

Cotton value chain analysis in Cameroon

Michel Fok
Gian Nicolay
Matthias Meier
Oumarou Balarabe
Romain Calaque

October 2019



Value Chain Analysis for Development (VCA4D) is a tool funded by the European Commission / DEVCO and is implemented in partnership with Agrinatura.

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The information and knowledge produced through the value chain studies are intended to support the Delegations of the European Union and their partners in improving policy dialogue, investing in value chains and better understanding the changes linked to their actions

VCA4D uses a systematic methodological framework for analysing value chains in agriculture, livestock, fishery, aquaculture and agroforestry. More information including reports and communication material can be found at: <https://europa.eu/capacity4dev/value-chain-analysis-for-development-vca4d->

Team Composition

Economist: Michel Fok, CIRAD

Environmental expert: Matthias Meier, Bern University of Applied Science

Social expert: Gian Nicolay, FIBL

National expert: Oumarou Balarabe

Additional expertise: Romain Calaque

The report was produced through the financial support of the European Union. Its content is the sole responsibility of its authors and does not necessarily reflect the views of the European Union.

The report has been realised within a project financed by the European Union (VCA4D CTR 2016/375-804).

Citation of this report: Fok, M., Meier, M., Nicolay, G., Balarabe, O., Calaque, R., 2019. Cotton value Chain Analysis in Cameroon. Report for the European Union, DG-DEVCO. Value Chain Analysis for Development Project (VCA4D CTR 2016/375-804), 122 p + annexes.

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ACRONYMS

AFCOT	Association Française Cotonnière
AFOP	Projet d'appui à la formation professionnelle (occupational training support programme)
ALIBET	Brand name of the feed manufactured at the Garoua factory
ASGIRAP	Programme d'Appui à la Sécurisation et à la Gestion Intégrée des Ressources Agropastorales au Nord Cameroun (programme to support security and integrated management of agro-pastoral resources in northern Cameroon)
BADEA	Arab Bank for Economic Development in Africa
CAMRAIL	Cameroon railway operator
CAR	Central African Republic
CC	Cercle de caution de cinq à dix membres
CDI	Cotton Distributors Incorporated
CFDT	Compagnie Française de Développement des Textile (French textile development corp.)
CFJA	Centre de Formation de Jeunes Agriculteurs (training centres for young farmers)
CF	Cotton fibre
CICAM	Cotonnière Industrielle du Cameroun
CIF	Cost, Insurance and Freight
CIRAD	Centre de coopération Internationale en Recherche Agronomique pour le Développement
CmiA	Cotton Made in Africa
CNPC-C	Confédération Nationale des Producteurs de Coton du Cameroun (national confederation of Cameroon cotton producers)
COFIL	Coton Hydrophile du Cameroun (absorbent cotton of Cameroon)
COPACO	Compagnie Cotonnière
CPCC	Confédération des Producteurs de Coton du Cameroun (Cameroon cotton producers confederation)
DAGRIS	Développement agro-industriel du Sud (name adopted by the CFDT in 2001)
DES	Division de Suivi Evaluation, relevant de la DG de la SDCC (monitoring and evaluation division)
DEVCO	Entreprise familiale française de négoce du coton (family cotton trading company)
DG	Directeur Général ou Direction Générale (managing director or general management)
DPA	Direction de la Production Agricole de la SDCC (agricultural production division of the SDCC)
DPGT	Projet de Développement Paysannal et Gestion de Terroir (farm development and territory management)
DRD	Division de Recherche Développement, relevant de la DPA (R&D division, under the DPA)
DTLGC	Direction du transport, logistique et génie civil de la SDCC (division of transport, logistics and civil engineering)
ECTP	Engelhart Commodities Trading Partners

ESA	Projet Eau Sol Arbres (water, soil and trees project)
EUD	European Union Delegation
CFAF	Franc CFA (CFA franc - Financial Community of Africa)
FOB	Free on Board
GA	General Assembly
GDP	Gross Domestic Product
GIC	Groupement d'Initiative Commune (common initiative group)
GIE	Groupement d'intérêt économique (economic interest grouping)
GmbH	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Corporation for International Cooperation)
HVI	High Volume Instrument
ICA	International Cotton Association
IRAD	Institut de recherche agricole pour le développement
IRIS	Name of a type of commercial cotton of the SDCC
IRMA	Prefix of the names of varieties created by the IRAD, Maroua
IsDB	Islamic Development Bank
ITFC	Islamic Trading Financial Corporation
KW	KiloWatt
LCA	Life Cycle Analysis
MARI	Margin after payment of inputs
MINADER	Ministry of Agriculture and Rural Development
MINEPIA	Ministry of Livestock Farming, Fisheries and Animal Industries
MINF	Ministry of Finance
NPK	Complex fertilizer composed of nitrogen, phosphor and potassium
NUTRIBET	Trade name of animal feed produced at the Maroua factory
OLAM	Trader multinational et multiproduits
PA	Producers' Association
PPP	Public Private Partnership
PSIE	Programme Spécial d'Importation des engrais (special fertilizer import programme)
RCMA	Multinational and multi-product trader
SC	Seed cotton
SDCC	Sodecoton
SGS	Société Générale de Services
SMIC	Société Mobilière d'Investissement du Cameroun
SONARASociété	Nationale de Raffinage du Cameroun
UBA	United Bank for Africa

VAT	Value Added Tax
VA	Value added
VC	Value chain
ZIC	Zone d'intérêt cynégétique (cynegetic interest zones)

ACKNOWLEDGEMENTS

The study required the understanding of numerous activities in the cotton-growing region of Cameroon undertaken by Sodecoton (SDCC) [Cameroon cotton development company] in close partnership with the Confédération Nationale des Producteurs de Coton du Cameroun (CNPC-C) [Cameroon national confederation of cotton producers] and producers' associations. We are indebted to all the managers of the different bodies of the SDCC and to the Executive Director of the CNPC-C for their assistance. We would like to thank them for providing the large volume of data required for the study following the VCA4D methodology. Sending the data in electronic format greatly facilitated its exploitation. The handover of data from the survey of farms conducted in 2017 is a strong indication of the trust granted to our team. If we had not been able to process this data for our study, albeit only partially, the quality of this study would have suffered significantly.

We are particularly thankful for the availability of the General Director of the SDCC for granting interviews with us and for assisting during the debriefing meeting. The spirit of cooperation of his assistant, who provided a maximum amount of information and data prior to the first field mission in Cameroon, greatly helped us to understand the value chain. We were touched by the importance that the CNPC-C granted to the study, transporting all of the members of its management committee to hear us present our goals and needs.

Travel in the field provided essential complementary information on producers, their associations, artisanal textile producers, and the technical supervision provided by the SDCC and the CNPC-C. We would like to sincerely thank these two bodies for the quality of their organization. We were touched by the availability of the managers of the SDCC's farming department to accompany us, and in their flexibility to adapt to our requests.

The CICAM has been able to include findings of our study into its study of industrial textile processing. We would like to thank, in particular, Mr. Abagana Adoum, technical director of the Garoua unit, and Mr. Jean-Paul Eloundou, financial director, for having assisted us.

Last of all, we would like to thank the European Union Delegation for the particular attention that it paid to the study from the beginning, and for its role as an intermediary to ensure that the representatives of the different ministries concerned were informed of the study.

NOTICE

This document offers a diagnosis of the situation of the cotton value chain (VC) in Cameroon. The diagnosis is based on factual data and the language chosen is as neutral as possible, given that it is based on an analysis carried out by scientists, avoiding any normative judgements.

The document has been designed to permit multiple levels of reading by readers with a variety of prior knowledge and/or with different concerns with respect to undertaking actions to make the VC more sustainable.

The complete document aims at providing a sum of knowledge to readers with the time necessary to read it or who wish to acquire in-depth knowledge of the value chain and its operation.

The main text provides the knowledge mentioned above, but without the details provided by the numerous annexes (currently available only in French).

The executive summary provides an accurate synthesis of the document as a whole.

The decision support summary is a synthesis of the conclusion, along with recommendations based on the SWOT analysis and on the risk analysis. It identifies the domains justifying the implementation of actions, simultaneously considering the economic, social, and environmental dimensions in the current operation of the VC. Decision-making regarding actions and implementation methods, which is admittedly difficult in a context of diverse uncertainties (social, economic, climatic), nonetheless goes beyond the responsibility of the experts. Therefore, the summary provides orientations without going into detail regarding the actions or methods for carrying them out, because these actions stem from effective dialogue between the actors involved. This summary should not be considered an exhaustive document to be used by the European Union for negotiating the actions to be carried out: the experts are unfamiliar with the subtleties of European diplomacy as well as the past and current interactions between the European Union and the national actors involved in the VC or in supporting it.

Hypertext links are used to facilitate navigation between the main text and the document's different figures or annexes. After clicking on a link, if you would like to return to the main text, simultaneously press the ALT and ← keys (the cursor must be placed over the title of the figure or annex).

DECISION SUPPORT SUMMARY

The cotton value chain in Cameroon is taking on major economic importance in the country's North province, the poorest region in the country. During the studied harvest of 2017-18, which achieved a production of 254,181 tonnes of seed cotton (305,000 t in 2018-19), the value chain generated income for more than 30% of rural households, while providing food security through grain crops grown in rotation with cotton.

Cotton-growing regions are affected by persistent insecurity related to Boko Haram in the Lake Chad sub-region, as well as kidnappings for ransom carried out at national level and growing conflicts between crop farmers and transhumant livestock farmers. Reducing insecurity must involve local actors and requires knowledge of local systems and creativity to design effective actions.

The lack of outlets for agricultural products in Nigeria, likely to persist at the very least until the next elections, in 2023, is driving small-holder farmers (the majority of farmers in Cameroon) to produce more cotton in order to meet their financial needs, as a part of the increasing monetization of activities in rural societies. Cotton is profitable for producers, even for the large numbers of them producing on less than 1 hectare. It provides an income for producers' associations (PA), allowing them to carry out actions with a positive socio-economic impact, although the scope of these is limited by the financial means available.

Production has already been in a growth phase for the past several years thanks to a remarkable partnership between Sodecoton (SDCC), the Confédération Nationale des Producteurs de coton du Cameroun (CNPC-C) [Cameroon national confederation of cotton producers] and PA, without negative implications in terms of food security for the farms concerned. IT tools for monitoring-evaluating and supervising PA at the SDCC are excellent methods for finding out who producers/PA are and how they produce/operate, even though skills could be improved in order to draw more information from these tools.

While carrying out public service missions on behalf of the government of Cameroon (in particular, maintaining paths and supporting livestock farming), the SDCC has restored profits in its "cotton" business. This return to a positive financial situation remains fragile, considering the state of means and of transportation and processing infrastructures, as well as the inadequate sale of solid byproducts of crushing, although potential opportunities do seem to exist.

The forecast of a continuous increase in production nonetheless runs the risk of a colossal financial deficit for the SDCC, which has the obligation to purchase all seed cotton from producers. It therefore runs the risk of a significant disturbance in the operation of the VC, in the context of persistently inadequate capacities related to transportation and industrial processing, and the insecurity of energy supply. The financial deficit will be significantly greater than the 36 billion CFAF recorded in the recent past. Financial partners' declaration

of intent to invest in development is taking time to materialize. The SDCC's risk of a colossal financial deficit in the short term is making it necessary to take responsibility and to stop procrastinating.

On the level of small-holder farmers, the predictable increase in production will be based on the continued expansion of farms in the context of the decreasing fertility of soils. This raises problems related to land or the exploitation of the space that threaten stability and social order. In the context of high demographic growth rates (a fertility rate of six children per woman), there is a growing risk of reduced land availability in the Far North, of pressure on land for farming in biodiversity conservation areas in the North, and of increasing difficulty of access to land for the masses of "small" farmers (70% of small-scale farmers overall) across all cotton-growing regions. The reluctance to provide adequate answers to these problems has the effect of exacerbating conflicts between sedentary crop farmers and transhumant livestock farmers.

Resolving the aforementioned issues related to land or the occupation of the space is not easy in the context of the current governance structure and the poor communication between traditional lamidate chiefs and official government institutions (such as communes, established 20 years ago but which possess inadequate means and capacities) or civil society. The SDCC has neither the authority nor the capacity to intervene. Supporting an increase in production requires the implementation of actions to accompany the farming of land and the occupancy of space in a process that divides responsibility between the actors involved in the field. The experiences of neighbouring countries can serve as an example. A restriction of the expansion of farmed areas must be sought by means of an increase in productivity through ideal research/development actions to be carried out as quickly as possible, making use of an effective existing partnership. The management of the above-mentioned actions will in turn have a positive effect on the environmental impact of the VC.

The sustainability of the cotton VC in Cameroon is primarily contingent on the success of regional measures to combat Boko Haram and national measures to pacify the coexistence of sedentary farmers and transhumant livestock farmers (for instance by establishing corridors). The redressing of the inequality of subsidies provided by affluent countries to their producers could also have a positive effect, but this has been awaited since 2003. Provided that the regional and national measures mentioned are taken to move towards efficiency, actions more specifically pertaining to the VC must be considered, with different deadlines. These actions should also take into consideration the challenges coming from the climate change, whose effects are nonetheless not yet clear and stabilized.

Over the short term, this would consist in:

- Bringing the SDCC's processing, transportation, and energy supply capacities up to standard;
- Adapting production support to the needs of both small cotton producers and the largest producers;

- Strengthening the financial means of PA to increase the socio-economic impact of their actions;
- Establishing new partnerships to guarantee outlets for solid byproducts of cottonseed crushing;
- Strengthening the search for new, more productive technical solutions with a reduced use of chemical inputs;
- Increasing skills in the use of IT tools at the SDCC to facilitate the monitoring of the actions carried out.

Over a timeframe of 5-10 years, this would consist in:

- Working to diversify agricultural production by continuing the actions already implemented (see the case of soya) or by launching new crops, in order to establish new VCs to complete the income sources of populations;
- Expanding the scope of action of the partnership between the SDCC, the CNPC-C and PA to include the issue of land and the occupancy of space with respect to land availability and access as well as to maintain fertility under the different usufruct regimes (in particular that of land rental). The involvement of different authorities – traditional (lamidates) and modern (communes) – cannot be avoided; it is indeed difficult to imagine a partnership framework transcending the current tripartite dimension, and real willingness would be required to provide the necessary means and capabilities.

EXECUTIVE SUMMARY

Functional analysis

1. Cotton production is located in the administrative regions of the North and Far North. The heavier demand on land in the Far North has triggered migration northwards, to such an extent that cotton production has spilled over into multiple *zones d'intérêt cynégétique* (ZIC) [cynegetic interest zones].
2. The cotton-growing region faces a context of insecurity and growing conflicts in different forms: raids by Boko Haram, kidnappings for ransom, and conflicts with transhumant livestock farmers.
3. The cotton value chain (VC) is characterized by a high degree of integration. The SDCC is involved in three functions considered in the study: support for cotton producers' associations (PA) in the production and commercialization of seed cotton (SC), the ginning and sale of cotton fibre (CF) and the crushing of cottonseed, including the sale of oil in the country (Diamor) and solid products such as cottonseed oilcake and livestock feed.
4. With regards to production, the SC yield – forecasted at 1,500 kg per hectare for the current season – is by far the highest in Francophone Africa. This is due in part to a high-yield variety and effective pesticides, along with producers' access to credit for inputs and a certain underestimation of farmed areas, due to the fact that farms not receiving this credit are not taken into account.
5. The sharp decline in production between 2004 and 2010 – following the exclusion of producers defaulting on their credit payments – led to a healthier input credit system. Production recovered, but in doing so caused a serious financial crisis as a result of inadequate industrial processing capacities. This was followed by a recovery plan proposed in 2007, which in the 2017-18 season (the season considered in the study) led to a production of 254,181 tonnes of SC by 152,612 producers, with over a farmed area of 182,610 ha receiving input credits, the ginning of which yielded 107,618 tonnes of CF, amounting to a fibre yield of 42.34%.
6. The current growth of SC production is in line with the recovery plan; however, the updating of industrial infrastructure is not. There is therefore a high risk of an even greater financial crisis in the VC than the previous one, triggered by losses from SC ginning that is incomplete or carried out under inadequate conditions.
7. The VC is studied by examining the direct actors, namely the SDCC, the Confédération Nationale des Producteurs de Coton du Cameroun (CNPC-C), PA, producers, the Cotonnière Industrielle du Cameroun (CICAM) [Cameroon industrial cotton corporation], and artisanal *gandoura* makers. The analysis is particularly but not exclusively focused on the three functions of the SDCC. The indirect actors analyzed are those providing services to the SDCC.
8. As a major player in the VC, in addition to the three above-mentioned functions, the SDCC carries out operations for the benefit of other crops rotated with cotton and livestock

farming. It also has experience in actions related to water, soil and trees thanks to previous external funding.

9. For the past ten or so years, the activities of the SDCC such as maintaining rural roads, research, livestock farming, and professionalizing PA have been recognized as constituting public service missions. Yet funding from the government of Cameroon, which has been *ex post* until now, is incomplete and delayed.

10. The CNPC-C is the umbrella entity overseeing regional confederations, which themselves encompass unions of PA at the village level. It operates in collaboration with the SDCC in accordance with several agreements, addressing, in particular: a) the purchasing and management of inputs and equipment; and b) the professionalization of PA.

11. Inputs and equipment are the property of the CNPC-C and are granted to PA on credit through the intermediary of the SDCC. The latter and the CNPC-C jointly manage the mechanism for establishing the purchase price for producers and the operation of a smoothing fund.

12. PAs provide two related services – the management of the input/equipment provided on credit and the sale of SC – in accordance with a three-year tripartite agreement between the SDCC, the CNPC-C and the PA. The agreement specifically defines the guarantee system for input credits on two levels (mutual guarantee groups or MGG and PA) and the credit eligibility of MGG and producers.

13. PAs operate with a workforce of four people under the oversight of a management committee of seven people. The staff of PA are remunerated by means of the agricultural season premiums paid by the SDCC. Purchasing actors are paid with commercialization premiums.

14. As the report considers only those cotton producers who are small-scale farmers and have obtained input credits, it does not include an unknown number of farmers producing cotton without credits, along with their corresponding farmland. These latter farmers sell through other small-scale farmers who have obtained credit.

15. Knowledge about cotton producers appears to be scarce and is even more limited for non-cotton producer farmers. The resumption of monitoring-evaluation at the SDCC should fill this gap if this department is accompanied with the appropriate skills.

16. The differences between producers are evident and correspond to the size of the land devoted to cotton production. Producers with a small cotton production area (less than 1 ha or 1 to 5 ha) make up the largest proportion of the population and of youth requiring schooling, compared to “large” producers (from 5 to 10 ha or more than 10 ha).

17. Differences between types of producers with respect to cultural practices and profitability per hectare are not noteworthy.

18. Women play a more significant role in cotton production, farming their own fields, which are rarely larger than 1 ha, in addition to working in their husbands’ fields. The status of these women deserves to be further acknowledged.

19. The cotton VC in Cameroon is noteworthy for the partnership with national research through a tripartite agreement including an international partnership with CIRAD. The SDCC provides support in the form of material and financial means, and even in the form of some researchers' wages. The IRMA Q302 variety, which is remarkable for its productivity and fibre quality, is a result of this partnership.
20. The CICAM, founded in 1965, has become the only organization carrying out industrial processing of cotton fibre produced in the country, with a volume of between 1,000 and 2,000 tonnes of SC. Factory waste resulting from the ginning and spinning processes is cleaned for export by only one company, the Coton hydrophile du Cameroun (COFIL) [absorbent cotton of Cameroon].
21. In rural areas, artisanal cotton textile production can still be found in cotton-growing regions, but it is the production of *boubou gandoura* that has been included in the study. Approximately one hundred villages participate in it, with an estimated 24,000 people involved.
22. The SDCC produces a quantity of seeds that is more than adequate, through the intermediary of small-holder farmers, who benefit from a purchase premium. It provides these seeds to other producers for free. The sale of seeds in Chad constitutes a significant source of income.
23. Inputs intended essentially for cotton production are imported through a close partnership: the CNPC-C purchases inputs and the SDCC distributes them to producers. The same applied for the agricultural materials acquired via local purchases.
24. Inputs are distributed on credit to producers by producers' associations but purchases with upfront payment are also possible. A certain productivity level and being up to date with payments are the eligibility criteria for input credits. In the event that a producer has difficulties paying back the credit, the guarantee provided by the producer's mutual guarantee group is invoked first, followed by that of the PA in question.
25. The implementation of a variety of actions between 2008 and 2016 to support the use of fertilizers and carts, additional to producers' contributions in 1996-1998 in view of the privatization of the SDCC, served to establish an "inputs fund" of approximately 34 billion CFAF. These funds are set aside and remunerated by the SDCC at a rate of 4% because it can use it as cash flow.
26. The individualization of an "inputs fund" in the SDCC's accounts is used as a guarantee to lend credibility to the orders placed by the CNPC-C, while establishing a cash flow reserve that can be used by the SDCC. The fund grows through producers' almost complete reimbursement of credit granted to purchase inputs and materials at cost price or a price slightly above it.
27. Producers do not benefit from any input subsidies. Due to their distance from Douala, they pay the additional expense of transportation. The method for calculating the cost price, including the management fees of the SDCC and the CNPC-C, as well as VAT on all services, tends to increase the price to be paid by producers, especially for herbicides.

Economic analysis

28. The seed cotton of producers is purchased at a price announced in advance and applied systematically across the country throughout the sale season. This price is the result of negotiations related to the operation of the price risk management system involving the SDCC, the CNPC-C and the five ministries concerned.
29. Negotiations are based on the proposal of a price floor and the proposal of a deposit into or withdrawal from the smoothing fund set up to reduce the effects of the decline in the global price. The decisions made are considered indicative of a real partnership between the SDCC and producers.
30. The reference to the global price to estimate the price one year in advance has changed over time. Originally the Cotlook A Index was used, whereas currently the New York Stock Exchange index for short-term cotton markets is used.
31. The timeframes to put SC on the market and sell it constitute a structural factor in the payment delay. This may be further accentuated by circumstantial difficulties in obtaining bank loans. Such a situation forces producers, and especially the most vulnerable of them, to sell off their grain harvests, to the detriment of their income and food security.
32. PA's services are a source of income through the various compensations paid by the SDCC, but it is the value of the difference in weight between the weighbridge and the village measurements that makes the social actions of PA possible, such as paying parent teachers to replace the government in providing education.
33. When it comes to ginning, processing capacities are limited by the facilities in place, as well as by the number of effective days of ginning between November and April, which is significantly lower than the desired 150 days.
34. Nonetheless, performance is good, with a ginning output ratio bordering on 43% and a near exclusive production of fibre with a length of 1"5/32, almost 93% of which enters classifications 0 and 1 of the African AFCOT standard.
35. Cotton production is profitable for producers as a whole, who cleared a margin of 39.8% after payment of inputs for the 2017-2018 season studied, an added value of 36.8% and a net profit of 32,730 billion CFAF. This production is economically sustainable due to its limited monetary expenditures.
36. The activity of *gandoura* production by artisans, who are also small-scale farmers, is profitable, with a net profit of 2.8 billion CFAF. It is indisputably sustainable as it does not require capital or synthetic products.
37. Profitability is currently recovering for the SDCC, of which the net consolidated profit of the three functions was 8.5 billion CFAF, prior to provision for potential inventory losses. This profitability would certainly be greater with the recovery of certain losses on the sale of cotton fibre. The sustainability of the SDCC's activities is related to the difficulty of selling solid products from crushing, which do not all have outlets.

38. With a total value added (VA) of 95.9 billion CFAF, the VC accounts for 0.6% of the national growth rate (GDP of 15,543 billion CFAF in 2017 according to the World Bank) and 4.3% of growth from the agriculture, fisheries and forestry sector. Direct players account for 81.6% of that contribution, of which 42.5% is from producers. Farmers who own less than 5 ha of cotton-producing land make up 62.7% of these producers. Transporters, other service providers, suppliers of goods for the operation of the SDCC's vehicle fleet and factories, PA for their SC commercialization service and the CNPC-C contribute to the remaining 19.4% of indirect VA.

39. The 106 billion CFAF for cotton fibre exports accounted for 5.0% of the balance of payments but 16.8% of the contribution of agricultural exports to this balance. After the deduction of input imports, the net balance was 51 billion CFAF.

40. Taxes accounted for 9.4 billion CFAF or 9.9% of the total VA. These taxes are after subsidies, of which only the CNPC-C was the beneficiary, for a modest amount during the 2017-18 season studied. The SDCC accounted for 66.8% of total tax contributions. The export tax, the application of which is debatable, accounted for approximately 20.0% of the total taxes collected by the SDCC. Producers contributed 16.8% of government income, through the inputs used, which do not benefit from any preferential taxation.

41. Out of a total net income of 48.6 billion CFAF, the direct stakeholders (producers, the SDCC and artisans but not the CICAM) received 82.4%. Producers overall earned an income of 32,730 billion CFAF, compared to 2,800 billion CFAF for artisans. The income of producers with less than 5 ha of cotton was 15,231 billion or 61.1% of all producers' combined income.

42. The price risk management system, which guarantees prices across the territory and protection against fluctuations in the global price, favours the income of producers who purchase inputs at cost price. This income can be improved by better defining cost prices, and even more so if the handicap of transportation costs can be reduced.

43. Four major elements of governance impact the degree of inclusiveness and the income of producers and of the SDCC. The credit system and price risk management are favourable. The methods for setting input prices are somewhat disadvantageous to producers. The application of export tax appears unwarranted according to the current ministerial memorandum.

44. Jobs related to the VC mainly benefit stakeholders in rural areas. Through the 1,545 active PA, at least 6,782 people are paid for their work, 10,815 people receive premiums for their management and at least 9,270 people, including youth and young women in particular, receive financial compensation in the management of commercialization. At the SDCC, the number of permanent employees was 1,960 in 2017, with a seasonal workforce of 1,300 to 1,600 people.

45. Simulations of variations in the global price and the euro/dollar exchange rate show that the international viability of the cotton VC in Cameroon is not bad and could be improved by removing the industrial constraints of ginning. The protection coefficient, despite being estimated at 0.90 (a value indicating an absence of protection), is not particularly relevant because the subsidies of the largest producer countries are real, and the claims made against

them to the WTO in 2003 were ignored. The same applies to the domestic resource ratio for regions without the possibility of alternative production.

Social analysis

46. The industrial production of cotton fibre started in 1951. The current VC stems from a longstanding cotton production tradition in the sub-region.

47. The majority of the diverse ethnic groups are currently moving into cotton production. On the other hand, the demographics are shifting to the detriment of livestock farmers, who are encountering increasing difficulties in accessing necessary grazing areas. Conflicts between crop farmers and livestock farmers are increasing in the absence of an operational mechanism to guarantee effective governance and conflicts mitigation .

48. The loss of soil fertility, which has been taking place over the past 20 years at least, particularly in the Far North, where cotton farming was first developed, is driving farmers to enlarge their farmland. This in turn is further increasing risks of conflict with transhumant livestock farmers and is threatening the protection of ZIC in the North. This loss of fertility is causing a reduction in profitability and is contributing to the migration of populations.

49. We estimate that with 152,000 producers, 30 to 40% of all families in the two provinces are involved in cotton farming, out of a total population of more than 6.6 million inhabitants. These patriarchal social units consist of an average of 9-12 people, and at times more than 30. The sociogram created portrays the social position in the context of the village, of society and of the governance of the country, also indicating the important position of traditional chiefdoms.

50. High fertilizer and pesticide expenses (~75% of the cotton credit) could make organic cotton appealing to small cotton producers (<5 ha). Reliable information on the organic production system would be relevant for stakeholders in the VC, with a view to investigating it for adoption.

51. Organic agriculture, and specifically organic cotton in the Far North region, should be studied to meet the needs of small farms and to address the decline in soil fertility. It could potentially be of interest to at least 20,000 farmers, for an annual production of 10,000 tonnes of seed cotton.

52. The current social structure as well as traditionalism are leading the investment of the cotton profits accumulated by men (as the heads of households) to extensions of cotton fields and as well as the expansion of families, similarly to what “large producers” do. This is a direction that the emphasis on large producers appears to support.

53. According to the social profile drawn up, the “working conditions”, “living conditions”, “social capital” and “food and nutrition security” domains correspond to favourable situations. The “land and water rights” and “gender equality” domains remain acceptable in the context of a social dynamic driven by the cotton VC (investment of a portion of cotton

income in infrastructure by PA at village level). However, these gains are fragile in several respects (cf. infra).

54. Several major risks have been identified concerning working conditions, with a labour shortage during the harvest increasing the risk that children in poverty will be put to work, as well as the risk of intoxication due to pesticide use.

55. A lack of transparency, participation and consultation with regard to land and water rights – elements outside of the direct influence of the VC – constitute major risks. These stem primarily from the national government's absence in villages and in the newly established communes of the Greater North.

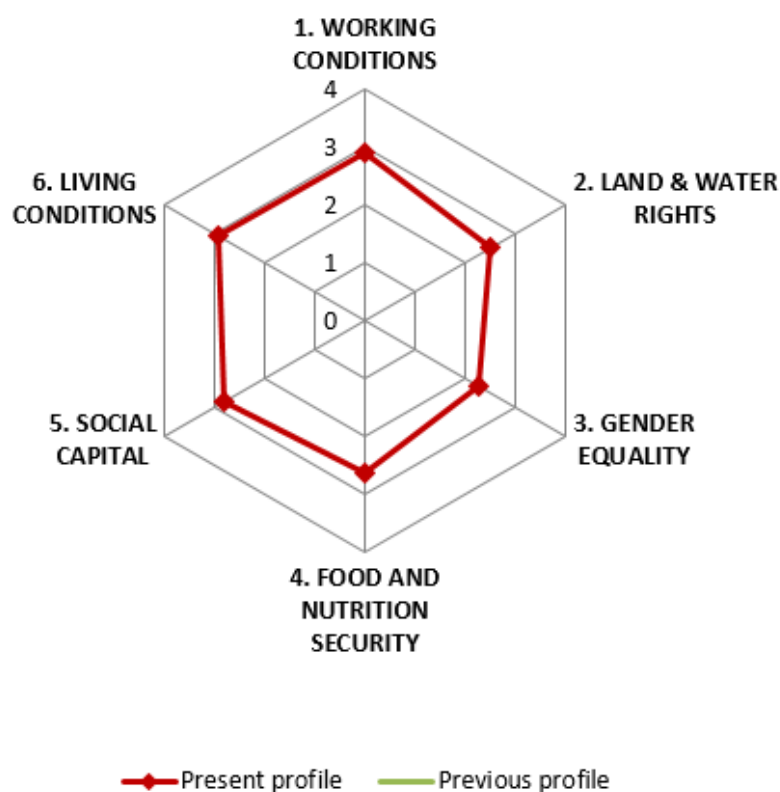
56. Concerning gender equality, several major risks have been identified (in the social analysis), the majority of which are related to the scenario of an expansion of cotton farms without reforms in social structures taking

57. account of women's rights. This dimension of women rights demands much more attention, either from the SDCC or directly from the government and the State.

58. For the time being, food and nutrition security has been significantly improved thanks to the cotton VC in cotton-growing regions, but this may change with excessive specialization in cotton production, which would reduce food production.

59. Social capital is enhanced considerably with the structuring by the CNPC-C and the three functions of the SDCC. However, it runs the risk of being eroded if specialization focused on cotton materializes.

60. The current state of the living conditions of cotton farmers primarily depends on the success of the cotton VC, which is itself subject to the fragile finances of the government, to the geopolitical context of the Lake Chad region and the volatility of the global market. The contribution of the VC is very positive and significant in the three categories (health, education, training), as well as in improving access to land via the maintenance of 4,000 km of rural roads. The structural problem is that the national government delegates all of the responsibility for the well-being of the population of the Greater North to the SDCC, without undertaking the multiple essential tasks for sustainable social development.



61. Certain social conflicts and institutional roadblocks differentiate between the situations of the two regions (Far North and North), shaping the situation of political and institutional governance and of the social structures of the cotton production system.

62. The analysis of land issues must take rented lands into account, as this phenomenon is detrimental to intensification and soil fertility management. The lack of available farmland is a problem that is felt, and which the use of land registries does not resolve.

63. The cotton VC has achieved stunning and praiseworthy results. It is not easy to imagine the future of the Far North without its presence. However, over the next 20 years, the stakeholders/decision-makers in the VC (the SDCC in particular, but also the CNPC-C and the ministries involved) will be faced with difficult problems related to demographics, ecological degeneration, social conflicts related to poverty, long-term intensification in a semi-arid region, and the coordination of different ministries and development partners. Complex, unprecedented transformations in the economy and society will be necessary and must be accompanied.

64. The VC is highly integrated, and allows a variety of farmers, from small (<3ha) to very large (>20ha), including men and women, to participate in production. The weakness of the VC is the very low rate of textile processing, despite a large factory in Garoua.

65. For the moment (2017-2019), the VC is socially sustainable, as it meets the basic requirements (income/profit from cotton and its byproducts, products of crops rotated with cotton, organization of the production base into PA, improvement of food security).

Environmental analysis

66. The environmental analysis studied the impact of the value chain, from the field up to the provision of balls of cotton fibre for export at the ports of Douala and Kribi.

67. In the domain of human health, 51% of the impact – throughout the value chain of providing a ball of cotton fibre for export – is due to the potential for climate change. Fine particle emissions and non-carcinogenic toxic effects for humans represent 35% and 12%, respectively, of the impact in the domain under consideration.

68. As regards ecosystem quality, 87% of the impact per ball of cotton fibre provided for export is caused by soil consumption, mainly associated with production of seed cotton in the field. The potential for global warming also contributes 9% to the degeneration of ecosystems and 3% to the acidification of land habitats.

69. Over 99% of resource depletion is due to the consumption of fossil fuels throughout the value chain, from cotton farming to the provision of cotton fibre balls for export.

70. Regarding the different processes in the value chain, production of cotton is responsible for 68% of effects on human health (through greenhouse gas and fine particle emissions), 96% of the degeneration of ecosystems and 17% of resource depletion. The main cause of resource depletion is transportation (66%). Overall, it is cotton production in the field that has the largest environmental impact across the cotton value chain in Cameroon.

71. The detailed analysis of cotton production shows that differences in environmental impact between the different production systems per kilogram of seed cotton are minor. However, small-scale production systems (<1 ha) tend to be more eco-efficient. Overall, the eco-efficiency of production in the North is slightly greater than production in the Far North.

72. The fact that production systems of 5-10 ha provide the highest yields, but without showing greater eco-efficiency per kilogram of seed cotton, indicates the unlikelihood that this can be improved by intensifying production. In the case of intensification, the quantity of inputs applied to the area dedicated to cotton would also increase in absolute terms, which would compound local environmental effects. Here, emphasis is put on soil degeneration and the degeneration of natural and semi-natural ecosystems. Greenhouse gas emissions caused by the application of nitrogen fertilizers to cotton farms would also increase in absolute terms.

73. An analysis of the system under consideration can be conducted on the basis of products (cotton fibre for export and products of crushing). This shows that the production of cotton fibre balls (including production in the field and ginning) contributes to more than 95% of the environmental impact. Crushing to produce oil adds 2-5% to the environmental impact of the VC. The environmental impact of the production of linter and livestock feed is insignificant (<1%).

74. The largest potential for making the cotton value chain in Cameroon more environmentally friendly resides in more sustainable agricultural production. To ensure the long-term sustainability of cotton farming, the effective preservation of soil fertility is essential, which implies the more efficient use of the organic fertilizers in existence and a production intensity suited to the site.

75. The cotton VC determines the management of rural land in the Northern region. This is the case particularly of the SDCC, through its presence in the field and its close partnership with the CNPC-C, in a context of changing demographics, relative abandonment by the national government, the limited functionality of communes, and the pervasiveness of the lamidates in local life.

76. Heavy economic dependence on the agricultural sector means that the evolution of the entire Northern region is determined by the cotton VC.

77. The cotton VC has to address the issue of biodiversity because 45% of the territory of the Northern region is currently classified as areas set aside for biodiversity conservation (national parks) or exploitation (ZIC). Protecting these territories cannot be avoided.

78. Taking into account the issue of biodiversity is relevant in the context of achieving the political goal of a significant increase in production, while neighbouring countries provide examples of tragic socio-economic impacts to avoid in the management of territories.

79. Territorial management by supporting protected areas constitutes an opportunity for stabilizing and securing territories. The growth of insecurity and the mounting conflicts

between different users of territories demands this stabilisation, and inspiration can be drawn from the experiences of other countries.

1. INTRODUCTION

1.1 Geography and demographics

Cotton production is localized in northern Cameroon, specifically the administrative regions of the North and Far North. This area is bordered to the east by Chad and to the west by Nigeria (Figure 1.1). It covers approximately 102,526 km². It has a Sudanese climate, with a rainy season from May-June to October lasting 5-6 months, between isohyets 700 mm in the north and 1400 mm in the south. Economically, the cotton-growing region is disadvantaged. It has the highest illiteracy rate in the country, and the prevalence of poverty has increased there while decreasing nationally.

The fact that geographically it borders on Nigeria has the advantage of providing several crop varieties with a mixed status of cash crop and subsistence crop. This reality must be used to nuance the typical perception of the competition between cotton and other subsistence crops. Several subsistence crops compete or potentially compete with cotton in order to meet financial needs. This is indisputably the case of the black-eyed pea, of which Nigerians are fond, as well as corn, groundnuts, rice, soy and onion, as we found during our journeys by road.

FIGURE 1.1: LOCATION OF COTTON-GROWING REGIONS

Demographically speaking, in both these regions almost half of the population fall under-15 age-group. The Far North is much more densely populated than the North. The third general population census, in 2005, forecasted a population of almost 4 million inhabitants in the Far North region today, that is, an area of 34,300 km², compared to 2.4 million inhabitants in the North on almost double the surface area (66,100 km²). The population density is therefore 150 inhabitants/km² in the Far North compared to 36 in the North.

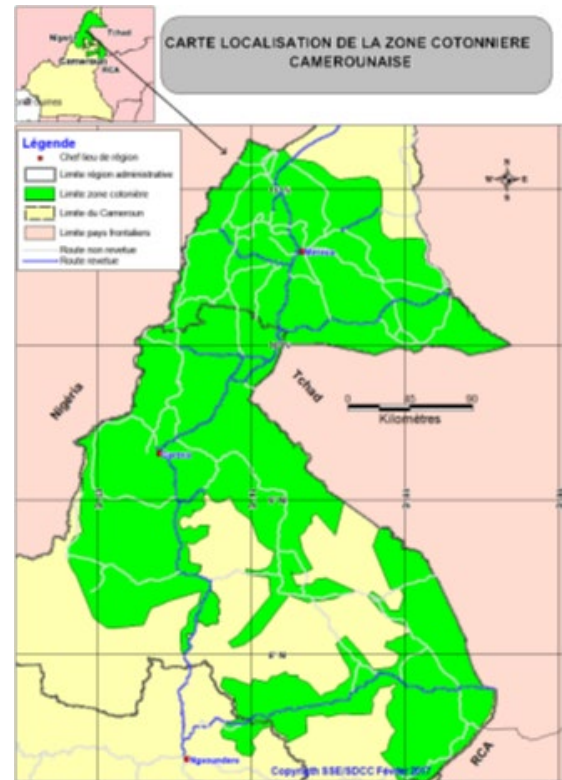
Demand on land is felt much more in the Far North and has triggered spontaneous migrations from the Far North to the North. These movements were even accompanied by the SDCC at the end of the 1970s to set up young people around Touboro. The experience of this inspired the recent proposal to once again support migration to this same region of Touboro.

The geographic location of cotton production coincides with multiple *zones d'intérêt cynégétique* (ZIC) [cynegetic interest zones] in the administrative region of the North. The prohibition of farming in ZIC is not strictly respected, especially in the area surrounding Mayo Galké.

1.2 A context of insecurity and of growing and multi-faceted conflicts

The cotton-growing region of the Far North has suffered from its proximity to the sphere of action of the Boko Haram jihadists in Nigeria. Attacks or suicide bombings have plunged its capital of Maroua into mourning on several occasions. While attacks have become less frequent, it is difficult to say if they are completely over.

In various places, small-scale farmers in the cotton-growing region are the targets of kidnappings for ransom. Due to the relative financial well-being of cotton producers, and in particular those with cotton fields of more than 5 ha, are particularly targeted. During our visit to the Bah Tao village in the SDCC region of Mayo Galké, two producers were still held hostage awaiting the payment of ransom. One of the farmers with whom we met said



that he was only freed after his son paid a ransom of 2 million CFAF. Kidnapping is probably on the rise and is likely to operate throughout the entire cotton-growing region.

Conflicts between sedentary farmers, and more particularly cotton farmers, and transhumant livestock farmers are also increasing. These can be seen in the form of fires, lit early by livestock farmers to destroy fields before harvest; or by transhumant livestock farmers steering their livestock onto cotton fields after nightfall.

In the case of conflicts between sedentary farmers and livestock farmers, when the perpetrators are caught in the act, disputes can result in serious injury or the death of sedentary farmers. They are not equipped to defend themselves against shepherds, who possess bows and arrows or even Kalashnikovs. The CNPC-C addressed this serious problem in 2012 in an issue of its newsletter. The fact that these conflicts still take place is evidence that representatives of modern order and the traditional local authorities have not been able to resolve them to date. In its role of dealing with the authorities to obtain justice and compensation for victims, the CNPC-C may have statistics to provide better information on the development of this phenomenon.

1.3 A highly integrated and coordinated value chain

The cotton value chain (VC) is highly integrated. One single cotton company operates in the region, the SDCC. This company participates via an integrated system of activities by taking responsibility for supplying upstream production factors and purchasing the seed cotton crops of small-scale farmers to process at its ginning factories, where the fibre is separated from the seed. This company is distinguished by the fact that it processes seeds to produce edible oil and livestock feed. Cameroon is the only country whose cotton company carries out downstream seed crushing, after Mali was (mal)advised by its international financial backers to eliminate the oil production unit (HUICOMA) of its cotton company in 2000, which ceased to operate in 2005.

The cotton VC in Cameroon is characterized by several coordination processes, like in other countries, but with mechanisms peculiar to it or which are more supportive of economic and social progress. The cotton farmer association process has allowed their associations (PA for Producers' Associations, or GIC for their legal name, *Groupe d'Initiative Commune* [common initiative group]) to become official, recognized entities. This has led the national PA representation body, the CNPC-C to take responsibility for importing inputs and to preside jointly over the mechanism for controlling the price for purchasing SC from producers. An even more original feature is the explicit contractual process establishing the relationships either between the SDCC and the CNPC-C, or between each of them and PA.

1.4 Common mode of production with remarkable performance

1.4.1 A classic mode of production in Africa

Cotton production in Cameroon is similar to that of the other cotton-growing countries in French-speaking Africa, although the entire production has been labelled CmiA (Cotton made in Africa) since the end of 2018. The cotton is farmed in 2-3 year rotations (mainly with cereals), with mechanization via animal ploughing, but with little mechanization for seeding, which is almost exclusively carried out manually, without the use of a seeder). Farming is labour-intensive, at a time when family labour is less available due to the schooling of children and labour from outside the family becoming scarce¹. Organic manure is produced and used, and approximately 60,000 ha of cotton is estimated to be farmed with exclusively organic manure. Increasing the production of organic manure is burdensome because it is highly labour intensive and arduous.

¹ One large producer with whom we met in a village visited said that he went to Chad to look for labour.

The technical aspects of cotton farming do not present any particularities. The use of herbicides, whether total or selective, is widespread. The use of mineral fertilizers is recommended, but with dosages that vary, depending on the region and the sowing period².

Control of cotton plant pests is exclusively based on chemical insecticides, even though insecticide use programmes have changed to move closer to the desirable method of threshold-based application. Cameroon was the inventor of Targeted Staggered Control (TSC), which is currently applied in Mali on a large scale. For several years, it has been promoting the Sequential Plan for Individual Decision (SPID). The total value of insecticides distributed on credit and the average cost of an application per hectare show that cotton producers on average apply insecticides slightly more than four times, compared to a recommendation of as many as seven applications.

The autumn armyworm (*Spodoptera frugiperda*) is not yet considered a threat, and representatives of the SDCC and the CNPC-C did not speak to us about it. The presence of this pest has nonetheless been noted in the five agro-ecological regions of Cameroon. This caterpillar attacks grain crops, and maize in particular, although cotton is among the 180 plant varieties that it can infest.

1.4.2 Lack of vegetation management

Like other countries in French-speaking Africa, and in contrast with countries with high yields, the use of plant growth regulators for cotton remains symbolic. Depending on the value of the credit allocated to growth regulators, they are effectively used on only 12,000 ha, with a single application. The result is significant vegetative growth of the cotton plant, which leads to the closure of the canopy, as reported to us by the national expert on our team³.

This closure has several potential drawbacks. It is hard to enter the field after 70 days of vegetative development. Our national expert thinks that such vegetation probably discourages small-scale farmers from entering to apply insecticides. The effectiveness of insecticide application is potentially reduced, simply because the sprayed particles do not penetrate the inside of plants. The decreased penetration of insecticide particles and the moist microclimate inside the closed vegetation are factors that may cause pods to rot, especially those at the base of the cotton plant, which potentially contribute most to the yield.

The limited use of cotton growth regulators is paradoxical, considering the limited and declining fertility of soils. By allowing cotton plants to grow freely (cotton is a shrub species), therefore depleting the nutrients in the soil and not subsequently returning them, failure to regulate cotton plant growth does not help to reverse the relationship between cotton farming and soil fertility. Cameroon is therefore no different from other African countries in terms of taking up knowledge on the regulation of cotton plant growth.

1.4.3 Techniques that are potential sources of inspiration

Cameroon is behind when it comes to certain technical advances, such as the topping of cotton plants, which is carried out in Mali. The technique has been studied in Mali to reduce the infestation of certain pests and has been met with great success among farmers, due to the increase in yield, estimated at 15-20%. Agro-physiological knowledge explains the positive impact on the number and weight of pods harvested. It also allows for improvements in the features of fibre to be anticipated, even though this has not yet been studied in Mali.

This lag is even more apparent in relation to certain major changes in the management of cotton farming at global level. In China, where production takes place among small-scale farmers, on an even smaller scale than in

² The complex fertiliser NPK is recommended at a dosage of 200 kg per hectare, but the complementary addition of 50 kg of urea is recommended only for the North administrative region. This complement can be halved or even eliminated in the case of sowing following the supposedly optimal period (prior to the end of June).

³ The time we had to conduct the study did not allow us to observe this ourselves.

Cameroon, the integration of cotton with a subsistence crop such as groundnuts in the same field is not known or considered in Cameroon nor other French speaking African countries.

By contrast, in terms of motorization, the SDCC is the only cotton company to have attempted mechanical harvesting, by importing very bulky machinery, even though the results were not convincing. It also established a support plan to equip farms with conventional tractors, which is currently underway. The conversations that took place during the study show that people's minds are open to motorized equipment that is more suitable for the size of family farms.

1.4.4 High yields that are inadequately explained

Despite a largely conventional technical approach, Cameroon stands out for having the highest yields in French-speaking Africa, at approximately 1,400 kg/ha of SC in 2017-18, and an estimated yield of 1,500 kg/ha for the current season. This is significantly higher than the yield of 950 kg/ha announced in Mali.

The SDCC explains this performance in terms of good technical know-how among producers, the effectiveness of caterpillar pest control owing to the new product replacing pyrethroids, and the qualities of the new variety used. The Q302 variety, which was distributed starting in 2015, is the only variety that covers all areas sown with cotton. It combines better productivity in the field with an improved industrial yield during ginning (at approximately 43% fibre produced from SC on average) and a greater fibre length⁴. However, technical reasons put forward overlook other reasons pertaining to the management of cotton producers (by SDCC). (cf. *infra*).

There are several reasons for a certain over-estimation of the yield. The yield has steadily increased every year since 2009-10 (8.1), the season when the input credit system was set up, but it is difficult to state whether this has also been the case for technical progress. The yield has progressively increased while the surface area dedicated to cotton farming has declined, although this surface area refers to the farmed area to which input credits are granted. Given that cotton is also farmed without the use of input credits, by the upfront purchase of inputs⁵, we cannot rule out the hypothesis of an over-estimation of yield through the under-estimation of actual farmed areas. Nor can we rule out the hypothesis that this over-estimation is of an even greater magnitude given the rigorous selection of farms eligible for input credits, as seems to have been the case. Moreover, the over-estimation of national production – by not adjusting it based on the volume of SC from Chad, evaluated at 5,000 tonnes – also has the effect of over-estimating the actual yield.

1.5 The VC in a state of crisis and recovery

1.5.1 Irregular production

The cotton VC experienced a sharp and sustained decline in production between 2004 and 2010 (**8.2**) following a loss of interest in cotton farming by more than half of producers. This loss of interest was the consequence of difficulties in the input credit system. Opportunistic farmers signed up for cotton farming to obtain inputs, and in particular fertilizers, which they used for subsistence crops. The result of this was a low level of cotton production, forcing other producers to intervene to pay back their input credit (according to the mutual guarantee group principle), which in turn discouraged these other farmers from continuing to produce cotton.

The redesign of the input credit system (cf. *infra* for a detailed description and analysis) enabled a recovery in production, up to the point in 2014-15 of approaching the record production of the 2004-05 harvest.

⁴ We also noted an improvement in the consistency of the length and percentage of short fibres, two features that are positive for spinning.

⁵ But also "arrangements" with farmers who have the right to input credits from the SDCC.

1.5.2 Record production triggering a serious financial crisis

This recovery was however the cause of a serious financial crisis at the SDCC. The SDCC was not capable of ginning the entire harvest and of doing so under adequate conditions, due to the inadequacy of its old factories and its ageing vehicle fleet. The SDCC recorded a loss of 36 billion CFAF during the 2014-16 period. According to the financial director, it has only been since 2017 that the SDCC has once again shown a profit, albeit modest – approximately 2 billion CFAF – whereas the above-mentioned losses have not yet been completely absorbed.

1.5.3 A VC engaged in a recovery plan

The increase in production combined with the inadequacy of industrial capacities and means of transportation led the SDCC to propose a recovery plan in 2017, aimed at bringing ginning and crushing capacities as well as the means of SC transportation up to standard. Because industrial performance was negatively affected by disruptions in power supply from the ENEO Cameroon, the plan provided for the use of renewable energy to reduce dependency on ENEO.

The implementation of the recovery plan, in terms of changes in SC production, has been a success, but the financial consequences could be disastrous if the SDCC remains in its situation of inadequate industrial ginning capacity. Factory capacities do not seem to have increased since, and the decision to build a new factory has not yet been made. The ginning of the 306,000 tonnes of SC of the current season could come to an end in June or mid-July for several factories, well after the arrival of rains. Financial losses are possible if ginning is carried out under inadequate conditions. Losses are likely during the next season if industrial capacities are not increased, considering that farmers' desire to produce more cotton is strong (an opinion survey showed an increase of 20 to 30% of cotton producing areas). This "love of cotton" among farmers has already been demonstrated by the increase in the average cotton production area from 0.5 to 1.3 ha over the past seasons. Such a "love of cotton" will not be easy to temper, because the prices of other agricultural products are negatively influenced by Nigeria's policy of promoting its national production, whereas cotton always assures a guaranteed price and a large income paid in a single instalment.

2. FUNCTIONAL ANALYSIS

2.1 Value chain actors

In this section, a brief overview of the actors is given. It will be completed by the information provided in the description of functions throughout the VC.

2.1.1 Sodécoton

A semi-public company with significant vertical integration

The SDCC is a semi-public company, in which the government of Cameroon is the majority shareholder with 59% of the shares. The remainder of the capital is held in the proportion of 30% by Géocoton⁶ and 11% by the Société Mobilière d'Investissement du Cameroun⁷ (SMIC) [Cameroon real estate investment corporation].

Like all cotton companies in the French speaking African countries that descended from the Compagnie Française de Développement des Textiles (CFDT) [French textile development company], the SDCC is characterized by integrated intervention combining the supply of inputs on credit, the commercialization of SC, ginning and the sale of fibre and seeds, essentially for export. The SDCC stands out however for its higher level of integration, given that it also covers seed crushing to produce refined oil, oilcakes, and other livestock feed in three different forms⁸. All of the above-mentioned products are cotton byproducts⁹.

To carry out its integrated activities, the SDCC has nine ginning factories and two crushing factories. In order to transport the variety of products of the VC, it has a fleet of multi-container lorries specifically dedicated to transporting SC, and a fleet to transport various other items, including cotton fibre. It also partially uses private transporters and the rail transport of CAMRAIL.

Organization and actions

Since June 2018, the SDCC has been structured according to the organizational diagram attached in 8.3, proposed in the recommendations of the COWI study from December 2017. The Deloitte study at the end of 2016 counted 1,897 permanent employees, emphasizing the issue of the ageing of managers. In the field, the SDCC is structured into 9 regions and 48 sectors, with approximately five sectors per region on average. In each sector, the sector manager is assisted by a zootechnics specialist and a regional training manager to supervise actions in villages, which are under the responsibility of area managers, 4-5 on average by sector. In 2016, the supervision network was composed of 214 areas with 192 area managers.

The SDCC's main activity consists in supervising the production and commercialization of SC. The technical supervision of cotton farmers starts with taking an inventory of input needs and supplying technical advice. Supervision and monitoring of cotton farming, initially carried out by its own staff, are now carried out by PA with the support of SDCC and CNPC-C staff. Supervision takes place from the sowing period until harvest; technical advising concerns the production of organic manure, the decision of whether or not to till the soil, weed control, mineral fertilizers, and pest control.

⁶ The company resulting from French government's privatization of DARGIS, a company that was itself a successor of the CFDT established in 1949.

⁷ It was created by Mr. Baba Ahmadou Danpullo during the attempt to privatize the SDCC in 1994 by purchasing 48% of its shares for 1.5 billion CFAF, whereas at the time, these shares allowed for the distribution of 2 billion CFAF in income to their shareholders. The controversy that followed led to the cessation of the privatization process, and the 11% ultimately allocated was the result of a compromise following a six-year legal battle.

⁸ ALIBET produces in Garoua and NUTRIBET produces in Maroua, with a higher nutritional quality due to a greater content of non-extracted oil. APPETIBET also produces this product, with an enriched formula.

⁹ Term typically used in French speaking African countries since the beginning of the 1990s, considering that the cottonseed oil industry is relatively recent there.

Cotton production is based on the efficient provision of input credits and the commercialization of SC by PA. These two fundamental functions will be presented and analyzed in detail below. The same will be done for the operation of PA.

Technical supervision has spilled over somewhat from cotton farming to the farming of other crops. The SDCC has statistics on the crops monitored, namely rainy season sorghum and millet, dry season sorghum or *décrué* sorghum (*mouskuari*), corn, black-eyed peas, groundnuts and soy. Statistics concern the areas sown, the areas treated with herbicides or herbicide sales, allocations of fertilizers, and the amounts commercialized for corn and soy. It was during the collapse of SC production in 2005 that the idea of promoting soy emerged, with a view to having another crop to grind at oil factories. Technical support is essentially based on granting credit for fertilizers and herbicides under relatively restrictive conditions (cf. *infra*), and only to cotton producers. The SDCC's statistics include only farms that have benefited from input credits, and as a result provide only a partial view of subsistence crops in the area concerned.

Considering that the intervention area has a long history of the use of animal ploughing of crops, the SDCC is involved in care given to livestock. This consists of disease prevention and the distribution of care products.

Through a sequence of projects financed by the AFD [French Development Agency] – *Développement paysannal et gestion de terroir* (DPGT) [rural farm development and territory management], *Eau sol et arbres* (ESA and ESA2) [water, soil and trees] and the *Programme d'Appui à la Sécurisation et à la Gestion Intégrée des Ressources Agropastorales au Nord Cameroun* (ASGIRAP) [programme to support security and integrated management of agro-pastoral resources in northern Cameroon] – the SDCC is involved in actions related to capturing water or combating erosion, conservation agriculture with growth under plant cover and agroforestry. The production and distribution of *Brachiaria* seeds is an example of the adoption of the practice of using cover crops. More recently, the SDCC was involved in the promotion of agricultural entrepreneurship as a part of a GmbH project that is particularly targeting women.

Public service activities

Cotton byproducts are not the only outcome of the SDCC's activities.

As the government of Cameroon has acknowledge the positive effects of the SDCC's management of certain actions over the past ten years or so, it has entrusted the latter with certain public service activities which it funds. These activities cover the following:

- Maintaining rural roads, for which the SDCC has a dedicated civil engineering department working under its *Direction du transport, logistique et génie civil* (DTLGC) (division of transportation, logistics and civil engineering]. This maintenance has a specific effect on the transportation of cotton products, which will be considered below in the functional analysis.
- Support for the professionalization of producers, and more particularly PA. This support has been provided since the initiation of the DPGT project in 1994. The *Division Professionnalisation* (DP) [professionalization department], which is specifically responsible for this, works under the *Direction de la production agricole* (DPA) [agricultural production division], according to the organizational diagram cited above. The professionalization activity will be studied in depth below in the functional analysis.
- Support for livestock farming, which is not provided by a specific department. This will not be directly addressed in the functional analysis.
- Support for agricultural research, which involves the specific department of the DRD, which operates under the DPA. This support will be discussed in further detail in the sub-section on agronomic research.

Financial compensation for public service missions is to date provided following ex-post evaluation, in a discretionary manner, so to speak. The SDCC complains about delayed and partial compensation – something that is currently changing. A recent inter-ministerial mission, in 2018, was set up to create a programme that the government of Cameroon would fund. It is worth noting that not all of the SDCC's current actions will be granted compensation, and as a result, the SC operating account will be affected. Without going into details of that which will be implemented, the missions retained will be:

- for the maintenance of rural roads, 5,210 km will receive compensation, compared to the 7,000 km for which the SDCC has taken responsibility;
- in the domain of professionalization, the actions retained are categorized into two groups: (i) the structuring of cotton producers' associations into cooperatives; and (ii) the storage of grains in villages at GIC/cooperatives of cotton and subsistence crop farmers for food security, to a value of approximately 552 million CFAF, compared to the desired amount of approximately 1.1 billion CFAF. It does not appear that the specific action of developing the functional literacy of farmers is considered.
- in the domain of livestock farming, the only actions retained are: (i) the supervision of farmers and the monitoring of animals for milking; and (ii) taking an inventory of animals, for an amount of approximately 180 million CFAF compared to an amount of 430 million CFAF submitted by the SDCC. Actions to promote the creation and use of organic manure and to support feeding livestock during the hunger season are not considered.
- regarding research, the actions retained are entitled: (i) varietal improvement, (ii) crop diversification and (iii) genetic conservation, for an amount of approximately 233 million CFAF, compared to an amount of 813 million submitted by the SDCC. Protection against bio-pests, agronomics including soil fertility management and integration of trees are therefore not considered.

2.1.2 The CNPC-C

General overview

In its current state, the CNPC-C is the product of almost 25 years of operations, starting in 1994. The history of this organization is briefly summarized in 8.4, along with its main principles of operation.

The structure of the CNPC-C is modelled on that of the SDCC, with its 9 federations and 48 unions corresponding to the 9 regions and 48 sectors of the SDCC, overseeing the approximately the 2,000 PA inventoried, 1,545 of which are 'active' in managing input credit and commercializing SC.

PA, unions, federations and the confederation operate quite similarly. A PA consists of an average of 100 members, namely cotton producers grouped together in Mutual Guarantee Groups (MGG) consisting of 5 to 10 farmers. A PA has a management committee as well as a broader board composed of the management committee¹⁰ and the heads of each MGG. The General Assembly (GA) is the supreme decision-making body. Federations and the confederation also have committees to address specific subjects.

Young people and women are involved in the operation of PA, but more prominently in the Far North region (8.11). The involvement of young people is a result not only of their education, which makes them capable of completing the required tasks, but also of their attachment to the village and traditions. The involvement of women stems from their growing role as producers and mothers concerned about providing a formal education for their children, according to a process that has been little studied but which may be similar to that observed in Benin¹¹.

Goals and intervention methods

The daily operation of the CNPC-C is conducted by an executive director (provided by the SDCC) according to the decisions of the board of directors composed of 12 members (9 presidents of federations, 2 representatives elected by producers and one representative of the SDCC).

¹⁰ Composed of a chairperson, a deputy chairperson, a treasurer, a deputy treasurer, a secretary, a deputy secretary and a councillor.

¹¹ Aboudou F. and Fok M. 2019. Women's empowerment in cotton growing, a case in Northern Benin. *Journal of Gender, Agriculture and Food Security*. Vol 4, Issue 1, pp 13-29. <https://agrigender.net/views/empowerment-in-cotton-growing-benin-JGAFS-412019-2.php>

The CNPC-C operates in collaboration with the SDCC on the basis of agreements, which are briefly presented in 8.5. These are:

- The agreement to manage a savings fund established by producers;
- The agreement to manage inputs and equipment to be purchased via import or local purchase;
- The agreement to share the facilitation function currently called PA professionalization;
- The livestock farming agreement;
- The agreement on the price risk management method.

An organization with its own staff participating in a close partnership

The CNPC-C thus participates as a service provider and contributes to vertical coordination price risk management. The modalities of purchasing and distributing inputs and equipment will be examined in the corresponding function. Likewise, price risk management will be considered in the SC commercialization function.

The CNPC-C has its own staff, the evolution of which is presented in 8.6. Field agents make up the majority of its employees, and are responsible for overseeing the operation of PA, at the request of PA members, and at the decision of the SDCC or the CNPC-C in the event that irregularities have been found.

The very close partnership between the SDCC and the CNPC-C in overseeing several functions results in overlaps between the two entities, which are separate. This will be taken into account when representing them in the VC graph. The different nature of the two organizations should become more visible following the occupancy of offices currently under construction by the CNPC-C.

2.1.3 Producers' associations (PA)

Operation by way of tripartite cooperation

The operation of PA, which are also called GIC (*Groupe d'initiative commune*), allows them to provide two related services: the distribution/management of inputs and equipment on credit, and the commercialization of SC. For the latter, PA are subject to a professionalization process carried out jointly by the CNPC-C and the SDCC. This operation is governed by a tripartite agreement that is renewed or updated every three years. This agreement, called the 'Contrat de partenariat Triennal GP/CNPC-Cameroun/SODECOTON' [triennial PA/CNPC-Cameroon/SODECOTON partnership agreement], provided in 8.8, encompasses the regulations published up until the 2019-20 season.

The tripartite triennial agreement covers technical support for cotton production and subsistence crops, the professionalization of PA, the supply of inputs and equipment on credit and the commercialization of SC. It establishes the rules for setting up PA and the respective commitments of the three parties. The respective commitments of the three parties are summarized in 8.10, but the major elements to retain are the following:

- To receive an input credit, all producers must be members of an MGG consisting of 5 to 10 members, with the exception of specific cases;
- The PA is responsible for the inventory of inputs stored at its warehouse;
- PA must hire one or two crop monitoring agents;
- PA must respect the practical modalities of SC commercialization specified in the annex to the tripartite agreement, included in 8.9;
- In return, the CNPC-C must support PA in professionalization, in collaboration with the SDCC, and must provide inputs and equipment on credit via the intermediary of the SDCC;
- The SDCC provides inputs for villages according to the orders of the season plan, and recovers the amounts of credits on behalf of the CNPC-C;
- The SDCC is required to provide technical support to producers.

In the operation of the cotton VC, Cameroon has the particularity that inputs and equipment are the property of the CNPC-C and are granted to PA on credit via the intermediary of the SDCC. This differs from the common case in which cotton companies are the owner of these.

Dynamics within PA

The operation of a PA includes at least two general assemblies (GA). The first takes place prior to beginning of the farming season, to establish the list of MGG and the blue list of producers eligible for input credits (and therefore the season plan in terms of cotton, corn and soy growing areas and the corresponding inputs). The selection of producers, carried out in accordance with the criteria indicated in 8.7, will be analyzed in more detail below. The second GA has the purpose of presenting the annual accounts for approval. Additional GA may be held to make joint decisions, in particular if there are MGG defaulting on the repayment of their input credits.

Staff and associated jobs

Daily operations are carried out by a permanent workforce specifically paid by the SDCC for an 8-month period. This workforce consists of at least four people: a manager, a warehouse clerk, a security guard and a technical agent (for monitoring crops). In large PA with many producers, there are several technical agents. In 2017, there were 2,147 monitoring agents for 1,545 active PA, equivalent to 1.4 agents per PA. The number of producers per monitoring agent was 71 on average, but this number is higher in the Far North than in the North (104 versus 57, respectively), which is inversely proportional to the average cotton producing area (1.0 ha compared to 2.3 ha).

For the important function of commercializing SC in PA, purchasing teams are established locally using people recruited from producers' families. Purchasing teams are paid by PA through the amounts specifically paid by the SDCC.

Overall for the 1,545 active PA, at least 6,782 people are involved in operations and at least 9,270 people (youth in particular) are involved in the seasonal commercialization activity, not counting the labourers responsible for making bales or loading lorries.

Managing large volumes of data

The large number of documents on the establishment and the management and governance of PA gives a good idea of the tasks they perform. The list of documents that we were able to consult during our visits to villages is included as 8.12.

The handling and conservation of the numerous document sheets mentioned is not simple because PA have only cardboard folders. While some sheets are from counterfoil books, this is usually the exception; many sheets are 'loose' and spill out of the full folders. The provision of binder clips would allow sheets to be combined easily into bundles, at a low cost. This would be a small additional expense fully justified by the financial importance of management tasks.

Financial management, accounts and bancarization

As indicated by the inventory of PA operation documents, PA have an individual account at the SDCC, for which they receive chronological statements and an annual breakdown. Cameroon, to the extent of our knowledge, is the only country that operates this way. All PA recognized by the SDCC-CNPC-C have accounts at the SDCC, and only a very small minority (12/2,067) have an additional account outside of the SDCC. The state of these accounts is therefore perfectly known and is conveyed in brief in the reports of the DP.

The state of the accounts of PA shows a low level of accumulation (8.13). The state of accounts represented is not that of the end of season following the complete payment for the SC commercialized; moreover, the indebted situation of certain PA is not necessarily abnormal, even though it concerns almost one third of PA (31% to be precise), albeit with clear discrepancies between regions. The most southerly regions have the highest PA debtor rate (Garoua, Ngong and Touboro) compared to regions such as Maroua 1, Maroua 2, Kaélé and Guider. For the majority of PA, which have a credit balance, the total amount was approximately 1.3 million CFAF per PA, on average.

By managing the PA accounts that it hosts, the SDCC plays the role of a bank. Such a phenomenon has led to questions around bancarization through the intervention of financial institutions or micro-credit, and bancarization is already the subject of some timid initiatives. In fact, a partnership has been implemented between the SDCC and financial institutions specialized in micro-finance, such as Crédit du Sahel or MC2B, under a project supported by the GmbH.

Despite a context of insecurity that reinforces the appeal of bancarization, impacts are still limited. The SDCC has noted a certain reluctance among PA. The lower number of rural branches of the banks involved is one major reason for this. The economy of these areas still remains characterized to a large extent by the prevalence of cash transactions. So as not to harm the operation of PA in paying agricultural season and social work expenses, the SDCC's DPA believes that bancarization should not go to such an extent as to eliminate account hosting at the SDCC. The field staff network of the SDCC is denser than that which any financial institution would be willing to set up.

2.1.4 Producers

The SDCC makes a distinction between cotton producers and farms. Cotton producers are individuals who have been identified and made responsible for the inputs that they purchase on credit in order to produce, and who receive the income from the sale of the SC produced. Two or more cotton producers can belong to the same farm, or *saaré* in the local language, in the sense of a concession or 'compound' where several families related to the same chief, generally the patriarch, live. The number of cotton farms, which is theoretically lower than the number of cotton producers, is not contained in the SDCC's statistics.

Producers and eligibility for input credit

Cotton producers are in contact with the SDCC mainly by means of their MGG, which are associated with a PA. They are required to join MGG, which are established through affinity, to be able to acquire inputs on credit and to be able to sell the SC that they have produced. The size of MGG varies from 5 to 10 members. The G for 'guarantee' refers to the fact that MGG must stand in for a member in default in the event that this member is not capable of reimbursing the credit taken. For the 2017-18 season, for the entire SDCC, 151,336 producers were recorded as being eligible for input credits, forming 29,490 MGG belonging to 1,693 active PA, for an average number of 5.1 producers per MGG and 17.4 MGG per PA.

The cotton producers actually included in the SDCC's statistics are those recorded on what the company calls the blue list, namely those farmers deemed eligible for input credit. Eligibility is based on the reimbursement of credits for the previous season and on the yield achieved, as indicated in 8.7. The increase in the size of the cotton production area from one year to another is also subject to examination. A strictly administrative criterion, the provision of a national identity card, proves to be a factor of exclusion because many farmers do not have one, in particular women, considering that it is costly in terms of both time and money to acquire one in a country where any public agent is capable of making money off of his or her 'stamping authority'. The maintenance of this administrative criterion is debatable, and the identity card could easily be replaced with a farmer identity card that the SDCC could issue. This would also be a way to finally determine the population of farmers in the cotton-growing region.

There are more cotton farmers than those appearing on blue lists, as farmers can produce by purchasing inputs upfront or by having deals with neighbours or acquaintances. Farmers producing outside of the lists are not considered in the statistics used by the SDCC, nor are their corresponding cotton production areas. This situation is a factor in over-estimating the yield.

Differentiation of producers

Despite the SDCC's numerous statistics, knowledge on producers seems to be poor. There is no real typology applied. This situation may be a result of the interruption of the operations of the *Cellule Suivi Evaluation* [monitoring and evaluation unit], which up until 2010 published a directory of farms. An implicit typology appears in the cotton production recovery plan document, using the size of the cotton production area, but this is only a proposal retained to account for the phenomenon of the emergence of 'large producers' farming more than 5 ha

of cotton, and on which the SDCC appears to be placing its bets for increasing production. Yet this phenomenon is already considered in the statistics of the DPA, which reflect the contributions of producers by size of cotton production area (8.14). The DPA also considers the relevance of adapting its technical support and training to 'large producers' in partnership with the *Projet d'Appui à la formation agricole et professionnelle* (AFOP) [project to support agriculture and professional training], making use of the infrastructure of the network of *Centres de Formation des Jeunes Agriculteurs* (CFJA) [young farmers' training centres].

Knowledge on farmers who do not produce cotton is even more limited. The proportion that these farmers may represent in a locality, village, area or sector of the SDCC is unknown. In other words, the number of farmers who could be involved in expanding cotton farming is unknown.

The analysis of the data from the survey carried out by the DES in 2017, while admittedly based on a sample over-representing 'large producers', provides information indicating that producers who were differentiated on the basis of cotton production area size are also differentiated on the basis of features of their families and their farms (8.15).

The distribution of producers by size of cotton production area varies, depending on the administrative region. Table 2-1, created with data from the DES sample, shows that the proportion of producers farming less than 1 ha of cotton is larger in the Far North region. This difference should be even more salient in reality because the sample used is biased in favour of large producers. The finding of the greater frequency of small cotton producers is in line with evidence on the demographics and the situation of greater demand on land. Despite this situation, the proportion of the Far North in total production is admittedly no more than approximately 35%, although this proportion has no longer been declining over the past decade (8.18).

Administrative region	Type 1	Type 2	Type 3	Type 4	Total
Far North	40.1%	47.6%	10.6%	1.7%	100.0%
North	18.7%	53.0%	24.6%	3.7%	100.0%
Total	30.3%	50.0%	17.0%	2.6%	100.0%

TABLE 2-1 : DISTRIBUTION OF PRODUCER TYPES BY ADMINISTRATIVE REGION (DES SURVEY)

The implementation of the system to clean up input credit had an impact on the distribution of producers between the four types considered by cotton production area size. Considering changes in the cotton production area and the number of producers, to deduce the average area per producer (8.19), this area has been shown to have increased continuously ever since the selection of producers eligible for input credits. The average area was stable up until 2009-10 from at least 1994, in other words, for approximately fifteen years, at around 0.55 ha/producer. It reached 1.30 ha/producer in 2017-18.

In terms of the populations involved, producers with a small cotton production area contribute the most, as indicated by Table 2-2. This table has been created using a distribution of the four types of producers that is more in line with reality, with 70% of producers in Type 1 and almost 25% in Type 2.

	Total	Type 1	Type 2	Type 3	Type 4
Number of producers	152,612	106,981	37,848	6,104	1,679
% producers		70.1	24.8	4.0	1.1
Population involved	1,301,440	791,769	379,121	92,697	37,853
% population involved		60.8	29.1	7.1	2.9
Number of children	911,874	542,186	273,222	68,468	27,997
Number family-field workers (> 12 years old)	665,726	401,319	195,841	48,309	20,257
Number of children <= 12 years old	246,148	140,868	77,381	20,159	7,740
% children <= 12 years old		57.2	31.4	8.2	3.1

TABLE 2-2 : TOTAL POPULATIONS AND CHILD POPULATIONS CONCERNED FOLLOWING CORRECTION OF THE DISTRIBUTION OF PRODUCER TYPES

With a total of 1.3 million people involved in 2017-18, up by slightly more than 152,600 producers, the two categories with a small cotton production area account for almost 90%. The same is true of the population of children under the age of twelve, who are of school-attendance age and therefore whose parents need money from cotton to send them to school.

Performance of producers by cotton production area size

Despite the process for cleaning up the list of producers eligible for input credit (8.7), a certain proportion obtaining a yield below the threshold remains (a yield varying from 700 to 900 kg/ha depending on the region, hence the average threshold retained in Table 2-3). 'Large producers' (who have between 5 and 10 ha of cotton) as it is significantly less common for them to be under the threshold, and more common for them to have a yield above 1,700 kg/ha.

Yield categories, kg/ha	Typology based on cotton production area				
	< 1 ha	1-5 ha	5-10 ha	> 10 ha	Total
<= 850	20.8 a	21.6 a	6.5 b	13.6 ab	17.7
850 to 1,200	25.2	28.1	14.9	13.6	24.0
1,200 to 1,400	11.3	9.9	17.9	9.1	12.0
1,400 to 1,700	17.6	19.2	25.0	36.4	20.7
> = 1,700	25.2 ab	21.3 b	35.7 a	27.3 ab	25.6

TABLE 2-3: SIZE OF COTTON PRODUCTION AREA AND CATEGORY OF YIELD

In terms of cultural practices and profitability per hectare, there are not many differences between the four types of producers (Table 2-4). 'Large producers' use less labour outside of the family, whereas small producers use less urea.

Exclusive case of male producers	Typology based on cotton production area				
	< 1 ha	1-5 ha	5-10 ha	> 10 ha	Total
Production per hectare, CFAF	293,786	307,834	383,553	346,946	317,063
Credit per hectare, CFAF	117,357	118,516	146,865	105,362	122,643
MARI* per hectare, CFAF	194,585	189,318	236,689	241,584	200,356
Temporary labour/ha, CFAF	15,839 ab	12,852 ab	18,813 a	7,956 b	14,642
NPK fertilizer dosage, kg/ha	146	139	155	145	144
Urea fertilizer dosage, kg/ha	15 b	26 a	30 a	32 a	23
*Margin after payment of inputs					

TABLE 2-4: INDICATORS OF THE ECONOMIC PERFORMANCE AND INTENSIFICATION OF PRODUCERS BY COTTON PRODUCTION AREA SIZE

A typology of producers that needs refining

It is worth noting that other typologies are possible based on the focus. To account for the increasing scarcity of grazing areas and the exacerbation of conflicts between sedentary farmers and livestock farmers, the criteria of cattle herd size (excluding animals for milking) may also be relevant, in particular to distinguish producers to which it is more appropriate to apply the status of crop-livestock farmer than exclusively crop farmer. 8.20 lists the features of producers differentiated according to this criterion. Almost 73% of producers do not have cattle, despite the fact that the sample over-represents large cotton producers. Livestock-crop farmers with at least ten cows account for only 6.8% of all producers. The criterion chosen also differentiates between producers based on the features of their families, their plough and cart equipment, the surface areas farmed and in particular with cotton.

The choice of the most relevant typology remains to be defined, and the purpose of the VCA4D study is not to do this; the work carried out only allows us to show that the SDCC has the data to do so correctly, after having decided on the goal of the typology. Considering the objective of achieving a production of 400,000 tonnes of seed cotton in the near future, for want of an existing typology, we retain the typology based on the cotton production area size, to identify different scenarios for achieving this goal. We pay special attention to changes in the distribution of producers according to this typology.

The role of women in production

Compared to the majority of the cotton VC in French-speaking African countries, the SDCC stands out through the participation of women in cotton production. Female cotton producers are defined according to the definition of cotton producers indicated above. In 2017-18, there were 19,466 female cotton producers (and 22,905 in 2018-19), following an irregular pattern subsequent to four years of growth starting in 2012, and reaching more than 30,000 in 2015 (8.14). The proportion of women among producers has stabilized, whereas the number of MGG containing women has increased (Figure 2.1). Even though there are MGG exclusively composed of women, women are most often included in mixed MGG.

The phenomenon of women who produce cotton on their own behalf is so widespread that PA that do not contain female producers are largely the minority (8.16). Across the nine regions, these PA account for less than 6% of the 1,545 active PA. It does appear that there is a difference between the two administrative regions, with the involvement of female cotton producers appearing to be more widespread in the Far North. The same trend is found for the presence of women on PA committees (8.10).

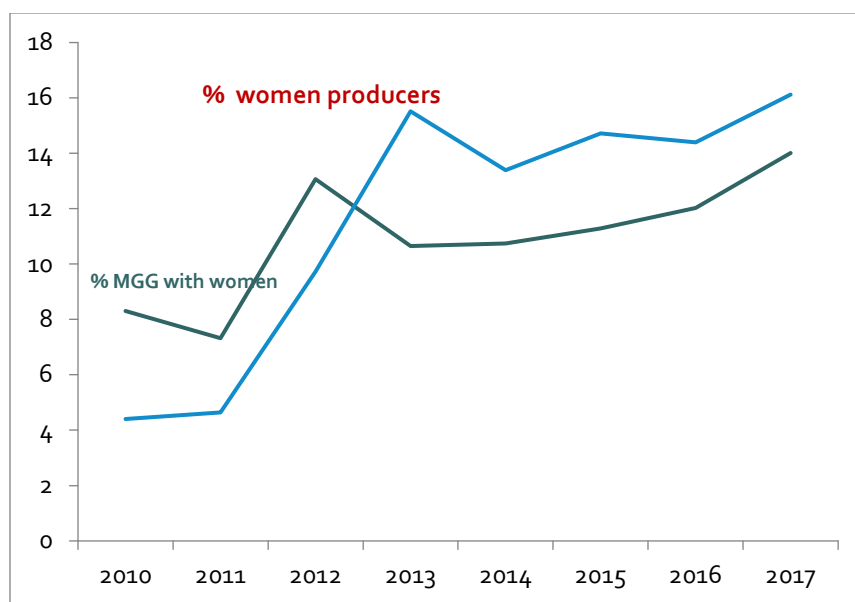


FIGURE 2.1: GROWING PROPORTION OF WOMEN AMONG PRODUCERS AND MGG

Little is known about cotton-growing women. The DSE survey does not address this topic. Communication between the SDCC's management and the CNPC-C indicates that they may be widows or married women who farm cotton as their husbands do, or married women who have returned to their father's farm, or single mothers. The respective proportions of these different categories of women are unknown; this is a knowledge gap that should be filled. In general, women's cotton production areas are smaller than those of men, except in the Touboro region, where there is more available land (8.17). Women's motivation for dedicating themselves to cotton farming is clearly affirmed in their desire to cover expenses related to their children's educational needs and healthcare.

2.1.5 Cotton research

In all countries in French-speaking Africa, agronomic research is heavily involved in the development of the cotton VC, but this appears to be very much the case in Cameroon, where national research and international cooperation are combined. In 2009, the SDCC, the IRAD and CIRAD partnered in a five-year tripartite collaboration agreement that was renewed in 2018, until 2022. A joint ownership agreement was signed in 2014 to transfer

research results outside Cameroon with any additional resources derived from being earmarked for research in Cameroon.

The goals of tripartite collaboration are to achieve a 50% increase in yields by improving and disseminating itineraries suited to climate changes and using fewer fertilizers and pesticides, with a view to preserving soil fertility. These goals are in parallel with training and support for the international recognition of researchers in Cameroon. The lines of research involved in attaining these goals are summarized in 8.21.

Under this agreement, the SDCC provides the support of its *Division de Recherche et Développement* (DRD) [research and development department] and provides the material and financial means necessary to implement and successfully carry out actions. As part of this support, the SDCC is unique insofar as it pays some of the IRAD researchers' salaries. Under the current agreement, it has committed to doing so for five researchers (two plant breeders, two entomologists and one weed specialist) and two technicians. The IRAD provides its infrastructure and contributes its researchers and technicians, assisted by the CIRAD with support missions and the execution of scientific analyses. The context of insecurity in Cameroon's North since 2012 has led the CIRAD to call back its researchers previously allocated to the region.

The fruits of this collaboration are tangible, as demonstrated by the very positive assessments of the IRMA Q302 variety. It is the latest creation stemming from a wave of discoveries that started with the IRMA L484 and IRMA L457 varieties, preceding a new, promising wave of varieties about being finalized. The genetic progress obtained by replacing varieties was based on the sharing of seed production responsibilities between the IRAD and the SDCC (see *infra*).

This collaboration is at the origin of new pest control methods that have turned away from scheduled insecticide applications to instead focus on infestation rate observations. This is the basis of the Sequential Plan for Individual Decision (SPID), developed just over a decade ago. During the 2014/2015 growing season, it already covered almost 20,000 ha, and its dissemination is predicted to accelerate. This collaboration has also enabled Cameroon to be the first African country to cease the use of pyrethroids in controlling cotton pod caterpillars, in accordance with the commitments made in order to benefit from the Cotton Made In Africa (CmiA) label.

The actions to be carried out are detailed in the annex to the tripartite agreement. With respect to the VCA4D study, it is worth noting that the desire to select varieties that produce more oil is clearly indicated. By contrast, the exploitation of agri-physiological knowledge is not explicitly mentioned. The management of the canopy or vegetable coverage by using cotton growth regulators – the positive effects of which have been noted above – is therefore not mentioned. This management can contribute to efficiently controlling plant densities, as is nonetheless indicated in the actions planned. Topping cotton is mentioned, but only in research on protecting the cotton plant, and not as a technique to improve the retention and development of pods to increase yields. Moreover, while the varieties farmed in rotation with cotton are considered in the planned research, intercropping cotton with other species is not mentioned.

2.1.6 Industrial textile transformation actors

The landscape of actors involved in industrial textile transformation, at least partially based on local cotton, has declined significantly over the past years, in particular since 2015. A 2015 World Bank study reported two actors in spinning (the CICAM and FAFINSA), three actors in weaving (CICAM, SYNCATEX and SOCAFTEC), two actors in knitting (BUETEC and FAFINSA), four actors in finishing (CICAM, COFIL, BUETEC and SITRACO) and four actors in clothing manufacture (CICAM, FAFINSA, BUETEC and Garment Makers). In 2019, the CICAM was the only actor in spinning and weaving, and BUETEC was the only actor in knitting, although using imported yarn. In the domain of the finishing of local cotton, the CICAM is actually the only actor involved, as the activities of the COFIL have been interrupted by a change in equipment, and this company no longer does anything other than clean the waste produced by the SDCC's ginning or the CICAM's spinning in order to export the resulting product. In cloth manufacturing, the CICAM is the only company active in the production of terry cloth articles.

CICAM

The Cotonnière industrielle du Cameroun (CICAM) [Cameroon industrial cotton corporation] has become the only organization that industrially processes cotton fibre produced in the country, with the volume of fibre consumed oscillating between 1,000 and 2,000 tonnes (8.22).

Set up in 1965 by French industrial corporations, the company was repurchased by the government of Cameroon in 2009 when its foreign investors, at the time French and German, decided to cease operations. Such a decision forced the government of Cameroon to take over the company to save its jobs.

The company has two production sites. The Garoua site, with a very spacious factory capable of welcoming new production equipment, is dedicated to spinning and weaving. Products are then sent to the Douala site, which has a dyeing and printing unit, as well as a terry cloth production unit. The CICAM group is the owner of the LaKing Textile brands and the Newco retail chain for the sale of its products.

The Garoua factory is dedicated to spinning and weaving. It is described in 8.23. We visited the Douala printing factory, which was shut down for maintenance. The equipment mainly consisted of machines dating back to when the company was created. The age of equipment has led to the establishment of an investment plan, the implementation of which, starting in 2013, has however been chaotic and irregular. 8.24 provides the up-to-date investment plan, for an amount of 36 billion CFAF, a subset of approximately 18 billion CFAF of which (8.25) is deemed to be the most urgent to materialize, and which was planned for 2019.

The CICAM's production is essentially based on pagne. The above-mentioned World Bank study indicated that from 1,600 tonnes of cotton fibre, the company produced 1,500 tonnes of yarn, 8 million linear metres of pagne and 300 tonnes of terry cloth. Pagne production has declined by more than 50% since 1998 (8.26). Since 2013, this production has stabilized at around 10-11 million metres.

The majority of pagne production is for events related to major festivities¹² in the country, as well as in neighbouring countries (Chad, the Central African Republic). In these countries, the textile industry has completely ceased to produce, despite the regional political will to develop it to utilize locally produced cotton. This production is concentrated in the first six months of the year. Pagne production based on the patterns of which the CICAM is the owner essentially take place in July.

The reduction in the CICAM's pagne production is a direct result of competition from Chinese products. This competition is formidable, and is considered unfair especially when imports are illegal, avoiding import taxes by making false declarations upon entry to avoid the tax on textile products. The sale price of imported pagnes is likely less than the price for purchasing cotton fibre at the Garoua factory. The sale prices of imported pagnes are approximately 50% less, partially because these products are not 100% cotton, but only 30 to 60% cotton.

Regulations for controlling imported textiles have been introduced, in particular including the criteria of 100% cotton, to reduce competition from Chinese products. These regulations have already been implemented¹³ but it remains to be seen whether this has been done effectively.

The CICAM also suffers from indirect competition from second-hand clothing, reducing the demand for new products. Second-hand clothing has even more of an effect on the CICAM's terry cloth articles, even though these articles benefit from a positive image among consumers, as opposed to that of pagnes.

Industrial textile processing will not be studied further in the functional analysis, as it would take us into the domain of industry beyond the skills of the team of experts. Moreover, the DUE indicated that a specific study of the industrial textile sector has been scheduled by the GmbH.

¹² International Women's Day (08 March), Labour Day (1 May) and the national holiday (20 May).

¹³ Regulations have been implemented since 29/01/2019 in the context of the PECAE (*programme d'évaluation de la conformité avant embarquement*) [program to evaluate compliance prior to loading onboard]. The standard used is NC 1817:2017 textile: specifications for household linens - minimum requirements, and NC 1816:2017: specifications for pagne - minimum requirements.

The information obtained from the CICAM has allowed us to estimate the global operating account for this enterprise, without being able to do so separately for its different activities of spinning, weaving, dyeing/printing and clothing manufacture. Analyzing this account in the economic analysis section will allow us to discuss the viability and sustainability of industrial textile processing.

COFIL

Coton hydrophile du Cameroun (COFIL) [absorbent cotton of Cameroon] was created¹⁴ in 2007 to be the only company in the subregion to process the waste of ginning and spinning factories, from which it produces absorbent cotton. The company was designed with two units located in Garoua and Douala, respectively. The goal was to process, at the Garoua unit, the linter¹⁵ produced as a byproduct at the SDCC's ginning factories and the waste from cleaning fibre and framing prior to spinning (cardage avant filature) at the CICAM's spinning factory. The resulting product, following several stages of cleaning and mixing, is then sent to the Douala unit to be exported or to produce absorbent cotton (cotton is naturally water-repellent) and related personal care products (such as make-up remover pads).

In 2014, the year in which some of the operations were ceased, until their resumption in mid-2018, the company employed approximately forty employees, although its activities appear to have been significantly reduced during our study. We were able to interview the manager of the unit for cleaning linter and waste products of cotton cleaning prior to framing. The unit, which we did not see in operation, has been reported to employ 19 people. The work carried out consists of completing cleaning and homogeneously mixing the fibres derived from linter and spinning waste, which have different lengths. The absorbent cotton production unit in Douala, which is awaiting new equipment, appears to have not yet resumed operations.

It is not possible to include the COFIL in the study to calculate the value added that it provides to the VC. We were unable to meet with its management in order to obtain the necessary data. Moreover, the company's website has not been functional since mid-March 2019. The company has however purchased linter from the SDCC since 2013/14, in increasing quantities, from 383 tonnes in 2013/14 to 1,754 tonnes in 2017/18 (8.22). We can assume that the product obtained at the Garoua unit is exported outside Africa without being processed into absorbent cotton.

2.1.7 Artisan textile processing actors

Processing in the cotton basin

The importance of artisan textile production is relatively well-known in Cameroon. This acknowledgement was the reason behind a study of operators in the cotton/textile/garment making industry carried out in 2014, the results of which were published in 2016. However, with respect to artisan textile making, the study included only urban workshops, and did not address the nature and origin of the raw materials used. These materials did not have to be cotton, nor did they have to be from the country.

In rural areas, cotton-based artisan textile production is found in the North and Far North regions, but its magnitude is little known. In 2005, at the initiative of the SDCC and in collaboration with the OPCC, a survey was conducted over a 40 km radius surrounding Maroua to count spinners, weavers and embroiderers. Even though this artisan tradition remains, it seems to be declining, as it has little appeal for young people. 217 spinners, 240 weavers and 22 embroiderers were counted.

¹⁴ By a couple, the husband of which was an engineer at the CICAM at the time, and who at the end of his career was responsible for managing it. The company was set up thanks to the participation of a Belgian partner, the Cotton Invest Group, a 30% shareholder of the company. Through the latter's contribution of the 220 million CFAF necessary to start the company, financing of 1 billion CFAF was subsequently able to be obtained in order to launch lint bleaching activities in Douala.

¹⁵ Short fibre recovered from ginning waste.

Production of luxury *boubous*

In the North region, the production of ecru luxury *boubous*, *gandouras* or *dimols* is a tradition that appears to be maintained in approximately 100 villages in the area surrounding Guider, or at least this is the estimate obtained during the visit to the village of Mayo Oulo, where a textile production artisan association operates. Approximately 200 people are involved in it, for a monthly production of approximately 20 *boubous*.

The production starts with seed cotton, using 100% cotton and no synthetic chemical products. We also find cotton naturally dyed brown, produced on a very small scale, to create embroidery thread. The colour green is not known.

The starting point of this sub-chain is the SC purchased on-site by spinners in the village in question, or sometimes taken directly from their own fields if they have them. The small quantity used has a minor effect on the production commercialized by the SDCC.

Spinners manually gin SC prior to spinning the fibre obtained on a distaff. This is carried out mainly by elderly people, including both men and women, and they account for almost 70% of the artisans involved in the village. To obtain a spindle with approximately 20 g of yarn, 4 to 5 days of work are necessary, consisting of three days to gin the SC by hand and one to two days for spinning. The artisans with whom we met are unaware that relatively simple tools for ginning exist, such as handle-operated roller gins. The introduction of this type of tool would greatly increase productivity without negatively affecting the artisanal and traditional nature of the products manufactured.

Spindles of yarn are purchased by weavers for a price of 150 or 250 CFAF depending on the weight of the yarn. Weavers can be men or women, young or old, and the majority are specialized in this activity, even though some of them also carry out spinning. Weaving is carried out on small looms created on-site from small pieces of wood, in particular bamboo bark, to obtain strips with a width varying from 2 to 4 cm. It is indicated that one month of work is necessary to obtain the 75 linear metres of fabric from approximately 100 spindles of yarn necessary to make a *boubou*.

Clothing makers, who at times also do embroidery, purchase strips of fabric to assemble them manually before embroidering patterns with a varying complexity. A roll containing 75 m of fabric, with a width of 2 to 3 cm, is sold for 40,000 CFAF. The product is completed following a beetling stage to smooth out irregularities in strips of fabric and to obtain a flat garment. Beetling requires strength and endurance, and is mainly carried out by young men, who are paid 5,000 CFAF/*boubou*.

Some people are specialized in embroidery and may make partial use of yarn dyed greenish black, using natural colourants obtained from certain plants. They are paid per garment, between 25,000 and 40,000 CFAF depending on the complexity of the embroidered patterns.

The product is sold by clothing makers/embroiderers, at a price of between 80,000 and 120,000 CFAF. Lamidate chiefs make up a significant proportion of customers, but it appears that any person who has achieved a certain social status is required to own this type of *boubou*, or even several of them.

Artisan *boubou* production will be included in the VCA4D study thanks to the information collected to estimate the value added by the different occupations involved. Considering that SC is purchased independently and only a small quantity is used, this sub-chain will not be mentioned further in the remainder of the functional analysis. We can however emphasize that this sub-chain, the intermediate consumption of which consists only of the SC taken, in its majority from artisans' fields, without requiring any capital, probably results in a very high level of value added, which is mainly used to remunerate local work.

2.1.8 Systems of actors and functions considered

The cotton VC in Cameroon is particular in terms of three aspects affecting the cotton sector. Further details on the actors presented above is not necessary. This is a highly integrated VC, with the central role being played by the SDCC, which purchases the SC from producers, gins it and then crushes the seeds derived from ginning. It is also a VC in which two actors adopt two important functions, but in the form of providing services in collaboration

with the SDCC instead of the latter carrying out services directly: the PA manage the input credits associated with commercialization and monitor the farming season; and the CNPC-C supplies inputs. Ultimately, it is a VC in which the execution of public service missions by the cotton company is recognized and financially compensated (albeit partially and with delays).

The SDCC thus constitutes a subsystem that will be addressed in the three functions called commercialization of SC, ginning and crushing. PA and the CNPC-C do not appear to be subsystems that generate direct effects but rather service providers in the SDCC's function of SC commercialization.

The VC graph (Figure 2.2) shows the relationships between the actors presented in order to convey: i) the specific nature of the partnership between the SDCC and the CNPC-C for services to provide inputs to producers and to professionalize PA, and ii) the conducting of public service missions by the SDCC. The SDCC can therefore be represented as having a component that executes certain functions in collaboration with the CNPC-C. However, the conducting of public service missions will not be specifically addressed in the economic analysis, because it is outside the scope of VCA4D analysis, which is focused on the development of an agricultural product. PA provide the service of commercializing seed cotton. To understand the graph, the following should be noted:

- Shapes drawn with solid lines are actors; actors in product processing are represented by rectangles;
- Dotted shapes represent service providers;
- Solid line arrows concern exchanges of cotton products; single lines are used for intermediate products and double lines are used for finished products;
- Arrows with dotted lines are the objects of the services provided (inputs, professionalization of PA, FOB arrangement services); these arrows, when they do not point to a specific actor, correspond to public service missions (rural roads, livestock farming and research).

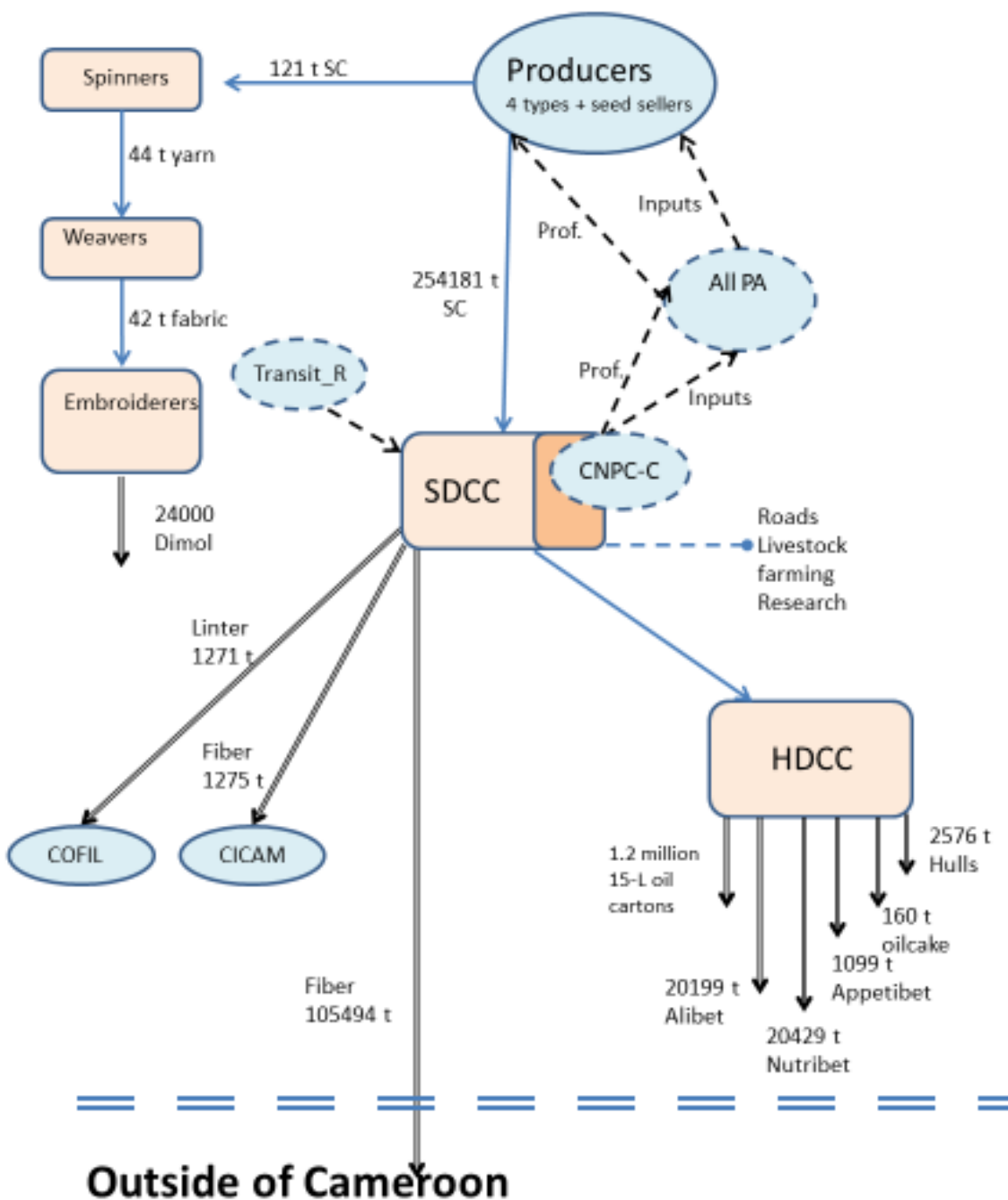


FIGURE 2.2: GRAPH OF THE COTTON VC OF CAMEROON

2.2 Production, acquisition and distribution of inputs and equipment

2.2.1 Production and distribution of seeds

Production of seeds in partnership with research

Due to the very positive assessment of the Q302 variety, mentioned above, seed production today explicitly concerns this variety. According to the usual procedures, the seed production system involves the IRAD in the first generations of seeds of a variety. The IRAD is responsible for preserving G0 pre-base seeds and for producing G1 seeds. The latter are produced on isolated plots, at stations and under the responsibility of researchers, up until ginning and delinting of seeds (elimination of the fluff covering seeds following ginning). The G2 and G3 seed production methods under the supervision of the IRAD are summarized in 8.27.

Method for producing certified seeds in village environments

For a long time, seeds have been produced as a part of a rural seed production system, in which the production of all the farmers in a pre-identified number of villages is destined to be ginned to produce seeds. The table in 8.28 indicates that the number of villages has fluctuated between 200 and 500, with this number tending to decline to around 200, and with approximately 100 seed producers per village on average. The number of seeds produced greatly exceeds needs, which provides margins for excluding batches with an inadequate germination capacity, and for delivering seeds to other countries¹⁶.

Seed is purchased at a higher price from seed producers than the price applied to general producers. This price was 270 CFAF/kg compared 245 CFAF/kg during the 2017-18 season. In return, seed producers must intensify fertilizer use, at a rate of two bags of complex fertilizer per hectare.

Seed producers also benefit from the faster transportation of their production, which must be ginned separately from ordinary production.

Types of seeds produced and their distribution

The SDCC produces and distributes two types of seeds. The majority of production is composed of seeds with hulls (with a fluff covering), accounting for approximately 90% over the past years, as indicated in 8.28. Delinted seeds, obtained by treatment with sulphuric acid using artisanal or even rudimentary equipment, are obtained at six small units located in ginning factories.

The SDCC has not yet transitioned to industrial seed delinting to cover producers' needs, even though this has been an objective for more than ten years. The recovery plan established in 2017 planned for the transition to industrial seed delinting, but this goal had not yet been attained by March 2019, even though the investment decision had reportedly already been made.

The seeds produced are distributed according to the methods described in 8.29. Seeds are free, distributed in doses of 40 or 20 kg/ha for fuzzy seeds and delinted seeds, respectively, but producers must pay for the products used in their chemical treatment.

High-dosage distribution of fuzzy seeds is adapted to the current practice of manual sowing but would not be as suitable for the generalized use of delinted seeds, the production of which often involves coating in chemicals. The transition to using delinted seeds may require a transition to mechanical sowing, making use of the numerous seeder models available.

¹⁶ This is the case of Chad for the season underway. Chad ordered 8,100 tonnes of seed and thus benefits, at a low cost, from the advantages of the Q302 variety in terms of productivity in the field, industrial yield during ginning and the technical quality of the lint.

2.2.2 Acquisition and distribution of chemical inputs and agricultural materials

Acquisition of imported chemical inputs

The acquisition of inputs via import and their distribution to producers is the subject of a close partnership between the SDCC and the CNPC-C. This partnership is explicitly defined in the aforementioned agreement.

The inputs for import are for cotton farming as well as maize and soy, two crops that can benefit from the input credit when they are grown by cotton producers, although according to a predetermined ratio. For example, a producer farming X ha of cotton can benefit from an input credit for X/2 ha of corn. Inputs to be acquired via import include fertilizers (compound or complex NPK fertilizers, urea), seed treatment products, insecticides and herbicides, and to a lesser extent, cotton growth regulator, which is still seldom used.

The mechanisms for acquiring inputs, described in Annex 30, appear to satisfy producers quantitatively and qualitatively. We heard no criticism of the quantities available or the quality of the inputs distributed. On the contrary, this quality is considered to be a factor allowing the yields obtained to be achieved. Annexe 31 gives an overview of the changes in quantities and amounts ordered over the past three seasons. For the 2017-18 season and for inputs as a whole, the total cost price of imports up until placement in villages was 28.1 billion CFAF (after deducting the purchase cost of agricultural equipment). This should be compared to the 23.3 billion CFAF of credit to be recovered from producers for the same season and for the same inputs, but based on the quantities effectively distributed and used by farmers (8.32). We can see that fertilizers account for the largest proportion of the credits allocated, followed by insecticides.

Local acquisition of farm implements

Animal ploughing implements are acquired from local suppliers in accordance with the needs expressed by producers at PA, at the same time that they indicate their crop intentions and their need for agricultural inputs.

Implements – like inputs – are ordered by the CNPC-C. The purchase prices correspond to the deliveries of the material at the warehouses of SDCC sectors, without requiring additional fees for placement by the CNPC-C or the SDCC. The history of purchase prices is shown in 8.31.

Process of transportation to villages

The SDCC distributes suppliers' inputs from delivery points to producers in the villages. It is responsible for transportation to users and for granting credit and for recovering the amount on behalf of the CNPC-C.

The SDCC is thus responsible for the distribution service, the compensation for which is specified in the aforementioned agreement, at a flat rate of 3% of the value of inputs provided, in addition to reimbursement of the transportation expenses incurred according to a scale negotiated in advance between the SDCC and the CNPC-C.

Process of distribution on credit

The PA distribute inputs to producers, largely but not exclusively on credit, based on the needs expressed in advance by producers acknowledged as being eligible according to the chosen criteria (Annexe 7). The results of applying the yield criterion appear good, but not completely infallible. Analyzing the individual data of PA showed that 5.8% of PA had an average yield under the eligibility threshold for input credits (Annexe 33). The effect of climate is nevertheless seen here, because the rate of these types of PA is greater in SDCC regions in the northern part of the intervention area.

A dual method of selecting producers and a two-level guarantee (according to the terminology used at the SDCC) is implemented, as described above, to reduce risks of non-payment. In the event of the failure of a producer to fully repay his or her credit¹⁷, the other producers in the same MGG must step in to pay, thus establishing the

¹⁷ It must be noted that problems repaying loans may be for reasons that do not call into question the good faith or intentions of a producer (such as the producer's unavailability due to illness), but they may also be due to dishonest

principle of mutual guarantee which presided over the creation of the MGG. If the mobilization of this intra-MGG guarantee is inadequate or ineffective in covering the amount owed by the producer, the MGG's eligibility for acquiring inputs will be questioned for the following season. The entire MGG in that PA will be called upon to apply the second-level guarantee, with failure to do so involving the penalty of the non-eligibility of the PA for input credits.

The supply of inputs to cotton producers is not exclusively limited to cotton farming; it is also available for these producers' maize and soy crops, although according to the conditions defined for eligible areas, as mentioned above. The provision of fertilizers for maize farming was implemented to reduce the phenomenon of 'misappropriation', in other words, the allocation to maize farming of a portion of the fertilizers purchased for cotton farming. The provision of fertilizers for soy was the result of a campaign to promote this crop.

The two guarantee levels were implemented during the 2017-18 season, with quite favourable progress if the case of the 2016-17 season is disregarded, as during that season the MGG mutual guarantee mobilization rate was clearly higher (8.34). The mobilization of the second level of the guarantee was much more frequent than that of the first level, indicating that the size of MGG is often too small to cover the default of one or several of its members.

Poorly controlled effects of the selective credit process

The application of approval criteria means that not all farmers are eligible for input credits and therefore to be listed as cotton producers. It also implies that the desired quantities cannot be met for all producers. Quantities eligible for input credits are related to cotton farming areas, approved by the PA in conjunction with the SDCC area manager. It is however possible that the farm area stated by a producer may not be accepted as such.

As a result, cotton production not covered by input credits exists, especially when it is possible to purchase inputs upfront and at the same price as on credit; however, very little if anything is known about the degree of such production. It may be practised by farmers who were unable to acquire inputs on credit or those who wanted to farm an area greater than that which allows them to obtain inputs on credit. SDCC statistics do not include the cotton production areas not covered by input credits; this is a factor in overestimating the yield, as indicated above. It is also impossible to ascertain which areas are farmed with inputs purchased upfront, as the corresponding statistics do not appear to be used. It would moreover be much more problematic to find out the areas farmed through arrangements between producers to share inputs purchased on credit. Likewise, it is difficult to identify the degree of 'misappropriation' of cotton inputs to subsistence crops, because producers find that the ratio of maize/cotton production areas eligible for input credits is too low.

Financing process or inputs fund

The acquisition of inputs and agricultural materials is carried out using the set of financial means commonly called the 'inputs fund', which has been established progressively over the years. In essence, the 'inputs fund' is a revolving financing device used to renew the financial means, with little or no erosion, left behind by the management of prior operations to support the VC with financial resources of different types, as indicated in Table 2-5. The nature of prior operations is listed in 8.35. The starting point of the 'inputs fund' was farmers' demand that the government consider the isolation of the cotton-growing region, which results in high transportation expenses.

behaviour. This is the case of an arrangement consisting of passing on a portion of one's crop to be sold by another producer. This practice, called '*coxage*' in the region, causes the producer in question to have a crop that is inadequate for paying back his or her input credit. This is prohibited, and producers are called upon to denounce it if they are aware of it. It is difficult to indicate the extent of such a practice.

Sources	Year Established		Current Amount in billion CFAF
	Start	End	
Producer savings	1996	1998	7,000
PSIE			7,000
ITFC contribution	2012	2017	14,540
PPP Project balance	2015	2015	0,350
Various government actions	2008	2016	4,124
Total			33,014

TABLE 2-5: COMPOSITION OF THE INPUTS FUND

The operation of the 'inputs fund' is described and discussed in 8.36, with the following salient features:

- It is hosted by the SDCC, in exchange for a remuneration of 4%; the 'inputs funds' can potentially be used to purchase imported inputs.
- In reality, the existence of this fund does not eliminate the need to use bank loans from the BADEA or the ITFC, thus justifying the inclusion of financial expenses in calculating the cost price of inputs.
- The inputs fund helps the SDCC to face cash flow problems, which can also be the result of a delay in the national government making payments owed to the SDCC, without eroding this fund.
- The operation of the 'inputs fund' is sustainable owing to the almost complete repayment of all of the types of credit taken out by producers, and the integration of the operating and management expenses related to these credits.
- The fund has increased in volume over time; it is therefore important to note that it is basically the producers' fund.

Cost and sale prices of inputs and materials

For chemical inputs acquired by import, the cost price is calculated by the CNPC-C for each input of each type, taking the following into account:

- The FOB import price;
- The cost of CIF (Cost, Insurance and Freight) arrangements;
- Unloading expenses, including inspection at the port of receipt (carried out by the SGS) and the payment of customs and transportation fees; this expense is indicated as a tax, but it is more of a service;
- Rail or road transportation expenses up to N'Gaoundéré or Pitoa, near Garoua;
- Transportation expenses up to PA;
- Financial expenses;
- Management expenses;
- The VAT applied to all of the services involved.

The proportions of the different components of the cost price of imported inputs, and in particular NPK fertilizers, are given in 8.37; the results should be similar for urea. While the cost of importing fertilizers is certainly the most significant item, additional costs once fertilizers have arrived in Cameroon account for over 40% of the cost price. Transportation to producers accounts for over half of these additional costs. The management fees allocated to the CNPC-C are calculated at a rate of 3%, but the base price to which this rate has been applied has fluctuated.

Sale prices are established based on the analysis of cost prices, in collaboration¹⁸ between the CNPC-C and the SDCC. Table 2-6 lists the cost and sale prices for NPK fertilizers and urea for the past three seasons to show discrepancies, which may be positive or negative. The total amount of discrepancies (balance) is relatively low compared to the total value of fertilizers distributed, which constitutes the main part of the input credits for cotton farming.

	2015-16				2016-17				2017-18			
	Q. purchased	Cost Price	Sale Price	Balance	Q. purchased	Cost Price	Sale Price	Balance	Q. purchased	Cost Price	Sale Price	Balance
	Tonnes	CFAF/50-kg bag	10 ⁶ CFAF		Tonnes	CFAF/50-kg bag	10 ⁶ CFAF		Tonnes	CFAF/50-kg bag	10 ⁶ CFAF	
NPK fertilizer	15,000	19,861	20,500	191.70	38,000	20,742	18,881	-1,413.36	45,000	16,826	17,000	156.60
Urea	4,200	19,461	19,500	3.28	11,000	20,500	19,500	-220.00	12,000	15,154	16,000	203.04
Total				194.98				-1,634.36				359.64

TABLE 2-6: COST AND SALE PRICES OF FERTILIZERS

For other inputs, which essentially consist of pesticides (herbicides, seed treatment products and insecticides), the situation is more varied depending on the types of products considered, as indicated by the situation analyzed for the 2015-16 season (8.38). For herbicides, with rare exceptions, sale prices are substantially greater than cost prices, with the difference being retained, along with the management fees applied to all inputs, to cover the CNPC-C's operating expenses. The result of this is a provisional balance of sales with a surplus, which constitutes the majority of the balance for pesticides as a whole. For insecticides, there is a levelling off between some products and certain other (expensive) products being sold largely below the cost price, contrary to others. The balance remains a surplus, but of a relatively small magnitude.

With regards to animal ploughing implements, the numbers obtained from sales forecasts are relatively low in terms of the number of cotton producers (8.39). For all types of equipment, sale prices are slightly greater than purchase prices. Producers purchase equipment at sector stores, and it is their responsibility to transport these materials to their farm. Management fees must exist on the level of the SDCC, but they are probably low.

Inputs and materials that receive few subsidies or are even taxed

Overall, producers pay the real price of fertilizers; they do not benefit from subsidies in the use of this input, despite its importance for productivity, as opposed to their equivalent in other countries in French-speaking Africa¹⁹. There was a time when the national government subsidized fertilizers, but that came to an end in 2013 (8.40).

The establishment of an 'inputs fund' did not result in a reduction in the sale cost for producers, to offset the handicap of distance/isolation stated in the complaint submitted and which was at the origin of this fund. Transportation makes up 20 to 25% of the cost price of fertilizers, and producers cover this expense.

According to the analysis presented in 8.41, producers use inputs at costs that are higher than necessary:

- Fertilizers are sold at a price with a slight markup;
- For pesticides, the situation is more diverse. Producers are taxed quite substantially when using herbicides. For insecticides, producers benefit from equalization between types of products to smooth out the financial effects of more recent products, which are more effective but significantly more expensive;
- Overall, for all pesticides, the financial balance is a surplus of approximately 10% of revenue according to the calculations that we were able to carry out for the 2015-16 season (8.38);
- With regard to agricultural materials, support concerned carts only, and was relatively limited.

¹⁸ In practice, cost prices are calculated by the input management department and the executive management of the CNPC-C, and are then submitted for initial examination by the president of the board of directors of the CNPC-C and the DG of the SDCC. Once approved by the board of directors of the CNPC-C, prices are jointly announced by the executive director of the CMP-C and the SDCC's DPA. Ultimately, it is the board of directors of the CNPC-C that makes the decision.

¹⁹ For example, this is the case of Mali. In Togo, inputs are exempt from taxes.

Repayment of credits

By means of PA, the SDCC grants different types of credits, of which the majority are input credits for cotton farming, in terms of both the number of producers concerned and the amounts. Input credits are also granted, in a different way, for maize and soy farming. Farm implements for animal ploughing are provided in the form of a short-term loan over two or three years. A different type of credit is available for pesticide application devices. Last of all, credit is also granted to members of PA, in the form of liquidity or advances.

In managing the credits granted, the amounts owed against the credit during the year and the reimbursements made are recorded differently for each type of credit. The collection of overdue amounts is also recorded differently for each type of credit, as indicated in 8.42.

An analysis of series of data for the 2011-2017 period regarding credit (8.43), provided by the DPA at our request, shows that overall, the reimbursement rate for credit is very high on the whole, at almost 100%, including for advances against the harvest granted by PA to their members. This can be associated with the two-level guarantee mechanism described above. This mechanism is itself strengthened by the selection of producers eligible for input credits: any farmer with overdue amounts is no longer eligible for a new credit, so long as these amounts have not been repaid.

2.3 Commercialization of seed cotton

2.3.1 Production of the 2017-18 season

During the season analyzed, production maintained the level achieved during the previous two seasons, with a very slight increase (8.2). The contribution of the nine SDCC regions, distributed between the two administrative regions of the North and Far North, nonetheless varies widely (8.44).

The data obtained for each of the 1,544 PA show that the two administrative regions of the North and Far North contributed equally to production, but not in terms of the number of producers. Compared to the North region, producers in the Far North were more numerous (72.3% of the total), were members of a larger number of PA (57.5% of the total) and were more numerous per PA. Producers in the Far North farm a total cotton production area that is slightly larger (53.1% of the total), but the cotton production area per PA and producer is smaller. The yield is slightly lower in the Far North, as is production per PA and per PA member.

The large majority of female cotton producers are registered in the Far North region (75.8% of the total), where only 2% of PA do not contain female cotton farmers, compared to 5.7% in the other region.

The two regions are similar in terms of the way of commercializing cotton, if we consider the difference between cotton weight during SDCC factory weighing, and cotton weight in villages during commercialization by PA (2.8% compared to 2.6%).

2.3.2 Commercialization at a regulated price tied to the global market

Price regulated and announced prior to sowing

The cotton VC in Cameroon continues to use the system of advance announcement of the purchase price, which must be respected systematically across the country; in other words, the price applies to the entire cotton-growing region, to all producers in this area and to the whole commercialization season. This is a practice that dates back more than fifty years and which is used in all cotton-producing countries in French-speaking Africa. This method gives cotton farming the advantage of certainty in terms of the sale price, which other potential competitor crops do not have. This advantage is even more significant considering that the market has become more uncertain for the latter crops due to the new policy adopted in Nigeria, which discourages the import of agricultural products.

In practice, the purchase price is announced around the end of April (and for seeds, at the end of May at the earliest) and is concretely based on three qualities (commonly called 'choices') of SC illustrated by sample boxes at the point of purchase. The differences in price for the three 'choices' of SC are relatively limited. For the 2017-

18 season, these were 245, 235 and 220 CFAF/kg, respectively. Production is almost exclusively purchased as first-choice.

Until recently, less than ten years ago, and in all countries in French-speaking Africa, the purchase price for first-choice SC was obtained by applying a formula that estimated the global price in advance as the basis for obtaining the price that producers would get. In the calculation method, the different costs incurred from ginning to preparation for export were often taken into account.

Price risk management mechanism

The method of announcing the purchase price in advance, early, requires an intra-annual stabilization system to mitigate fluctuations in the global market. The mechanism currently in effect emerged in 2009, when the stabilization fund implemented previously was completely used up following more than two years of low prices worldwide.

The functioning of the mechanism and the adjustments made are described in 8.45. The global price reference to apply the mathematical formula used was initially the Cotlook A Index. At the proposal of a consultant, it was later decided to use the short-term market index of the New York Stock Exchange, and it is henceforth planned to use the prices effectively obtained during export sales by the SDCC. In its operation, the mechanism is seen as a way to demonstrate the solidarity and partnership between the SDCC and the CNPC-C, without automatically adopting the results of the mathematical formula.

The current mechanism seems to work well and to be accepted, but information on it does not appear to be complete, and communication has been poor. A representative of the Ministry of Trade does not appear to know about the mechanism. We also heard a member of the CNPC-C's management committee indicate that the mechanism takes into account the costs of repairing roads.

It is also necessary to remain vigilant when applying the mechanism. While the option of granting 66% of the global price is taken into account in determining the floor price, the proportion effectively obtained on the basis of the export price is not calculated ex post.

An even more delicate matter is the choice of the right global price reference. While the reference used to follow changes in the global price has varied in order to best reflect reality, the corresponding type (quality) of cotton must be considered. The Cotlook A Index and the short-term market price of the New York Stock Exchange do not refer to the same types of cotton; moreover, the short-term market of the New York Stock Exchange uses only American cotton and in a spot position. The A and New York indices refer to Middling + 1¹/₃₂ and Strict Low Middling + 1²/₃₂ grade and length of cotton, respectively. Cotton from Cameroon has a good quality and a longer length (cf. infra), which is significantly better than that which is considered in the New York index. We do not see how the difference in quality is taken into account in the mathematical formula for calculating the floor price to offer, if it is considered at all.

Is also necessary to be vigilant when referring to effective prices for export from Cameroon. If the export price obtained is less than what it should be (cf. infra), this will be detrimental to effective export prices, if these prices are not set properly in advance.

2.3.3 Credit for commercialization

Obtaining credit is necessary for launching the commercialization season, hence the name 'season credit'. This credit is used not only to obtain liquidity to pay producers, but also to acquire the means to operate the fleet of vehicles and factories.

For the season underway, the SDCC has a set of revolving lines of credit, all of which are renewable from one year to the next so long as there is no default on repayment. These credits, which can be used until November, are:

- An ITFC line of credit for €78 million at 3.75%, equivalent to 51 billion CFAF.
- Lines of credit from three local banks lent at 4.9%: Afriland for 20 billion CFAF, Commercial Bank of Cameroon for 10 billion CFAF and UBA for 3 billion CFAF.

All of these lines of credit use sale contracts as collateral. In practice, merchants who purchase cotton fibre pay the bank in question directly, which withdraws the amount corresponding to it and deposits the remainder to the SDCC's account. The use of the lines of credit granted is therefore progressive as a function of the portfolio of sale contracts. As of 01/03, only 17 billion of the ITFC line of credit had been used.

Given producers' significant delay in paying, noted during the current season, the acquisition of season credits is not all that easy. This is related to the mobilization of the ITFC line of credit, because it is a portion of a larger sovereign loan granted to Cameroon, of which three companies are the beneficiary. Use of this credit is blocked whenever there is a default on repayment recorded in the country. As the SONARA, the country's oil company, defaulted on its payment, this has prevented the SDCC from drawing on the line of credit.

2.3.4 The central role of PA in commercialization

The commercialization of SC is carried out by producers in accordance with the three-year partnership agreement between PA, the CNPC-C and the SDCC (8.8). The mechanisms of commercialization are stated in the annex to the contract in question (8.9). More specifically, the annex establishing the mechanisms of commercialization can be updated each farming season.

The tasks undertaken by PA to commercialize SC in villages are described in 8.46, as well as the practical methods for weighing during commercialization. Each PA assembles and mobilizes a purchasing team and workers to store the commercialized SC until it is transported to the ginning factory. Tasks carried out according to requirements are rewarded with the payment of a premium. Weighing is carried out in order to produce the positive differences observed at the SDCC's weighbridge, the source of an income called the PA weight difference, but at variable rates depending on the PA, contrary to what would be expected (last line of the table in Annexe 44).

The execution of commercialization creates seasonal jobs that benefit 9,000 people, according to our estimates based on 1,500 purchasing teams of 6 people each. The purchasing teams are remunerated by the PA, but the funds are provided by the SDCC. Other people may derive financial benefits from commercialization²⁰.

2.3.5 The professionalization of PA, an important lever in commercialization

The proper execution of the tasks to be carried out requires assistance and training, which are provided in the context of an action called 'professionalization', as noted above. The *Division de professionnalisation* (DP) [professionalization department], a mixed structure belonging to the SDCC and the CNPC-C, operates with a department manager, a PA account monitoring manager, 9 regional professionalization managers, 7 PA managers and 93 PA professionalization managers, as well as PA staff²¹.

Support is provided to PA individually as well as to larger group structures to which they belong, such as unions and federations. It revolves around two intense times during the cotton season: prior to the start of the farming season and prior to the commercialization of SC. Support takes place through training on different management actions and the supervision of proper execution.

Cleaning up of PA producer lists

At the beginning of the farming season, the support provided is related to cleaning up producer lists based on the criterion of the repayment of credits for the previous season. The idea is to exclude from the list of producers eligible for input credit, those producers who have amounts owed that are deemed to be excessive. The cleaning up of producer lists also implies cleaning up MGG and PA. The result of this process is a list of so-called pilot (or active) PA, satellite PA and suspended PA. These three types of PA respectively accounted for 1,545, 140 and 382 PA out of a total of 2,067.

²⁰ This is the case of labourers offering their services to tie up bales prior to the weighing of SC. Payment follows a flat rate scheme per bale, which is an incentive to producers to make bales that are as large as possible. The SDCC has therefore limited the maximum weight of bales. Loading lorries can also be a source of financial compensation.

²¹ For the 2017-18 season, there were 1,569 managers and 1,544 warehouse clerks.

The process to clean up PA also includes approving the list of staff hired by PA for operations, composed of crop monitoring agents, warehouse clerks, managers and security guards.

Authorization of PA to commercialize SC

Support to PA to prepare for commercialization takes place by obtaining authorization to carry out this function. For the 2017-18 season, out of the 1,545 active pilot PA, 1,445 received complete authorization enabling them to carry out the commercialization of SC with the purchasing teams that they had set up. The remaining 100 or so PA received partial authorization, requiring them to carry out commercialization under the oversight or in collaboration with the purchase teams of fully authorized PA.

Support for unions and federations

The support provided is focused on organizational and structural aspects aimed at good governance in the operation of PA. The DP ensures that meetings and general assemblies are held within unions.

According to the available statistics (8.47), an average of three meetings are held per PA union, as well as 1.5 ordinary general assemblies (GA). Almost all the unions also held an extraordinary GA.

2.3.6 Transportation, payment and income tied to commercialization

Removal of commercialized SC from farms

The removal of SC from farms is designed to be paired, to the extent possible, with the transport of inputs to villages, in order to avoid empty trips. This removal of SC is exclusively carried out by the SDCC's multi-container lorries. These lorries are purchased with eight containers each to optimize the number of rounds; each lorry carries two containers at once, one of which is towed as a trailer. Under normal conditions, for a single lorry, two containers are left in the village for loading while two are used to transport cotton to the factory, where four more have already been delivered for the ginning of their contents. During the 2017-18 season, 101 multi-container lorries were used, complemented by 13 box lorries. Owing to the implementation of the recovery plan in 2017, the fleet of multi-container lorries was able to be increased by 40 units. This had the effect of slightly decreasing the average age of the vehicles, which nonetheless remains high.

The operation of the entire vehicle fleet is the subject of an end-of-season report to evaluate a variety of performance indicators (8.48). These indicators vary widely over time (between the beginning and end of the ginning period) and between regions, with those of Garoua, Mayo Galké and Touboro clearly showing the worst levels, particularly in terms of the number of rounds per day and per lorry. The average distance per round indicates the distance of markets from factories. Overall, while progress has been recorded for certain indicators, such as average fuel consumption, others still remain poor. This is the case of the frequency of lorry stoppages, whether at the factory or elsewhere, which significantly surpasses target levels for multiple reasons, including lorry breakdowns, factory stoppages, a lack of containers, and delays in supplying markets or in loading.

Maintenance of rural roads for cotton removal

The maintenance of roads is an important factor in the performance of the transportation of SC from farms, which is affected by the state of the roads, their accessibility and the role they play in the occurrence of lorry breakdowns.

The SDCC maintains the roads in its area of intervention with its own human and material means. It has a department with eight intervention teams, but its equipment is very old.

As noted above, the road maintenance carried out by the SDCC has clear secondary effects in terms of opening up and/or servicing villages in order for its nature as a public service mission to be recognized. Following the last inter-ministerial committee mission, a programme was established for the next three years. The rural roads component was the only one of the four public service missions acknowledged for the SDCC, to benefit thus from a sort of multi-year scheduling – even though the three-year term appears to be short for an activity requiring investment, especially in the case of equipment that is already very old.

Payment, structural factors causing delays, and impacts

Payment for the cotton commercialized by the PA is delayed. This delay has been even more apparent during the current season and more widespread, because 'large producers' have also been affected by it. Shortening the payment delay constitutes one of the SDCC's commitments in the execution of commercialization by PA – within the 2 weeks following the submission of commercialization documents by the latter – but which the SDCC has had trouble respecting.

The delay in payment is the result of two structural factors with different degrees of importance. The first factor is internal to PA. It depends on how long it takes commercialization documents to be sent by PA for them to be signed by area managers and to trigger cotton removal. When MGG fail to pay back credits and the PA in question must decide to invoke the second-level guarantee or not, consultation and decision-making may take time. However, more generally, the SDCC does not and cannot own the fleet of lorries and factories necessary to pick up the cotton of all PA immediately once it is commercialized and ready to be transported.

For the season underway, a circumstantial factor independent of the SDCC accentuated the delay in payment. As indicated above, the ITFC line of credit, a significant component of the season credit, could not be used as usual.

The delay in payment is a factor of food insecurity and impoverishment, especially among the most disadvantaged people. Faced with the cost of going back to school in September, and with social expenses that may occur at any time and those related to end-of-year festivities, producers have no choice but to harvest a portion of their subsistence crops just to purchase them back at a higher price a few months later.

The cash flow needs of some producers are a known phenomenon at PA, where initiatives to provide loans to members have been introduced. The repayment rate is good (8.49); this is indicative that this type of loan meets real needs and that beneficiaries would like it to be maintained. However, PA have limited financial means, which need to be complemented in order to contribute to food security and poverty reduction in cotton-growing regions.

The income of PA in their partnership with the SDCC

The services of PA, from establishing lists of producers eligible for input credit up to commercialization, including the monitoring of crops and the distribution of inputs, are financially remunerated by the SDCC in various forms. These are presented in 8.50.

At its core, the PA's remuneration by the SDCC is related essentially to monitoring the farming season, with respect to cotton farming but also a few crops rotated with it. This remuneration is indexed on the basis of the tonnage of SC produced. Other payments are used to offset the expenses incurred for commercialization, although with incentives in the form of premiums. The total amount of financial compensation received from the SDCC is however modest: less than 2 million CFAF for 60% of PA.

In practice, it can be said that PA are also or even primarily remunerated by the producers for the commercialization service, because the monetary value of differences in weight is left as a resource for the PA. Without this producer option, the income of PA would be very limited or even non-existent, as we will see in the economic analysis section.

Use of income

PA generate income which, despite being modest in terms of magnitude, is significant in terms of its social reach. PA carry out social services with a portion of the income remaining after all expenses and after having potentially covered defaults on credits by certain MGG. The table in 8.51 gives an overview of the number of social services recorded to date. 8.52 gives the value of the services for the last season, a value that is underestimated because it considers only outgoing expenses, and not labour expenses and contributions in time.

The importance granted to education stands out in the use of income. Beyond free clinics and classrooms, PA take responsibility for paying teachers (called 'parent teachers') so that the hundreds of children in school are not exclusively educated by the only teacher that the government sends. In one of the villages visited, out of the seven teachers teaching, six were paid by the PA. Classes are open to all children in the village, regardless of whether their parents grow cotton.

2.4 Production and commercialization of cotton fibre

2.4.1 Production via ginning of seed cotton

Ginning and ginning capacity

At the SDCC, ginning is carried out at 9 factories, the equipment of which is described in 0. Each factory is equipped with 2 to 4 gin 'stands' with 170 saws, for a total of 26 gin stands operating a total of 4,420 saws.

All ginning factories are equipped with humidifiers to reduce the risk of fibre breakage during ginning, and so that cotton fibre bales attain humidity close to the standard of 8.5% water authorized by international trade. They are also equipped with a fibre cleaner, which allows the short fibres called 'linter' to be recovered and then sold to the COFIL.

With regard to ginning, to preserve the quality of the cotton fibre, the SC should not have been wet by rain. The major constraint is therefore to squeeze the ginning period into the dry season, both to prevent the SC from 'being wet' and to guarantee that the lorries can use the roads to pick up SC. To do so, the installed capacity must allow for SC ginning within the set period, and machines must operate with limited stoppages.

The ginning capacity of installed equipment²² depends on the equipment and its effective duration of operation. The SDCC retains an effective ginning period of 150 days, ideally starting at the beginning of November and lasting until the end of April, but the number of effective days has been well under this number over the past years. This is still the case for the current season, and the end of ginning will take place around mid-July for certain factories, after the arrival of rain. 8.54 lists the constraints responsible for this and presents the results of simulations based on the number of effective days of ginning and the gins' rotation speed. The identification of these constraints and the prospect of production continuing to grow was the basis for the recommendation to increase installed ginning capacities. Although accepted, this increase has yet to materialize.

According to our simulations, existing equipment allows for the ginning of 300,000 tonnes or almost 380,000 tonnes with a speed of 12 kg/saw/hour, with 120 and 150 effective days of ginning, respectively, during the optimal period from November to April. Furthermore, undertaking actions to achieve these numbers of days is as important as increasing the amount of ginning equipment. This implies identifying and implementing solutions to achieve this goal. Building a new factory can take two years, whereas implementing solutions to prevent known constraints could require less time. Moreover, it would be more realistic to consider a combination of both options at the same time.

Classification of cotton fibre

At the SDCC, classification is carried out in a way similar to that of the cotton companies in other French speaking African countries, as described in 8.55. It is done visually for the grade or appearance of the cotton fibre, and manually for length. The micronaire, a composite index to indicate the fineness and maturity of fibre, is measured by machines that are appropriate but not automated. The humidity of fibre bales is not measured; how close it is to the authorized rate of 8.5% is therefore unknown.

Transition to automatic classification via the acquisition of three machines, as provided for in the recovery plan, has not yet been carried out due to a lack of external financial support. The SDCC has made the decision to purchase a machine using its own financing and to build a suitable building to operate it.

With respect to grade, Cameroon adopted commercial types with specific names long ago. The correspondence of these types was established and updated in 2014 (8.56) with respect to the subdivisions of the African standard (AFCOT) managed by the Association Française Cotonnière [French cotton association]. 8.57 presents the abacus used by the American standard, which claims to be universal, showing grades by cross-referencing appearance

²² With the prospect of producing 400,000 tonnes of SC, the 2017 recovery plan was to increase ginning capacities by means of actions at the level of existing factories, and by establishing new factories. Our analysis is limited to the capacities installed and inventoried during the study with respect to the recovery plan because we were unable to obtain information to update capacity levels, in line with the actions that have been carried out since then.

and colour characteristics and assigning them two-digit numbers. Based on the information provided by the SDCC's classifier, in **8.58** we present the correspondence between the American or universal grade and the commercial types used, as well as correspondence with the African cotton standard. There are several cases in which different commercial types correspond to the same American grade number. The same goes for correspondence with the African cotton standard, although correspondence between the standards is imperfect. It may therefore be relevant to simplify the number of commercial types to use, to simplify classification efforts and to reduce confusion among buyers. This implies choosing one standard. AFCOT does not give the impression of truly promoting the African cotton standard. If this situation remains, it would not be efficient to choose this African standard, considering that the American standard has a claim or international reality that is much more concrete.

Products, quality and industrial ginning yields

Ginning SC provides cotton fibre, which is the main product, as well as seeds, short fibres recovered from waste (also called linter) and waste. As indicated above, linter is utilized locally, which is not always the case in all French-speaking African countries.

The various indicators of industrial yield are presented in 8.59. The main quantitative indicator is the fibre yield (ratio of the weight of the fibre obtained divided by the initial weight of SC), with a value of 42-43%, which has been increased by the adoption of the new Q302 variety. The seed yield is 53-54%, for a linter yield of 0.5-1%, and a waste rate of 3.0-3.5%. The humidity of cotton bales does not attain the authorized level of 8.5%. This results in a financial loss evaluated at 2 billion CFAF for a likely humidity of 5% for a production of 100,000 tonnes of fibre. On average, cotton bales do not reach the net weight of 216.8 kg, but the financial loss from this is marginal.

Qualitatively speaking, the SDCC is distinguished by its almost systematic production of fibre with a length of 1"5/32. Regarding the grade of cotton, 90% of fibre production is classified 0 or 1 of the African standard.

2.4.2 Export of cotton fibre

Methods and export clients

Export sales of cotton fibre are described in 8.60. These sales are carried out according to the incoterm FOB, essentially at the port of Douala, and according to the European general regulations followed by the AFCOT.

For the past few years, the SDCC appears to have had a customer base of around ten merchants, but this base seems to have expanded lately (8.61), increasing to around twenty as of the latest reports. Despite this, purchases are concentrated among five merchants, which grab at least 75% of sales. The main customers remain multinational corporations in the multi-product business (Cargill, OLAM, RCMA and Dreyfus).

Price references

The price reference to evaluate merchants' offers is given in 8.62, which also explains how premiums and price reductions are considered to take into account differences in quality compared to the quality associated with the price reference chosen.

Like other French-speaking African countries, Cameroon has been taken advantage of in terms of the base used to calculate the premium to pay for good cotton fibre length. This situation results in €2.4 million in lost income for a production of 100,000 tonnes of fibre. It was only corrected as of 27/02/2019. There are reasons to believe that this detrimental situation remains with respect to the reference used to pay for the proper grade or proper appearance of cotton fibre. Such a situation results in a lost income of the same extent as that indicated for the length of cotton fibre, which remains to be salvaged. This is an abnormal situation which cotton companies in French-speaking Africa had already pointed out (ACA, 2017).

Even though Cameroon sells its cotton under its own commercial type names, with the identification of premiums and price reductions based on length and grade, these values are tied to those of the intervals published by the AFCOT, which are decided exclusively by merchants. The updating of the list of sale types (cf. *supra*) should be accompanied by the updating of the list of premiums and price reductions. In this operation, Cameroon should have its interests taken into consideration by the AFCOT, the affairs of which mainly revolve around countries in

French-speaking Africa. Proceeding in collaboration with other countries in Francophone Africa would certainly provide more of an opportunity to achieve this, in line with the actions identified in the context of the ACA commercialization-marketing technical committee in 2017.

Prices obtained

When selling its cotton, the SDCC appears to establish a target price, at least implicitly, by referring to the New York Stock Exchange short-term contracts index (the 'New York index' for short). It is likely that there is good correspondence between the prices effectively obtained and those of the New York index.

Cotton stakeholders across the globe are however accustomed to referring not to the New York index but rather to the Cotlook A Index, which has a longer history and more authority. It would be relevant to analyze which of these reference prices is better for target prices, in order to avoid perpetuating the situation of undue lost profits. In terms of quality level, the New York index is systematically inferior to the Cotlook A Index (8.64). The two indexes are also for different types of cotton, as well as different delivery terms. The New York index operates only for Strict Low Middling (equivalent to the IRFO, IGOR and IROL sale types) with a length of 1"2/32, whereas Cameroon is known for its superior sale type (PLEBE S) and fibre length of 1"5/32.

An analysis of the data provided also shows that the market premiums expected due to a greater length or better grade of cotton fibre are not actually obtained (8.64). We do not have enough hindsight to say whether CmiA labelling has an effect on the export price, even though the contracts signed contain this specification. Doubts are justified, considering that merchants typically have the attitude that additional quality does not result in a premium, but rather only avoids difficulties selling or a price reduction due to the lack of quality.

Transportation for export sale

Cotton fibre for export is transported to shipping ports in two ways. For approximately 60% of the exported volume, cotton is transported by highway from the SDCC's ginning factories to the CAMRAIL railway station in N'Gaoundéré, whence it is then transported by train. The remainder of the cotton is transported directly by highway to the ports of Douala or Kribi. For all highway transportation, the SDCC uses its own heavyweight lorry fleet, as well as the fleet of private transportation companies. During the 2017-18 season, the intervention of the two vehicle fleets, expressed in kilometre-tonnes, was identical (approximately 870,000 each). The SDCC primarily uses its fleet of 24 5-tonne lorries, marginally complemented by multi-container lorries when the removal of SC from fields is complete. The availability of its own transportation fleet allows the SDCC to put pressure on private transporters to obtain reasonable services in terms of quality and price.

FOB shipment arrangements

For shipping operations, which include the receipt of cotton fibre at the port, its potential warehousing, loading of containers, customs formalities and loading onto the boat, the SDCC uses the services of three competing companies. They are Bolloré-logistics, a maritime logistics multinational; Camas, a company created by a Cameroon national; and Sonotra, a company once again starting to operate²³ in the sector. The intervention of these companies takes place according to bipartite agreements established by the SDCC with each of them, but for different tonnages. Camas and Sonotra have a share of 20,000 tonnes of fibre each, plus or minus 3%, whereas the agreement with Bolloré-Logistics allowed the latter to process 65,000 tonnes in 2018, which represented 70% of the market.

Shipping companies are responsible for all the formalities at the port of receipt of cotton bales up until their loading onto the boat. This includes paying for all associated fees and taxes, in particular the export tax, which has been applied since December 2017 at a rate of 2% of the FOB value. According to their contracts, they have 21 days to do so, which is barely enough, taking into account the operation and congestion of the port of Douala.

²³ Resumption of operations as a lessee manager, following the liquidation of Getma-Necotrans, which was accelerated by a fire in one of its factories with 2,481 tonnes of cotton in Douala in April 2017.

FOB delivery arrangements and prospects for changes in these arrangements are presented in 8.65. The availability of storage capacity differentiates shipping companies in their way of operating. The establishment of additional storage capacity is presented as an interesting prospect to be considered by the SDCC. On the other hand, the imminence of the implementation of weight control upon boarding is strange, considering the meaning of the FOB incoterm²⁴ and the practices that have prevailed to date. This will result in a cost that will be detrimental to competitiveness upon export, when it does not pose technical feasibility issues for certain shipping companies. It is related to changes in AFCOT regulations ever since the transition to the general regulations of the Hague and of the European Union, with the merger of the regulations of several countries. It may be relevant to study use of the ICA regulations, the rules of which appear to be simpler and to sellers' interests into account more adequately.

The application of export tax, which is sometimes also called turnover tax, is being debated by the SDCC and is effectively debatable. According to memo 004/MINF/DGD of 04 January 2018, it is specified that the cotton previously exempt from the tax is no longer exempt, but at the same time, an exemption is indicated for products that have undergone processing in Cameroon (8.68). This can be taken to mean that seed cotton exported as such would be subject to the tax, but this product is never exported. On the other hand, cotton fibre has been processed at the ginning factory, and we believe that it falls within the exemption provided for.

2.4.3 Local sale of fibre and linter

The SDCC currently has only one local customer for the cotton fibre that it produces, the CICAM. The terms of sale are mentioned above. The grade sold is IRIS (classification 2, sub-classification 2), which corresponds to the lowest grade for which the SDCC possesses sufficient quantities. Its length is 1"5/32, which is better than what the CICAM needs for the products it manufactures, but the SDCC has virtually only this length. Over the past eight years, the CICAM has acquired no more than 2,000 tonnes of fibre, equivalent to less than 2% of the SDCC's production. Moreover, this quantity has even declined over the past year (8.69).

Linter, the short fibre byproduct of cleaning waste in fibre cleaners, is provided to the COFIL on a basis of mutual agreement. The price fluctuated between 43 and 66 CFAF/kg between 2013 and 2018.

2.5 Crushing of seeds and commercialization of byproducts

2.5.1 Location, technology and industrial capacity

The crushing of cottonseed is carried out at the SDCC's two factories, respectively located in Maroua and Garoua. Up until the 2016-17 season, as seed production was not enough to saturate the capacities of the two factories, the SDCC promoted soy production in the intervention area. For the past two seasons, the situation has reversed. Crushing capacities are proving to be inadequate for all of the cottonseed produced, to the extent that a portion of this production has had to be exported²⁵. Under these circumstances, the SDCC ceased to purchase the soy that it had promised to purchase, and planned an increase in crushing capacities as a part of the 2017 recovery plan created.

The two factories have different ages and use different technologies. At the Maroua factory, which is older, oil extraction is exclusively mechanical: seed kernels are crushed following dehulling. At the Garoua factory, extraction is carried out via hexane solvent, with a higher oil extraction rate than in Maroua. The oil content and nutritional quality of the Maroua factory oilcake is therefore higher. At both factories, oil extraction is carried out following the dehulling of seeds. The hulls that are the byproduct of this process are partially used to operate furnaces, and are partially mixed with oilcake in the livestock feed manufacturing process, but are not entirely used up.

It is not possible for oil extraction from cottonseed to be complete, even with the more modern technology used at the Garoua factory. For seeds entering with an oil content of around 21%, 15-16% of this oil can be retained.

²⁴ International Commercial Term

²⁵ Unground remainder of 153,079 tonnes in 2015-16, 137,831 tonnes in 2016-17 and 139,263 tonnes in 2017-18.

The difference is 5 to 6% oil, which remains in oilcake, but this would be the same even with seeds with a higher oil content.

The oil content of cottonseed in Cameroon is the same as that typically found across the globe, although the genetic variant for higher oil content does exist and is becoming easier to use (8.70). Cameroon could undertake an initiative to try new varieties reconciling the criteria of productivity in the field, quality of the fibre and a higher oil and protein content.

2.5.2 Byproducts of crushing and industrial yields

The crushing of cottonseed provides oil and a solid residue rich in oil and protein, called oilcake. At the SDCC, this oilcake is used mainly to manufacture livestock feed. The names Alibet and Nutribet are used for the feed manufactured at the Garoua and Maroua factories, respectively. The name Nutribet refers to the better nutritional quality of this product, in relation to the crushing technology used in Maroua. However, the manufacture of this feed does not consume all oilcake or all hulls available, which are also a part of the finished products sold by the SDCC.

The capacities established according to operations on 330 days per year are indicated in 8.71, in accordance with the data provided in the 2017 recovery plan document. We did not obtain data series on the products of crushing; we can only indicate the quantities of the products sold for the 2017-18 season, whereas the quantities of solid products (hulls, oilcake and livestock feed) were larger. By using the quantities of crushed seed, we were able to obtain 70,374 tonnes of oilcake, 33,381 tonnes of which we can estimate were included in the livestock feed produced (based on a proportion of 4/5 oilcake in the weight of livestock feed). We thus obtain a magnitude of approximately 37,000 tonnes of oilcake (raw or included in livestock feed) that was not sold.

2.5.3 Seed transfer price

Because crushing is included within the SDCC's operations, ground seed is sold at a transfer price according to the terminology established for this purpose. This process is established internally, unrelated to the real market.

The SDCC acted tentatively when deciding on the price for transferring seed from its ginning factories to its crushing factories. The current price retained is 95 CFAF/kg, after having been 120 CFAF/kg. It must be noted that the seed sale price on the national market was 60 CFAF/kg for quantities that the factories could not process. The current price retained is equivalent to approximately \$0.17 USD/kg, which appears quite high. It is retained to distribute the cost of seed cotton across the sale prices of cotton fibre and oil. The option retained is to not excessively burden the price of cotton fibre, so as to remain resilient faced with fluctuations in the global price.

2.5.4 Commercialization of products from crushing

The SDCC sells both for oil and solid crushed byproducts (oilcake, livestock feed and hulls) to wholesalers on the national market. The latter can resell in neighbouring countries, but the SDCC does not export directly.

Commercialization of oil

Oil is sold in the form of 15-L cartons, for a price of 14,500 CFAF. Selling the product does not pose a problem, despite competition from palm oil. The sale of oil and solid byproducts provides for the day-to-day cash flow of the SDCC, so that it is less dependent on short-term bank loans at an interest rate of 5%.

The sale price of table oil has supposedly been regulated in Cameroon since 2011, but we heard conflicting opinions from two central directors on this aspect. It is not permitted to exceed a limit of 15,291 CFAF per 15-L carton, which is the sale price applied by the SDCC.

Oil sales are currently very good, despite the acknowledgement of certain weaknesses by the SDCC. Bottle quality is unsatisfactory, with somewhat weak plastic. Moreover, the label does not stick well to the bottle. Improvements appear to be planned, but it may be relevant for the sales department to complement its ideas by taking on a

marketing intern to better valorize the intrinsic qualities of cottonseed oil compared to other competing oils, and to aim at a higher retail price.

Commercialization of solid byproducts

The sale of solid byproducts of crushing, namely oilcake and livestock feed, raises many more issues, and can even threaten the profitability of the entire crushing activity. The sales department estimates the domestic livestock feed market at 300,000 to 400,000 60-kg bags, whereas production achieves a level of 1.2 million bags. A significant surplus to sell off remains. This surplus would be reduced only marginally by increasing the proportion of oilcake in the composition of livestock feed, thus decreasing the proportion of hulls, a solution idea proposed by the sales department. If the surplus cannot be sold off, when it is a very large volume, this will cause losses, likely to put the crushing sub-chain in a very difficult financial position.

However, prospects for selling oilcake and livestock feed in the sub-region are not good. The Nigerian market is unfavourable, because the Nigerian government is seeking to protect its market and therefore to limit food imports. Furthermore, the depreciation of the Naira has made products from Cameroon more expensive, limiting the demand for them. Outside Nigeria, the Central African Republic does not present real opportunities in its current state of instability, whereas Gabon is a small country.

Nationally, insecurity in the Far North region has reduced the demand among livestock farmers, due to kidnappings for ransom or the theft of livestock. Those who have been kidnapped and paid a ransom have fewer financial means. Others fear that this will happen to them or hesitate to invest in fattening livestock, faced with the risk of losing it.

Yet it is worth exploring the domestic market further. Sustained projects to support livestock farming or projects involving the MINEPIA should be inventoried for the purpose of establishing contact and business relations.

The search for product outlets outside the domestic market and the regional market appears to be vital for the sustainability of the crushing sub-chain. Other markets must be explored. Europe imports cottonseed. Togo exports cottonseed to Spain and Greece, two cotton manufacturing countries where oilcake can also be used. Denmark used to import oilcake. Eurostat statistics showing which countries have imported cottonseed oilcake can be analysed to better target export contacts, with the possibility of adapting the livestock feed formula to customers' needs.

3. ECONOMIC ANALYSIS, CONTRIBUTION OF THE VC TO GROWTH

The economic analysis was carried out on the 2017-18 season, as the current season (2018-19) was not finished yet at the time of writing this report and the necessary data were not available. The data that we obtained correspond to most of the 2017-18 season. Note that, as operations required industrial systems to be run at capacity, it should not be assumed that the results we observed and calculated here could be maintained with little or no change to industrial capacities if production grew significantly: 152,612 producers harvested 254,181 tons of SC on an area of 182,610 ha cultivated by the recipients of inputs credit. Ginning yielded 107,618 tons of CF, and the fibre yield was 42.34%. The results of our economic analysis are summarized in Table 3, the content of which is explained below.

3.1 Profitability and sustainability for the stakeholders

3.1.1 Production Sector

The method and data used are described in annex 8.72. It is important to take into consideration the difference in weighing between villages and the weighbridge at the ginning plant. Since no PA redistributes the value of this weight difference to producers, and all treat it instead as a resource of the PA, it is justified to consider that producers pay for a marketing service carried out for them by their PA. We show the cost of this service in producers' operating account. The indirect value-added of this service will be analysed below.

Cost-effective and sustainable production with little intensification

Cotton production is profitable for all types of producers (8.73). On average, a producer's net income is about 214,000 CFAF, which is 5.9 months of minimum wage or 1.9 months of the average wage in Cameroon. The impact of amortization on income is small. As Table 3 shows, the value added is also high for the average producer (57.1%).

The share of producers in the final price of cotton fibre is below the price risk management device's goal of 66%. Producers' income is derived from a guaranteed price of 245 CFAF/kg of SC or, taking into account the 43% yield at ginning, 570 CFAF/kg of fibre equivalent. In relation to the average export price of 1029 CFAF/kg FOB obtained in 2018, the producers' share in the final price is 55.4%. The difference may be due to a rise in the selling price, as the previous year's price was only 965 CFAF/kg.

As the mode of production is fundamentally low-intensity in terms of inputs – be they fertilizers or pesticides –, the value added is high. Compared to the kind of intensive production carried out in Brazil, for instance, this production mode could potentially have a lesser negative impact on wildlife and human health. The low level of intensification also induces a degree of economic resilience because the incurring financial charges are low.

		overall	Producer types				
			<1 ha	1-5 ha	5-10 ha	>10 ha	seed farmers
Value added							
in currency	10 ⁶ CFA	36 878	5 802	11 384	8 504	4 153	7 035
in proportion of income	%	57.1	39.0	59.6	69.1	63.7	59.7
per producer	10 ⁶ CFA	0.242	0.066	0.363	1.683	2.989	0.268
per kg of SC	CFA	145	98	150	174	160	160
Net profits							
in currency	10 ⁶ CFA	32 730	3 580	10 502	8 292	4 107	6 249
in proportion of income	%	50.7	24.0	55.0	67.4	63.0	53.0
per producer	CFA	214 464	40 424	335 216	1 640 987	2 955 334	237 751
per kg of SC	CFA	129	60	138	169	158	142
in months min. wage/prod		5.9	1.1	9.2	45.2	81.5	6.6
in months average w./prod		1.9	0.4	2.9	14.4	25.9	2.1

Note: interprofessional guaranteed minimum wage is FCFA 36,270 (in 2016) and average wage is FCFA 114,000 (in 2019)

TABLE 3-1 : UNIT INDICATORS OF VALUE ADDED AND NET INCOME OF PRODUCERS

There is a significant gap, of about CFAF 3.0 billion over all producers, between value added figures and margins after repaying inputs (MARI). In other words, looking only at MARI, as do most cotton studies for lack of the necessary data, leads one to overestimate the financial impact to cotton producers at the range of gap observed.

As these farms are strictly family-run, in a context in which it is becoming difficult and therefore rare to hire workers for the whole year, cotton production is carried out without employees but with temporary labour. The financial impact of this labour varies between types of producers and is much greater among the smallest cotton producers, who therefore appear to have a greater need to hire labourers from outside their families. This might be explained by the fact that they own less machinery, and that they are also a little younger, so their children are more “mouths” than “arms”.

In general, cotton producers are not directly subject to taxes, nor to financial charges as they buy very little equipment on credit. As we shall see, they are however subject to them in an indirect way, which is not just symbolic.

Size matters

While very small producers, as a group, do contribute slightly more to the total value added than do the largest producers (15.7% vs. 11.3%), this is out of all proportion with the difference in the portion of the population of producers they each represent (58.0% vs. 0.9%). The lower economic performance per kg of SC produced on very small farms is obvious compared to very large ones: 98 vs 160 CFAF in VA and 60 vs 158 in net revenue. Their cost/benefit ratio is not quite as good (Figure 3.1).

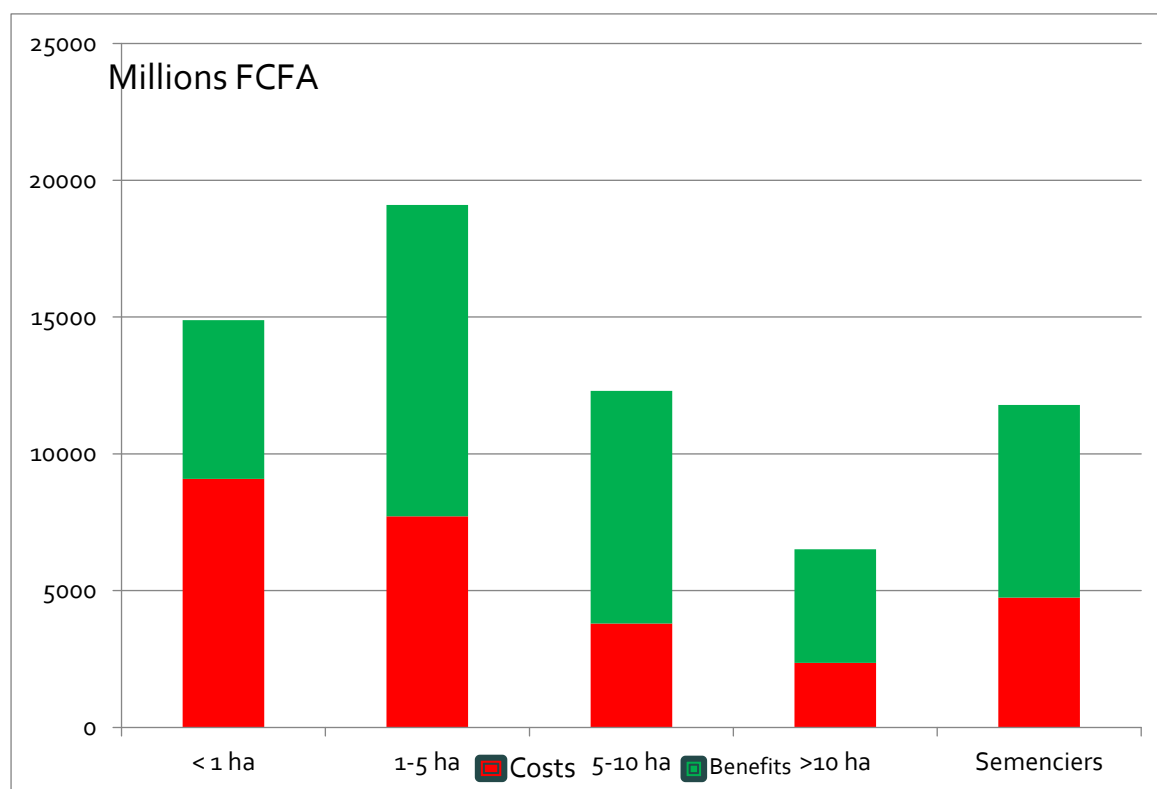
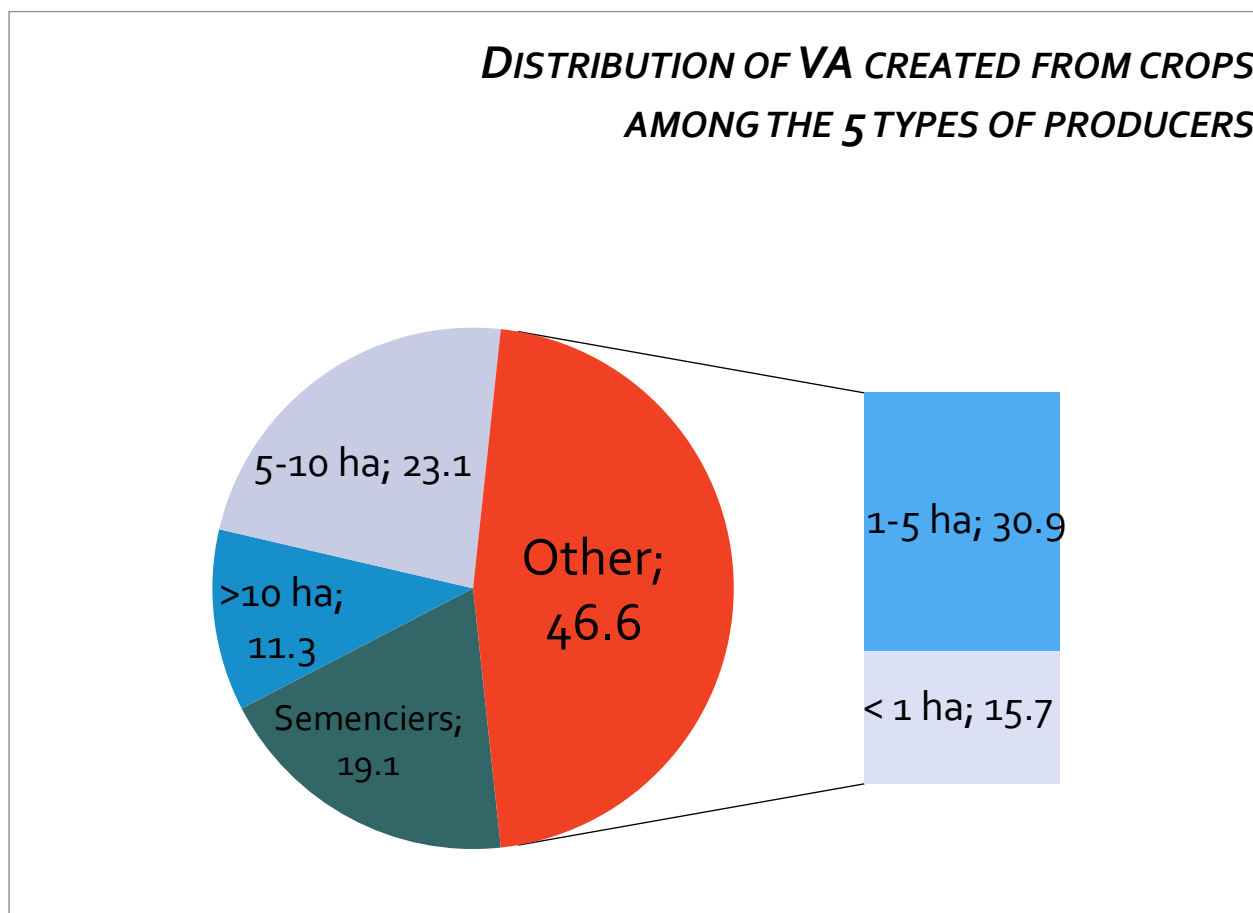


FIGURE 3.1: COSTS AND PROFITS BY TYPE OF PRODUCER

With regard to the large producers on whom the SDCC seems to be relying more heavily in its recovery plan, other producers (those who have less than 5 ha of cotton crops) continue to create most of the overall VA, even though very small producers (< 1 ha of cotton) contribute only 15.7% of it, whereas they account for 70.1% of the total

number of producers. The share of seed farmers is significant, as they create over 19% of produces' overall VA. This stems from the higher purchase price they are offered and especially from SDCC provisions for much larger seed production than the country strictly needs – an option that both maintains high standards of seed quality, and meets to external demand, for instance that of Chad. Sorting seed farmers into four categories according to the surface area of their cotton crops shows an even larger share of small producers, at 62.7% (Figure 3.2 and 8.74).

FIGURE 3.2: DISTRIBUTION OF VA CREATED FROM CROPS AMONG THE 5 TYPES OF PRODUCERS



Although very small producers do not perform as well as others, their economic and social impact may be greater. As most children of primary-school age in these communities are from small producer families (Table 2-2, page 43), these families have more school-related costs to cover. In such a situation, cotton money counts, irrespective of how little it may be.

Noting this difference in performance calls into question cotton policy or agricultural policy more generally. Rural development requires support – rather than exclusion – for a category of producers who are poor but numerous.

3.1.2 A sustainable but costly input supply service for producers

The methodology and the data used are presented in annex 8.75 service's operating account.

Importing inputs into Africa is known to be expensive and Cameroon is no exception, but the cost to users (here, cotton producers) increases sharply after the products enter the country. The import cost of inputs sold for 23.3 billion CFA francs was 14.9 billion, i.e. less than 64% of the retail price.

Due to the remoteness of cotton-growing areas and their distance from the port of Douala, transport contributes the most to the increase in the cost of inputs. Heavy inputs, such as fertilizers, drive this added cost to its peak. Transport is carried out by rail and by road, in proportions for which we have no data. We cannot analyse them to identify the corresponding indirect value added.

Our finding on the high cost of transporting inputs is nothing new. It led producers to request a gesture of support from the State, which gave rise to a sequence of actions that made it possible to subsequently set up the “inputs fund”. Producers nevertheless continue to be penalized by the cost of transport, which they still cover singlehandedly.

Somewhat unsuspectedly, the combined share of financial costs and taxes is close to that of transport. In total, taxes account for nearly CFAF 1.6 billion, while financial expenses account for about CFAF 1 billion (CFAF 0.92 billion). Tariffs seem particularly heavy when it comes to importing goods that the country does not produce, and which are badly needed in the agricultural sector. Apart from the agricultural inputs taxation policy, which is beyond the control of stakeholders in the cotton VC, the formula for calculating the cost price should be examined to check whether the basis for applying VAT is correct.

The level of financial expenses is a matter of concern, as these costs account for as much as 6.2% of the calculated value of imported inputs. This rate is much higher than the rate of remuneration of the inputs funds at the SDCC (4%) and the rate of lines of credit that the SDCC has obtained from development banks (BADEA or ITFC, at 3.75%). The question of whether financial charges are correctly applied also remains.

The current system of input acquisition and distribution appears to be sustainable – at least for the CNPC-C, which is in charge of it. The result of its operation account is positive, especially since it benefited from an operating subsidy of about CFAF 95 million. The operating costs of this organization, whose activities are not limited to inputs, are covered. As we have already seen, the way the inputs fund operates and its reimbursement rate, which is almost 100%, also make the system sustainable.

The fact remains that inputs are expensive for producers, who are ultimately the ones financing the system, in spite of being the poorest stakeholders in the VC. Perhaps some of the measures used in the current cost price calculation method are over-conservative. Alternative and more cost-efficient inputs importation methods should nonetheless be explored.

3.1.3 The SDCC's results as a stakeholder

The method and data used are described in annex 8.76. The data were provided by the SDCC on the basis of the income statement that was audited in March 2019 for the 2018 accounting year, which actually overlaps with two crop years. Accounts had to be cut off to take into account the 2017-18 crop year only, which is also consistent with VCA4D's methodology. While we were not informed of the cut-off applied by the SDCC, we applied ours in such a way as to stay as close as possible to the audited income statement's accounting lines. In addition, contrary to the corporate accounting approach, we have not taken into account provisions for inventory write-downs or losses and gains that cannot be incorporated into revenues. Finally, for the purposes of the VCA4D method, we prepared operating accounts for three functions: SC marketing, ginning and crushing.

Continuously improving results for all functions

For all three functions under consideration, the net revenue is positive at CFAF 8,469 billion after deducting CFAF 5,430 billion for amortization (Table 3). This exceeds the income audited by the SDCC (CFAF 5.146 billion), with the difference coming from provisions for inventory depreciation and out of revenue gains and losses (amounting to CFAF 3.322 billion). Details of the operating accounts for each of these functions are provided in the annexes (8.77, 8.78, and 8.79).

The profitability of the VC's core activities followed the increase in production on the farmers' side, which resumed an upward trend during the 2017 financial year. Profitability may be improved if costs can be reduced and/or if identified revenue shortfalls can be recovered (see above and below).

In terms of the rate of value added, the overall level of 17.0% is quite low. It indicates a high level of expenses compared to the level of revenue.

However, there is room for improvement in establishing the profitability and sustainability of the SDCC's activities and thus of the VC as a whole. All else being equal, our findings from the functional analysis, which we will mention again upon analysing each of the activities, indicate that there are already shortfalls to be recovered in the current state of the industrial facilities, and there would be even more after some adjustments.

Functions	SC marketing	Ginning	Crushing	Total
Income	74 587	128 039	19 408	222 034
Intermediary goods*	79 038	86 504	18 797	184 338
Value Added	-4 451	41 535	612	37 696
VA % income		32,4	3,2	17,0
Wages	5 797	4 579	2 206	12 582
of which Temporary	790	1 279	433	2 502
Permanent	5 007	3 300	1 773	10 080
Financial costs	1 302	2 248	616	4 166
Insurances	482	446	155	1 082
Taxes	1 371	4 214	381	5 967
Gross income	-13 404	30 049	-2 746	13 899
Amortization	2 652	1 645	1 134	5 430
Net income	-16 055	28 404	-3 880	8 469
* In intermediary goods, the value of SC is counted twice; once for marketing and once for ginning. The total value of intermediary goods is actually FCFA 115,8 billion.				

TABLE 3-2: SUMMARY OF SDCC OPERATING ACCOUNTS (IN MILLIONS OF CFAF)

Crushing, Negative Result and Transfer Pricing

The net revenue of crushing is negative, even before amortization (with gross and net revenues of CFAF at -2.7 and -3.9 billion respectively), despite cottonseed oil's well-established position on the cooking oils market. The demand for this oil is such that production cannot keep up. The sale of oil contributes greatly to the SDCC's cash flow. Its VA rate is very low (3.2%), much lower than that of ginning, even though ginning goes as far as exporting and requires more external players.

The apparent lack of profitability of crushing is partly due to an accounting artefact in the context of vertical integration within the SDCC. Lowering the transfer price of cottonseed after ginning would reverse the observed economic result. For example, by lowering the internal transfer price of seeds from 95 to 60 CFAF per kg, charges would be reduced by 4.3 billion and the net revenue would become positive.

However, the shortfall in income is not only the result of a non-optimal adjustment of the seed transfer price. Although it seems like the current level of this price could be lower, it cannot be reduced by much and, in any event, it would be unreasonable to go as low as 60 CFAF/kg, which means revenue from crushing would remain negative.

Improvements in income should be sought through sales. Oil is already selling well, but it could sell even better with a price adjustment that better matches the difference in quality with palm oil, in terms of its content of different types of fatty acids and proteins. In fact, the problem comes more from the solid products of crushing:

oilcake and meal. They do not sell well, the unsold stocks lead to provisions for the depreciation of oilcake stocks, almost amounting to one billion CFAF. It seems vital to find selling solutions. In our functional analysis, we stressed the relevance of establishing contacts with livestock development projects in the country and exploring European markets for oil cake.

Although improving productivity at the crushing level is only a medium-term solution, it should be embarked on as soon as possible. Without going into considerations on industrial processes, for which we have no competence, we mentioned the prospect of taking advantage of genetic variability to use seeds that are richer in oil and in proteins. This would result in an increase in the amount of finished goods and a reduction in unit costs.

In the context of a global fibre market that has steadily been fairly bouyant in recent years, crushing is the one function that undermines the financial sustainability of the SDCC and thus of the VC. It is a vital function that needs to be consolidated as soon as possible.

Profitable ginning with possible room for improvement

While the net revenue of ginning, which includes the sale of cotton fibre, especially for export, is good, this is largely due to the favourable external situation, which is beyond the SDCC's control. The world exchange rate has stayed at a satisfactory level in recent years and the euro-dollar exchange rate encourages exports.

As the functional analysis shows, there are shortfalls to be recovered with an approach that aims to ensure that Cameroonian cotton is valued fairly, on the basis of its recognized qualities. Traders have been abusively raising the reference base for the length of cotton. This abuse was corrected last February only; it cost 1.6 billion in the 2017-18 season, which will now be recovered. Abuses persist with regard to the grade reference, which likely represent a loss of earnings of the same order of magnitude. The choice of the New York Mercantile Exchange Cotton futures as an objective price reference should be called into question, as this index is systematically lower than the Cotlook A Index, which is the global price reference for cotton.

Revenue can and must nevertheless be improved by enhancing efficiency in industrial operations. Costs are inflated by outdated industrial facilities that need to be modernized and by an insufficient number of effective ginning days during the optimal period, from November to April. On top of increased operating costs, non-optimal operation of ginning plants also leads to lost earnings. Cotton bales do not reach international trade's 8.5% moisture content threshold, which is a missed opportunity to sell water at the price of cotton. At current production levels, a 3% difference leads to a shortfall of over three billion CFAF.

Economic results are likely to show negative figures if the capacity of ginning installations is not improved to match the projected increase in production. Cotton producers are motivated to produce more. Calling upon their sense of solidarity to voluntarily curb the increase in production might not suffice, as each of the 150,000 producers is likely to feel that their "indiscipline" will be of little consequence, since others will have "discipline". There is an urgent and vital need to increase effective ginning capacity through either new plants, corrective actions leading to an increase in the number of effective ginning days between November and April, or both. Setting up a new plant takes time – two years, apparently – so it is worth checking whether structural actions to improve the number of effective ginning days during the optimal period would not be easier and quicker to implement.

SC marketing turns a loss but shows noteworthy performance on some points

Insofar as SC is marketed in an integrated sequence and is transferred to the ginning plant at the purchase price without the associated costs, the function can only show a loss. The notion of value added has no bearing in operating this function and profitability cannot be assessed through net revenue.

This VC is however particular insofar as it derives revenue from the sale of seeds. The SDCC is benefiting from Chad's demand, the value indicated corresponds to a volume that we do not know, but the volume currently being delivered for the 2018-19 crop year is 8,100 metric tonnes. It is reasonable to expect that this demand will last a few more years before Chad's cotton VC is able to produce seeds on its own.

The SDCC also benefits from an expense transfer, which results from the management of inputs distribution for the CNPC-C. The amount relates to the quantities processed and not only to the quantities actually used by

producers who may not follow the doses initially planned for, for various reasons (such as sowing later in the season).

Financial compensation for public service tasks is partial and late, thus affecting the operating account. The late payment of this compensation has been pointed out to us on several occasions. 8.80 reconstitutes the cost situation over the period 2014 to 2017. Payment of the financial compensation for the years 2014 and 2015, and for 2016 and 2017, was ordered in a letter in May 2018. For this second period, the amount being processed for payment is less than half of the amount validated by the inter-ministerial mission. According to what was validated²⁶ during this mission, the amount expected as compensation for the 2017-18 crop year can be estimated at CFAF 4.0 billion, which would improve income for this year, although the actual payment might be smaller.

With regard to intermediate consumption, we will comment specifically on only two items. Other items are of equal financial importance but we do not have sufficient information to go any further.

The price of outbound SC transport by SDCC trucks can be estimated at 3.4 billion if we include spare parts and fuel/lubricants, that is, CFAF 13,376 per tonne. This amount is close to the one given in the calculation of the cost price of fibre for the 2015-16 campaign, which indicated 10,440 CFAF/tonne. As we are not specialists in this field, we lack any reference to assess the actual costs. A UEMOA reference²⁷ from 2009 indicates a cost of CFAF 90,000 per tonne of bulk product (malt, cement, etc.) or heavy staple products (rice, sugar, etc.). If this reference is still valid, the performance obtained by the SDCC on rural roads is very good. This is partly due to the fact that inputs delivery is synchronized with the removal of the SC, with this delivery cost being included in the costing of inputs and compensated by CNPC-C.

The cost of commercializing the SC, in the strict sense of the transaction cost for the change of ownership between producers and the SDCC, is also a performance worth noting. This cost, which corresponds to the PAs' service fees, is slightly above 2.4 billion CFAF. In relation to the tonnage sold, the transaction cost is CFAF 9,442 per tonne, which is 3.7% of the value of the product exchanged. This extremely low cost is the result of the tripartite partnership between the SDCC, the CNPC-C and the producers.

Cost-effectiveness of SC commercialization by PAs

As the marketing of SC is outsourced to PAs, it generates indirect value added, which we were able to estimate by collecting specific data with the cooperation of the SDCC's Staff Delegation (SD). This data was needed because, while the revenues of the PAs' operating account are known, their expenses are not. The statement of operating expenses is not part of the statistics kept by the SD but could be. Accounting books are kept at the level of each PA, financial statements are presented at the PAs for validation, but elements are not recorded at the level of the regional professionalization officers and do not reach the central level of the SDCC. In this situation, we used the budget estimate that each PA is required to prepare. We were able to get our hands on the projected budgets for the 2019-20 campaign from some 15 PAs in six of the SDCC's regions. We determined the ratios of the various expense items to the sum of the revenues from the SDCC payments for the service provided and the difference in weighing that producers leave to their PAs. Details of the method are given in annex 8.81.

The PAs' conduct of marketing delivery is profitable, generating a net income of just over CFAF 1.3 billion, or CFAF 5,193 per ton of SC marketed (8.82). It is the use of this revenue that enables social improvements in the form of infrastructure (classrooms, dispensary rooms, canal pounds, boreholes) or in the form of payment of the salaries of teachers.

At 77% of the total revenue collected, the rate of value added is very high, because intermediate consumption for commercialization purposes is inexpensive. They cover purchases of office supplies and bulletins published by the CNPCC, as well as fees for refurbishing market spaces and for training, with associated meal costs.

²⁶ A positive outcome of the inter-ministerial mission for the SDCC was the validation of an annual cost of 1.7 billion CFAF excluding taxes for maintaining rural roads. This is very close to the SDCC estimates despite the revision of the cost calculation structure according to road categories.

²⁷ <http://www.izf.net/ancien/entreprise/num-4772>

The value added is mainly used to cover personnel costs of about CFAF 1,724 million. These costs include salaries for permanent staff hired for the day-to-day management of PAs and miscellaneous bonuses for these staff and for members of PA steering committees. Assuming eleven people are involved (7 people from the steering committee and 4 permanent staff) in 1,545 active (or pilot) PAs, this is CFAF 101,440 per person per year. Financial expenses are minimal; they correspond only to the cost of managing the PAs' accounts at the SDCC.

Note that the payment for PAs' services, which covers commercialization as well as annual crop monitoring services, does not however cover the expenses incurred by PAs if premiums paid to staff and committee members are included. The SDCC payment is just over CFAF 2.4 billion, for a total expenditure of CFAF 2.7 billion (including 0.6 for premiums). It is therefore essentially the weighing surplus (amounting to 1.8 billion CFAF), a voluntary contribution by producers, that contributes to the net revenue of PAs and allows the sustainability of their operations and their social accomplishments in substitution of the State.

PAs are not subject to taxes in their commercialization of the SC. It would be unfortunate for them to become so, given that the financial resources behind their economic and social achievements come from the voluntary contribution of producers.

Limited dependence on private road hauliers

In view of the total intermediate consumption associated with the three functions performed by the SDCC, the service provided by private road hauliers is limited. This service corresponds to a total amount of about CFAF 5.3 billion – only 4.6% of the actual total of intermediate consumption. This result can be explained by the exclusive use of internal transport for SC, by the partial use of the internal fleet of trucks to take cotton fibre to the port, and by the part of this evacuation that is done by rail.

Outsourced road transport services generate indirect value added which, in view of the significant amount it represents, warrants an assessment. We were not able to do this by speaking directly with the actors involved and we were not sure that we could have obtained the necessary information.

We estimated the operating account for private road transport based on the SDCC's SC transportation data and by positing the ratio of VA to turnover. We assumed a plausible ratio of 45%, from which we were able to establish an operating account that corresponds to the amounts involved, following the method explained in annex 8.83.

The operating account obtained is presented in annex 8.84. The indirect VA created by road transport services is CFAF 2.4 billion according to the assumption of 45% turnover. In this case, the net revenue of the operators involved is close to 0.7 billion CFAF – 12.8% of turnover – a level that seems plausible to us.

Indirect value added of goods and services provided to the SDCC

In performing the three functions we have studied, the SDCC uses supplies of goods and services worth approximately CFAF 19.4 and 7.2 billion, respectively. We could not establish contacts with all the suppliers concerned to obtain the data needed to estimate the indirect value added associated with them. Rather than excluding these values, we have opted to estimate them, albeit roughly, on the basis of the data we obtained from the freight forwarders responsible for FOB shipping of cotton fibre, and the information used for the operating account of the outsourced transport service.

Our process allowed us to identify an indirect VA of approximately CFAF 9 billion, and a cumulative net revenue of about CFAF 5.5 billion. The distribution of the latter and the calculation assumptions are set out in annex 8.85.

3.1.4 Industrial Textile Processing Industry

The CICAM's operating account was drawn up on the basis of the profit and loss accounts that it provided, after making the necessary adjustments. It covers all of this company's activities. We did not have data allowing us to prepare separate accounts for spinning, weaving, printing and terry cloth activities, as we have done for the SDCC. We were only able to draw up operating accounts for the two CICAM production sites in Garoua (spinning and weaving) and Douala (printing, dyeing, terry cloth spinning and terry cloth manufacture). The accounts correspond to the 2017-18 season's production of cotton fibre from the SDCC, of which the CICAM had acquired 2,178 tonnes. The Garoua unit actually processed a larger quantity of cotton fibre (probably with some fibre that had been

acquired previously). At the Douala unit, processing also involved imported unbleached fabrics in addition to those from the Garoua unit. The operating accounts we have drawn up for these two units are based only on the SDCC's cotton fibre from the 2017-18 season.

The results are shown in annex 8.86. They are different from those of the CICAM for the reasons mentioned above, but they do show the same lack of profitability, with a negative net revenue of CFAF 3.98 billion as a result of low value added and wage costs.

The total value added created by the two CICAM units was under 0.3 billion CFAF, which is very little in view of the volume of cotton fibre processed and the number of people involved (one thousand). This poor result is partly due to the negative VA at the Douala unit.

At the spinning and weaving unit in Garoua, intermediate consumer goods accounted for CFAF 2.3 billion, including CFAF 1.3 billion for cotton fibre. According to the World Bank study mentioned above, energy costs counted as much as the maintenance of the CICAM's very old equipment (Figure 3.3), but this is not apparent from the data provided, probably as a result of recent efforts to modernize equipment.

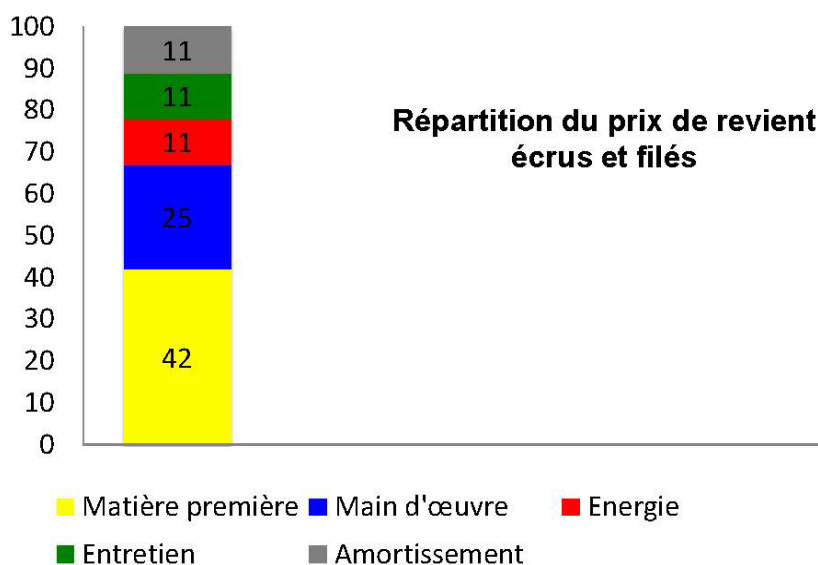


FIGURE 3.3: COMPONENTS OF THE COST PRICE OF THE CICAM'S UNBLEACHED YARNS AND FABRICS (TAO CONSULTING, 2015)

Value added per kg of cotton fibre processed is low, at barely over 1,000 CFAF. This level is to be assessed in relation to the VA derived from agricultural production. The value added created from the production of SC up to the sale of cotton fibre is CFAF 74.574 billion (36.878 from the production by the farmers and 37.696 from the SDCC up to the sale of fibre). The unit VA for a production of 254,181 tons of SC is 293 CFAF/kg of SC, or 682 CFAF/kg of fibre equivalent (with a fibre yield of 43%). The unit VA of CICAM's Garoua unit is less than 1.5 times that created jointly by producers and the SDCC.

At the Douala unit, VA is negative by about one billion CFAF. This is the equivalent of distribution and commercialization costs combined.

With one thousand employees, most of whom are male (women are only involved in the terry cloth products manufacturing segment), wages are an important item on the CICAM's accounts: CFAF 1.5 and 1.1 billion respectively at the Garoua and Douala units.

When it comes to taxes, the CICAM enjoys rather preferential treatment. It is exempt from having to pay the full VAT collected from the sale of the final products to consumers and returns only 70% of it. Such treatment corresponds to the payment of a virtual exploitation subsidy of 30% VAT at the rate of 19.25% (which amounts to 5.8% of the value of the products before tax). The CICAM benefits from the option of paying a lump-sum tax of CFAF 300 million. Noting the very difficult financial situation of the CICAM due to the accumulation of deficit years, the Cameroonian State has suspended the payment of this tax. This moratorium also applies to the payment of contributions to the National Social Welfare Fund, from which CICAM employees continue to benefit.

The State displays a desire to support the industrial valorisation of cotton fibre but not yet the acquisition of the raw material, cotton fibre itself. Under current acquisition conditions, at the global market price minus hidden costs, it appears that cotton fibre accounts for 40% of the cost price of unbleached yarns and fabrics (Figure 3.3). It is not up to the SDCC to support the activities of CICAM, but rather up to the State to find an effective solution with its own means, or with those of its technical and financial partners.

The viability of the CICAM's activities is undermined by competition from products imported from China, by a lack of cost competitiveness and by its image, that of a producer of poor quality pagne fabric. Action is being taken to temper competition from imported products; a 100% cotton standard has been set for pagne fabric imported from China, but there is little evidence that this standard is being enforced yet. Theoretically, the standard should greatly reduce imports of products from China, which does not seem to be able or willing to offer truly 100% cotton products. Enforcing import controls should automatically improve cost competitiveness, as the increase in demand will reduce the CICAM's unit costs through economies of scale.

Efforts to correct CICAM pagnes' negative image are under way but need to be pursued further. Colour fastness is subject to criticism due to the printing and finishing process. Apparently, the printing process has been improved in spite of the venerable age of the rollers, and now achieves better dye deposition. However, outdated finishing equipment is still detrimental to the preservation of print quality. Current achievements will remain insufficient and fragile so long as the finishing equipment is not modernized.

Discussions on the correction of the negative image of its pagnes are affording an opportunity for the CICAM to be active in forging and defending the image it wants to have, by investing in communication, which it had neglected for too long. Following best practice when washing a pagne for the first time is important, to preserve the brilliance of its colours. This should be done without detergent, as some components of detergents might hamper dye fixation. No pagnes are marketed with a care advice label and the CICAM could distinguish itself by being the first company to do so. This seems necessary to correct the tendency of Cameroonian consumers to favour foreign products.

Investing in enhancing and maintaining the CICAM's image relates to the sustainability of its activities but requires many other actions. Staff training emerges as a priority. This is an area that the company has neglected due to its financial difficulties. The lack of technical competence is such that the company must continue to call on a former manager who retired a year ago, and who had benefited from many periods of training in Europe and elsewhere during his career of over thirty years at CICAM. Cameroon should consider making greater use of the regional textile training school in Segou, Mali (Cerfitex), which is lauded for the quality of its training.

Clearly, the CICAM cannot last if it keeps operating with equipment acquired, for the most part, at the company's launch in 1965. It is true that modernization is under way, but it is still insufficient and must be continued without too much delay. Spinning has been modernized, with a total switch to open-end technology, and so has weaving – at least partially. Modernization must also be undertaken both in upstream (cleaning and carding) and downstream (printing and finishing). The company has already established a modernization plan but needs financial support to implement it.

For sustainability's sake, the CICAM must also adapt to the evolution of the raw material. The SDCC now produces only cotton fibre of 1"5/32 in length, at least 2 units longer than the fibre normally used in pagne production (1"3/32 or even 1"1/16). This reality challenges the relevance of adjusting the way of spinning and weaving. The fibre length now available allows finer yarns to be spun, and different yarn thicknesses to be combined during weaving. High-quality WH pagnes are already produced, albeit in small quantities, based on crossing Nm 50 and Nm 40 yarn. Technical feasibility and economic interest should be studied for weaving and printing in order to

identify possibilities for gains in productivity and subsequently in competitiveness. The aim would be to check whether the waste rate remains unchanged during the various operations upstream of the spinning mill, whereas it is likely that the consumption of products at the printing stage can be reduced.

There is also the question of product diversification. For now, the CICAM offers only 6-yard pagnes. Given the number of tailoring and sewing workshops available, the potential demand for other fabrics, in terms of length and design, is worth identifying.

3.1.5 Artisanal textile processing sector

We have described the mechanisms and stakeholders of the artisanal manufacture of ceremonial boubous. The economic elements of their activities, as collected in the village of Mayo Oulo, are summarized in annex 8.87. Consumption of SC, for the annual production of a village of craftsmen making 20 boubous per month, is estimated at 1.22 tonnes, which would take less than one hectare to produce. Assuming this involved 100 cotton-farming families, that would make it one are per family. This demand has no impact on the marketing of SC by the SDCC.

Operating accounts have been established for all production sites, which, according to the artisans of Mayo Oulo, amount to about 100 villages. Provided that there are indeed about a hundred producing villages of the type we studied, 8.88 gives the operating accounts of the different types of stakeholders involved: spinners, weavers, embroiderers, dressmakers and beetlers/ironers.

As artisanal garment making requires no equipment and is based solely on family labour, the figures of value added and operating profits are the same. Table 3-3 provides an overview of these accounts, along with the number of people involved.

	Numbers	Value Added	
		Total million FCFA	Individual FCFA
Spinners, mostly women	14 000	402	28 745
Weavers, men and women	4 000	420	105 000
Tailors, men	2 000	1 126	562 800
Beetlers/Ironers, men	2 000	120	60 000
Embroiderers, men	2 000	762	381 000
Total	24 000	2 830	

TABLE 3-3 : SYNTHESIS OF THE OPERATING ACCOUNTS OF STAKEHOLDERS IN THE ARTISANAL TEXTILE INDUSTRY

At over CFAF 2.8 billion, value added is substantial. For 121 tons of SC consumed, it amounts to CFAF 23,388 per kilogram of SC processed, that is, 95 times the value of the raw material. Such a rate of value added seems hard to beat.

However, value added per person and per year varies widely between professions. Sewers and embroiderers generate significant value added, from 380,000 to 560,000 CFAF. Spinners, who are mostly elderly women, make only CFAF 28,000. However, these values should be put in perspective with the time invested and the arduousness of the work involved. For spinners, the work may be much less demanding, although manual ginning is difficult. Improving the productivity of ginning would be preferable, especially if yarn production is the limiting factor in the whole production chain. However, we did not address this aspect during our conversations at Mayo Oulo.

There is no doubt about the sustainability of the artisanal textile processing sector under consideration, from an economic, social and environmental point of view. To function economically it does not depend on the main chain, where the SC produced is commercialized and processed. The sector operates autonomously, based on villages'

SC production which, in some cases, may come from the artisans themselves. As long as there is a demand for the gandouras known as "*boubous d'apparat*", production is guaranteed to continue. This demand is supported primarily by the *lamibé*, whose local socio-economic role should remain important in the medium term. In social terms, gender and generational diversity is an asset to sustainability. We have seen young – even very young – people weaving, which means the transmission of socio-cultural heritage is assured for the time being. From an environmental perspective, the exclusive use of natural products shields the sub-VC from any criticism. This characteristic could even be an asset that could be further exploited to promote demand and/or enhance the value of the products manufactured.

3.2 Economic contributions of the VC

3.2.1 Contribution to national growth

Status of the 2017-18 campaign

The total value added of the VC was CFAF 95.9 billion (Table 3), of which 81.0% is from direct stakeholders – i.e. producers, the SDCC, artisans in the textile industry (and CICAM) – and 19.0% from the indirect stakeholders taken into account – i.e. all PAs, the CNPC-C, transporters, other service providers and providers of goods to the SDCC for the operation of its factories and fleet of vehicles –. With an overall turnover of CFAF 362.5 billion for the whole VC, the integration ratio in the economy (VA to turnover ratio) was 26.5%. In reality, due to the internal transfer of SC within the SDCC, the value of the SC purchased from producers, worth CFAF 68.5 billion, was artificially counted as a product of the SDCC's SC commercialization function and as intermediate consumption of the SDCC's ginning function, so the actual ratio of integration into the economy is 55.9% $[(95.9 + 68.5)/(362.5 - 68.5)]$.

This VA accounts for 0.6% of Cameroon's GDP of CFAF 15,543 billion in 2017 (according to World Bank data). There can be no doubt that the share of this VC in the territorial gross product of the administrative regions of the North and Far North is considerably larger, but we were unable to obtain these figures to check this. On the other hand, of the CFAF 2,208 billion of overall value added for agriculture, fisheries and forestry sectors for the same year, the cotton VC accounts for 4.3% at national level, and most probably much more at regional level.

	Total, million FCFA			Total, %	
	Direct	Indirect	Overall total	Direct	Indirect
Turnover	303 686	59 667			
Value Added (VA)					
Amount	77 679	18 249	95 928	81,0	19,0
% Turnover	25,6	30,6			
Wages					
Amount	17 492	4 472	21 964	79,6	20,4
% VA	22,5	24,5	22,9		
Financial costs / Insurances					
Amount	5 594	2 077	7 671	72,9	27,1
% VA	7,2	11,4	8,0		
Taxes					
Amount	6 275	2 952	9 227	68,0	32,0
% VA	8,1	16,2	9,6		
Gross Income	48 318	8 843	57 162	84,5	15,5
Amortization	8 270	652	8 922	92,7	7,3
Net Income	40 048	8 191	48 239	83,0	17,0

TABLE 3-4: ECONOMIC INDICATORS OF DIRECT AND INDIRECT STAKEHOLDERS

For the different indicators in Table 3, the share of direct stakeholders accounts for a little over 80%, yet it is not as preponderant as one might expect. It is even less preponderant for taxes (or state revenues). In other words, the role of indirect stakeholders is not negligible in the economic impact of the VC under study, and even less so when it comes to state revenues.

Would contribution be increased if production reached 400,000 tons?

While the VCA4D study is not intended to be a foresight study to identify possible trends, we cannot pretend that we do not know of the plan to revive cotton production, with a production goal set at 400,000 tonnes of SC or, even more ambitiously, at 600,000 tonnes. The question of how to achieve the 400,000-tonne target came up repeatedly in our conversations with stakeholders.

A simulation was carried out to identify changes in the distribution of producers among the four types identified according to the size of their cotton crops. Our aim was to show that, even though discourses tend to be focused mainly on large producers, in a context where small producers are a large majority, these producers' contribution must also be taken into account. Any future can depend on many factors and the interactions between them. In the case of cotton production, soil fertility, yield evolution and climate change are examples of interacting factors. In our simulations we cannot realistically take into account all the factors affecting the future, and we even doubt that this could theoretically be done so long as the manifestations of climate change are not yet well identified and stabilized. The simulation method and the scenarios considered are presented in annex 8.94. The results obtained are summarized in annex 8.95 to show the variations obtained – from the baseline scenario – in terms of numbers of producers, crop area and production. Variations are calculated for each of the four types of producers and for producers as a whole. 8.96 concerns the variations for MARI, VA, net operating income, and the shares of producer types in VA and net operating income as a whole.

Analysis of the results shows that in order to reach the target of 400,000 tonnes of SC:

- An increase in the total surface area is inevitable if realistic prospects of short- to medium-term yield gains are to be achieved;

- Increasing the number of producers is not strictly necessary but it would make it easier to achieve the goal;
- Producer “shifts” from one type to another larger type (in terms of the size of the cotton crop area) are sufficient, without very high rates of “shifts” in favour of larger producers (over 10 ha of cotton crop) being needed;
- It is the increase in yield, at realistic levels of 10 to 15% (depending on the technical prospects mentioned in the functional analysis), that would make it possible to reach the target with the least increase in surface area;
- Such an increase also induces the best VA gains.

Note, in passing, that the possibility of moving to a production of 600,000 tonnes requires an increase of fewer than 23,000 producers while almost doubling the total surface area, if a 15% increase in yield is achieved.

3.2.2 Contribution to the balance of trade

Only the export of cotton fibre contributes to the trade balance, but more than 98% of production is actually exported. According to World Bank data, the cumulated value of exports is CFAF 2,100 billion. The 107.6 billion made in cotton exports accounted for 5.1% of this figure.

The share of the contribution of agricultural products to exports is even greater. Assuming that agricultural products accounted for 30% of exports in 2017, as they did in 2016 (the figure for 2017 is not provided in World Bank data), cotton exports accounted for 17.1% of these.

With regard to imports of goods and services for a total value of CFAF 4,046 billion in 2017, the export of cotton fibre covered 2.6% of the currency outflow.

Estimates in annex 8.90 show that the VC accounts for a total of CFAF 56.6 billion in imports. Considering cotton fibre exports' value of CFAF 107.6 billion, the VC's overall balance is positive by 51.0 billion. Imports accounted for 19.3% of the value of the VC's production (CFAF 294.0 billion).

3.2.3 Contribution to domestic trade

It is the products of cottonseed crushing, and to a marginal extent the gandouras of the craft industry and the cotton fibre sold to the CICAM, which contribute to domestic trade. They totalled CFAF 24.6 billion. However, we do not have internal trade figures to assess their respective shares.

3.2.4 Contribution to public finances

Within the VC, only the CNPC-C benefited from an operating subsidy of CFAF 95 million during the agricultural season under consideration. Hence, the taxes of CFAF 9.2 billion constituted almost net State revenue estimated at CFAF 9.1 billion, which is 9.5% of the total VA (Table 3.4). With the exception of craftsmen, all stakeholders are concerned; producers are indirectly concerned through the use of inputs provided by the CNPC-C. It is the SDCC that contributed the most, with a share of 64,7%, followed by a substantial contribution of 17.1% from producers grouped together in the PAs and the CNPC-C (Figure 3.4).

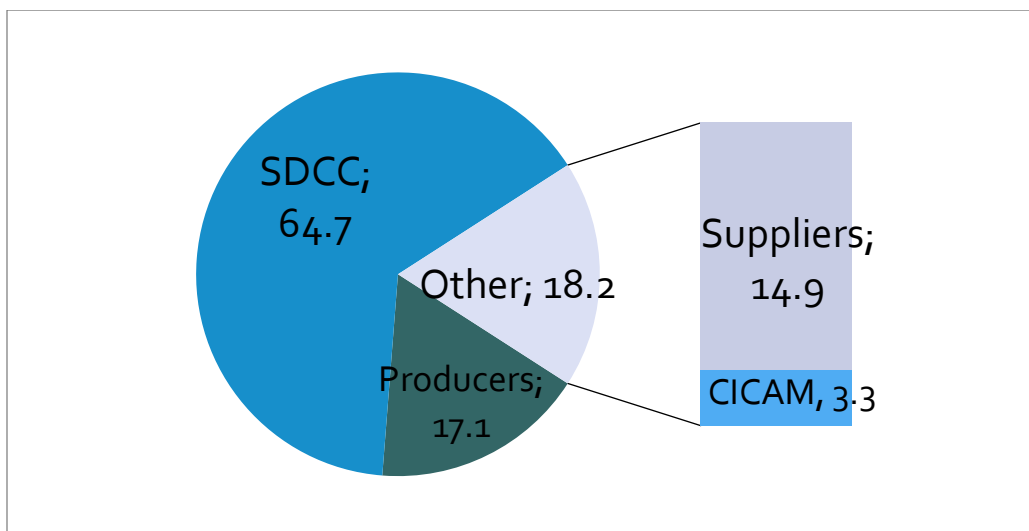


FIGURE 3.4: STAKEHOLDERS' CONTRIBUTION TO TAXES, AS % OF THE TOTAL

The SDCC's share can be explained by how much VA it creates; it is also taxed relatively more when taxes are based on VA (Figure 3.5), although this ratio is difficult to calculate in cases of negative VA (crushing at SDCC) and of very low VA (CICAM). This result might also be influenced by the assumptions used to estimate the operating accounts of indirect stakeholders. However, it can be said that the SDCC, which operates in rural areas, is at least as taxed as private operators. Without the application of the export tax, the rate would be only 11.1%.

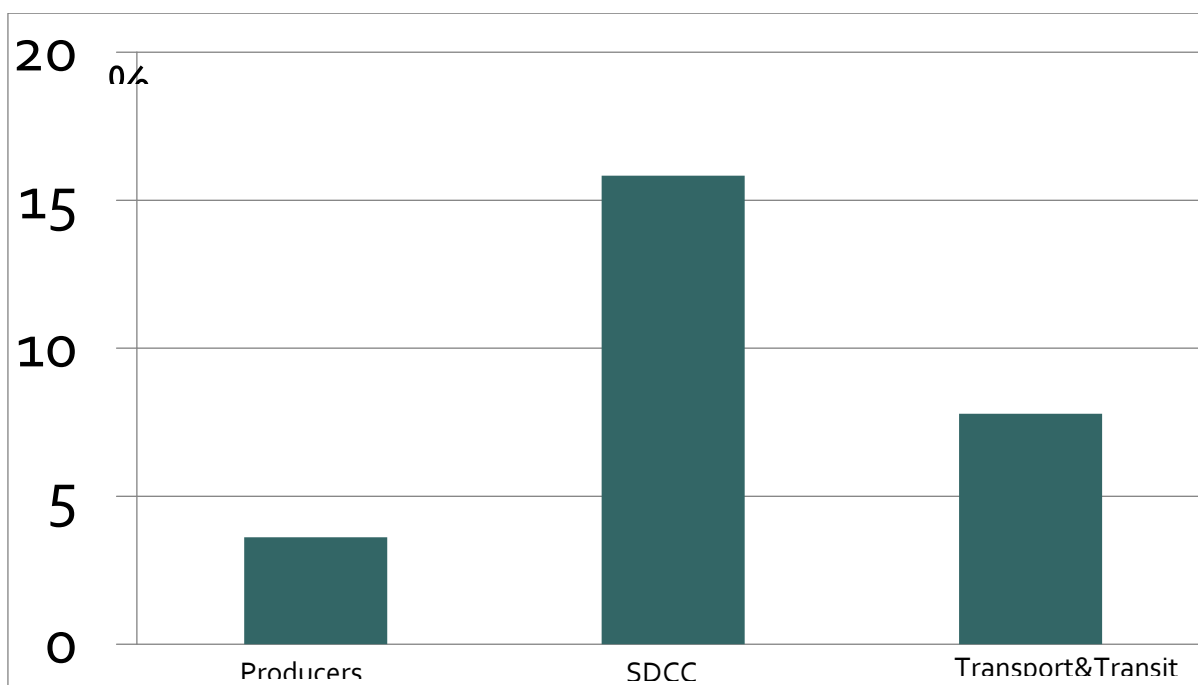


FIGURE 3.5: TAX RATES AS % OF VA

Taxes indirectly applied to producers through the inputs they use are of three types: SGS tax, customs duties, and VAT, which are included in the calculation of the cost price of inputs to determine their sales price. The amounts were CFAF 124 million, 999 million and 445 million respectively (see operating account in annex 8.75), the equivalent of 7.9%, 63.7% and 28.4%, respectively, of the total taxes they pay.

The composition of the taxes the SDCC pays is more complex and the data obtained to date do not allow us to correctly determine how exactly the total sum is distributed between different taxes. We can only determine that the export tax, at the rate of 2%, plus the stamp duty associated with the FOB file, would be CFAF 2.17 billion. The other taxes to which the SDCC is subject are:

- Employer's payroll tax;
- Quarterly taxes applied to transport equipment: road taxes, toll fees, and axle tax, which amount respectively to approximately CFAF 40, 25 and 25 million;
- Trading dues on factories, worth a total of about 200 million CFAF.

The share of taxes of value added is represented for all stakeholders in Figure 3.6, where producers, PAs and CNPC-C are grouped together as a single entity (CICAM is not represented because of its negative result). For craftsmen, operating profits correspond to all of the VA, whereas they make up the bulk of it in the case of farmers. The SDCC's rate of taxation is the highest, as it slightly exceeds that of carriers.

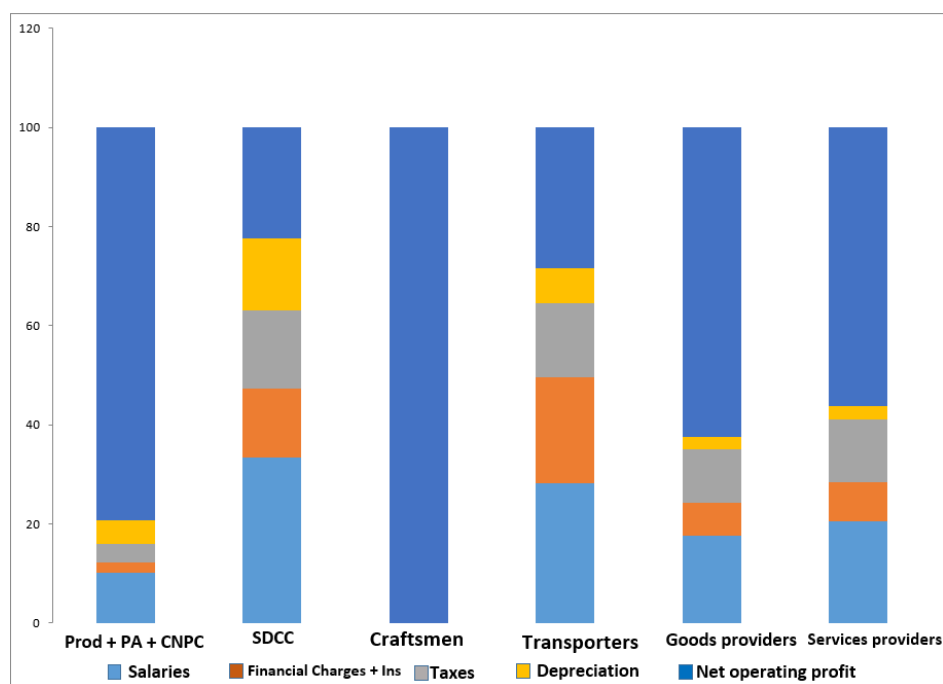


FIGURE 3.6: DISTRIBUTION OF VA FOR THE DIFFERENT STAKEHOLDERS

3.3 International viability

Impact of the World Price and Eurodol

The viability of all cotton producing in French-speaking Africa countries is subject to two exogenous factors: the volatility of the world market price in US dollars, and the exchange rate of the dollar against the euro.

To determine international viability in the face of these exogenous factors, we carried out simulations to see the changes in the value of the SDCC's net operating income, which we limited to the production and sale of cotton fibre (without accounting for crushing). For the 2017-18 season, this result was CFAF 12.3 billion: the negative result of SC marketing (-16.1 billion) plus the positive result of ginning (+28.4 billion).

We assume that fluctuations in both factors occur after planting, so that production is for the 2017-18 crop year and the operating account of the SC marketing function is unchanged; only the value of the sale of cotton fibre is affected. We have considered situations where both the world price and the exchange rate can vary, by 5% increments, from -40 to +40% compared to the reference situation of 2017-18. The complete results are given in annex 8.98 an excerpt of which is shown in Figure 3.7

Exchange rate variations			Selling price in US cents per pound, % variation from 2017-2018 level								
			-40%	-30%	-20%	-10%	Référence	10%	20%	30%	40%
%	Eurodol	CFAdol	45.0990	52.6155	60.1320	67.6485	75.1650	82.6815	90.1980	97.7145	105.2310
-40%	0.6762	815	12.3	20.6	30.3	41.7	55.4	72.1	93.1	120.0	155.8
-30%	0.7890	757	4.7	12.3	21.3	31.9	44.6	60.2	79.6	104.6	137.9
-20%	0.9017	698	-3.0	4.1	12.3	22.1	33.9	48.2	66.2	89.2	120.0
-10%	1.0144	640	-10.7	-4.2	3.4	12.3	23.1	36.3	52.7	73.8	102.0
Référence	1.1271	582	-18.4	-12.5	-5.6	2.6	12.3	24.3	39.3	58.5	84.1
10%	1.2398	524	-26.1	-20.8	-14.6	-7.2	1.6	12.3	25.8	43.1	66.2
20%	1.3525	466	-33.8	-29.0	-23.5	-17.0	-9.2	0.4	12.3	27.7	48.2
30%	1.4652	407	-41.5	-37.3	-32.5	-26.8	-19.9	-11.6	-1.1	12.3	30.3
40%	1.5779	349	-49.2	-45.6	-41.5	-36.6	-30.7	-23.5	-14.6	-3.0	12.3

FIGURE 3.7: SDCC NET INCOME EXCLUDING CRUSHING ACCORDING TO FLUCTUATIONS IN THE WORLD PRICE AND EURODOL

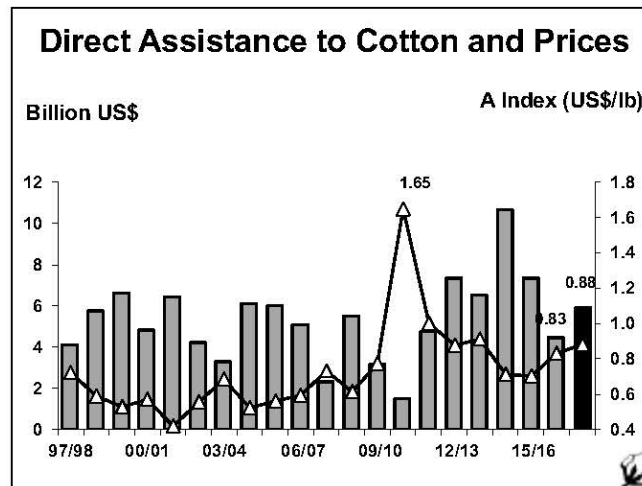
Were the world price and/or the Eurodol rate to be raised or lowered by 10% – a variation that could realistically happen in the short term – the SDCC's net revenue (excluding crushing) would vary in a range from CFAF -7.2 billion to CFAF +36.3 billion. But with variations of 20%, the net revenue would vary from CFAF -23.5 billion to CFAF 66.2 billion.

In short, it would take a very unfortunate combination of a 20% fall in world prices and a depreciation of the US dollar of the same magnitude for the deficit to reach 23.5 billion in the current non-optimal conditions of industrial transformation in the SDCC. In such an event, many other producing countries would also be in a bad financial position, and probably a worse one because of more capital-intensive production methods. The international viability of Cameroon's cotton VC is therefore not bad. Alleviating industrial constraints in ginning would further enhance it.

National Protection Coefficient (NPC)

The NPC is the ratio between the actual export price obtained and an international or parity price, which serves to identify the effect of the interventions of the country under consideration; a ratio greater than 1 would indicate that protection is being implemented. The parity price should not itself be influenced by the support policies of other states, but this condition is often difficult to meet. Since 1997, the International Cotton Advisory Committee (ICAC) has been in charge of keeping statistics on support for cotton worldwide: this support has sometimes exceeded \$10 billion and is inversely related to the Cotlook A index (world price reference): a fall in prices leads States to intervene in support of cotton VCs (Figure 3.8).

FIGURE 3.8: DIRECT ASSISTANCE TO COTTON (SOURCE: ICAC)



In the case of Cameroon, the NPC calculated using Index A as the international price reference (despite its imperfection, which we have noted above), has every reason to be equal to one unit or even less – a value that indicates a lack of protection or even a certain level of taxation. Cotton is sold through international tenders to which a pool of more than 15 mainly global traders responds. The price obtained can be considered to be the current world price, leading to NPC = 1. Nevertheless, the SDCC sells its cotton with reference to the NY Cotton Futures, which is lower than the A Index by about 10%, so the NPC is about 0.90, which indicates that a country does not protect the cotton it produces.

The Effective Protection Coefficient (EPC), the calculation of which takes into account State intervention in the export of cotton and the import of inputs, confirms this. Since the end of 2017, the export of cotton fibre is subject to a 2% FOB tax. The EPC would therefore be $0.90 \times 0.98 = 0.88$. On the inputs/equipment side, no support was recorded in 2017-18: support for the use of fertilizers was discontinued in 2013 and support for the purchase of carts has ceased in 2016. Instead, inputs are taxed on importation and subject to VAT – with no preferential rate –, which means the EPC is in fact lower than 0.88.

This lack of protection, and even the prevalence of taxation, is not modified by the State's participation in the capital of the SDCC. There has been no increase in capital that could have allowed for an injection of funds as of late. On the contrary, the SDCC carries out public service missions which, while they are meant to be financially compensated for, are only partially so, and only much later.

Cost in domestic resources

The concern for international viability relates to the notion of comparative advantage, for which the domestic resource costing method was developed. The basis of the method is to check whether a given product (cotton, in our case) makes better use of domestic resources (commonly capital, labour and land, but also water in the case of irrigated production) compared to alternative productions, and whether it allows the country to earn or save more currency.

The application of the method is problematic in the case of family farms whose product is seed cotton, for which there is no world market, as a global market exists only for cotton fibre, that is, a product that results from processing seed cotton. Budgets for production among farmers and at the ginning plant would have to be available to consider applying the method. One of the few cases of applications we know of for cotton was in irrigated and mechanized production among large-scale farmers in Zimbabwe²⁸ in the early 1980s. For those

²⁸ Morris, M.L., 1986. *Determining comparative analysis through DRC analysis. Guidelines emerging from CIMMYT's experience, Mexico, CIMMYT.*

farmers, who paid for a ginning service and sold cotton fibre, a domestic resource coefficient of 0.62 was determined, which shows some degree of comparative advantage.

The appropriateness of applying the method is also somewhat questionable in a context where family farms are prevalent and still very much focused on subsistence. The notion of specialization underpinning the concept of comparative advantage has not really materialized yet, even though the share of cotton in crop rotation varies and is higher among the largest cotton producers.

Even ignoring the above reservation, we were not able to apply the method because the accounting elements obtained from the SDCC are too aggregated. For example, Purchases Account 60 alone has about ten purchase lines, each of which is the consolidation of a wide variety of purchases. The same applies to the aggregated accounts of external services. The time allotted for the study was too short for us to engage in estimating the shadow prices associated with the many market factors at play in the SDCC's support, marketing, ginning and export functions, whether they are actually traded or not.

Focusing strictly on the production phase among farmers, it seems to us that the efficiency of domestic resource use relies on:

- The low level of committed capital, especially with yoke farming, for which investments have been absorbed, for cotton and other crops in the rotation.
- The allocation of labour and land by farmers according to their perception of the attractiveness of cultivating cotton rather than other crops. The loss of interest in this culture between 2005 and 2010 reflected a lack of attractiveness, which has been totally reversed today. The risk associated with the inputs credit is contained, and the purchase price of cotton is considered favourable – especially since prices of other crops are suffering from reduced demand caused by Nigeria's economic policy.

3.4 Redistribution and social effects

3.4.1 VA and distribution

For the entire VC, taking into account direct and indirect stakeholders, the total VA is CFAF 95.9 billion, split between CFAF 77.7 billion of direct VA and CFAF 18.2 billion of indirect VA. With regard to the production of SC for the season studied, unit VA was 377 CFAF per kg of SC produced.

The SDCC and cotton producers contribute around 80% of the total VA and in similar proportions: 39,3% and 38.4% respectively (Figure 3.9). If we add to the producers the VA created by PAs and textile craftsmen who are also agricultural producers, the total share of agricultural producers rises to 44,8% of the total VA. All providers, that is carriers, other service providers and providers of goods, account for 11,9 % of total VA, and up to 15,7 if we add the VC created by the CNPC-C. However, the VA rate varies widely among the players (Annex 8.89); it is at 57.1% for producers and PAs, but only 17.0% for the SDCC, which concentrates most of the turnover.

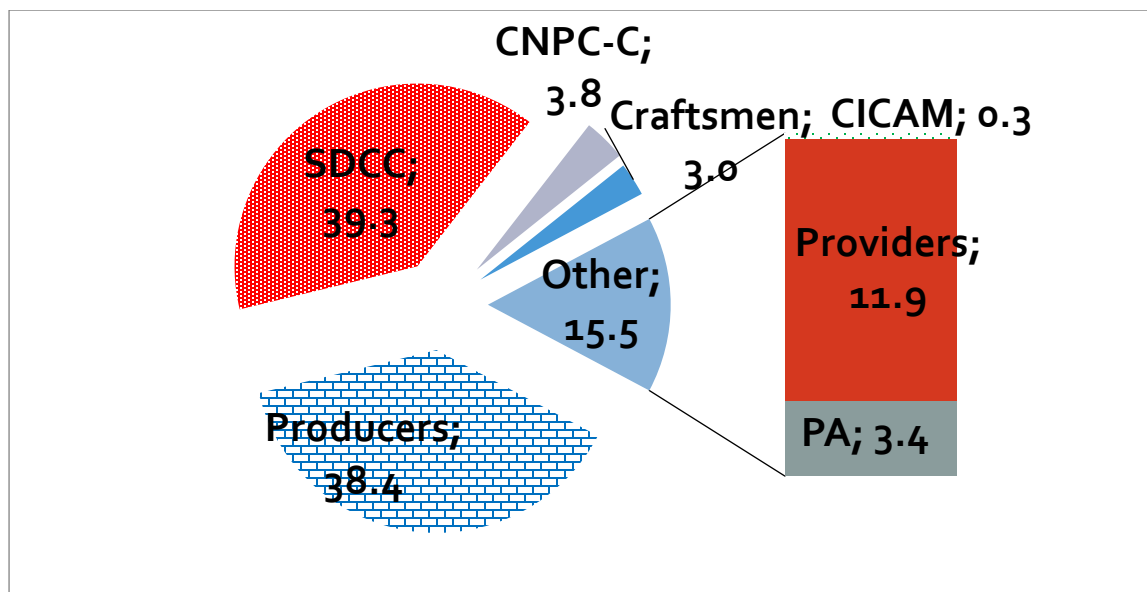


FIGURE 3.9: BREAKDOWN OF STAKEHOLDERS' CONTRIBUTIONS TO TOTAL VA

In terms of income distribution, as a percentage of total VA excluding amortization, producers have the largest share: 37.6%, and even 45.4% when rural workers and artisans, who are also agricultural producers, are counted as part of the same group (Figure 3.10). Employees, through the salaries they receive, come in second place with 20%. The shares of the SDCC, of the State and of financial institutions (FIs) are quite similar, around 9% to almost 11%.

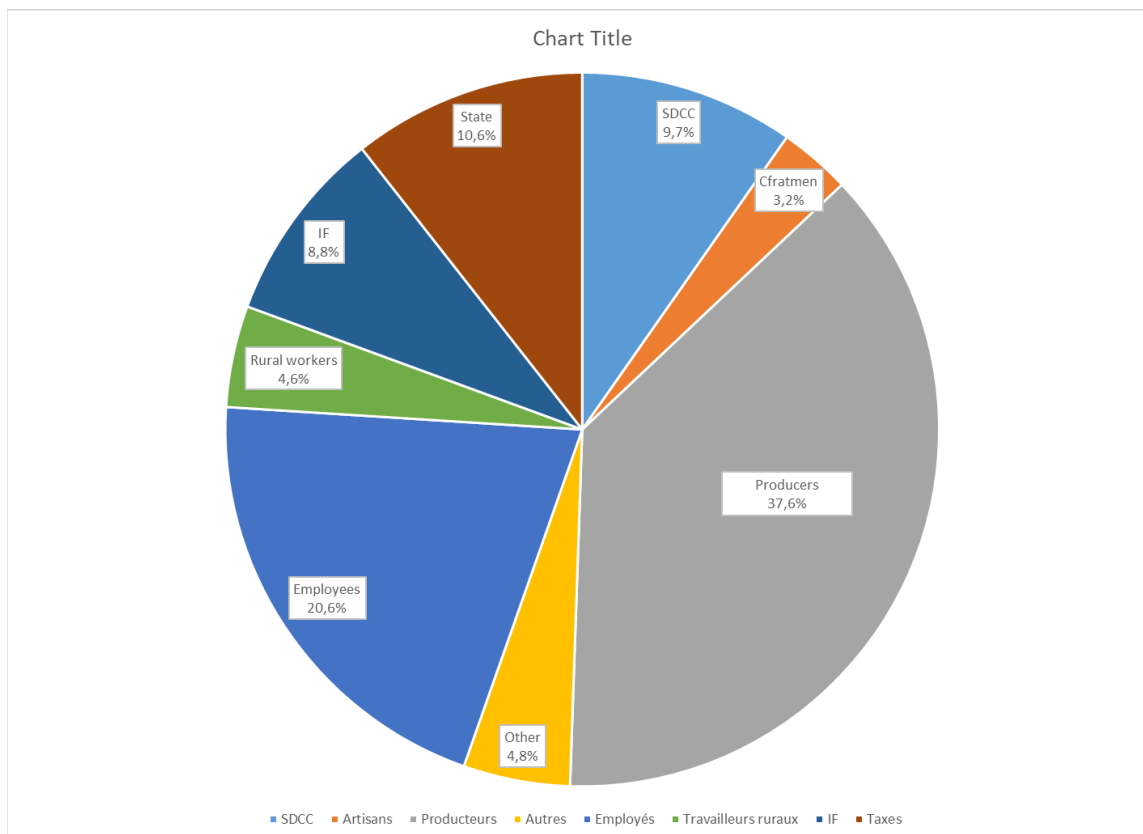


FIGURE 3.10: STAKEHOLDERS' NET INCOME (EXCLUDING AMORTIZATION) AS A % OF TOTAL VA

3.4.2 Distribution of VA, wages and operating income

In terms of VA, producers contribute the most while the contribution of artisans is minimal. We have seen that producers contribute 42.4% of total VA, and even almost 50% if PAs and textile artisans are counted with them (section 3.4.1). This is even clearer with direct VA, in the total of which producers alone account for 47.5% and 51.1% if we include textile artisans (annex 8.97). These values are lower than they would usually be, closer to 60%. They are also to be assessed in relation to the 66% rate used in the price risk management device to fix the producers' share of the price obtained on export.

Wages, which amounted to nearly CFAF 22.0 billion, accounted for 22.9% of total VA. SDCC employees are the largest recipient of salaries: nearly 60% of the total (Figure 3.11). Agricultural producers come second, with 18.6%, amounting to 4.0 billion CFAF, of which 1.7 billion was distributed within the framework of PAs' operations. A larger part, CFAF 2.3 billion, is distributed as compensation for temporary work that cotton producers perform for one another.

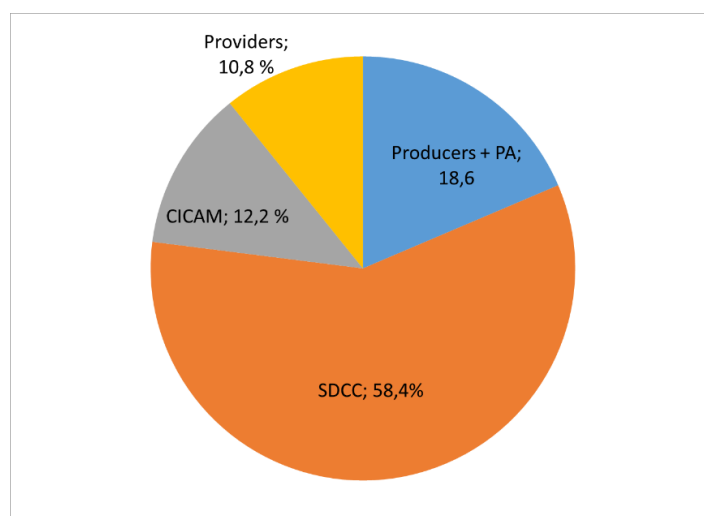


FIGURE 3.11: DISTRIBUTION OF WAGES AMONG STAKEHOLDERS

The share of producers is even more predominant if net operating income is taken into consideration (Figure 3.12). The specific share of all producers is 62.2%, and even 66.5% when combined with PAs, whose members are all cotton producers. One could even add the share of artisanal textile producers (5.4%), which would take this up to 71.9%. The SDCC accounts for only 16.1% of all income. Thus, producers are the main income earners in the VC.

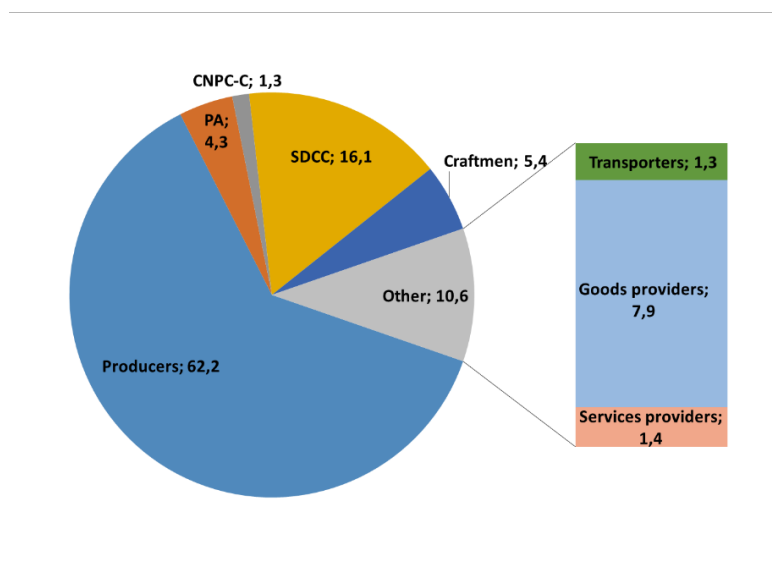


FIGURE 3.12: BREAKDOWN OF NET OPERATING INCOME (MILLIONS CFAF)

3.4.3 Inclusion of vulnerable groups

Direct information on the participation of vulnerable groups in production is lacking. These groups are generally understood to be young people and women. Their cotton crops are thought to be small and they are mostly represented in the group of producers cultivating less than one hectare of cotton. This is the case of women, according to the data we used (annex 8.17), and must also be the case of young people, since the average age of producers cultivating less than one ha is low (Tableau 8-1 in 8.15).

Despite producers being selected to ensure the sustainability of the inputs credit system, Figure 3.13 shows the integration of the smallest producers (less than 1 ha of cotton) to be relatively good. Seed farmers are divided²⁹ into four types of producers according to the size of their cotton crops. The share of very small producers in the VA of all producers is 26.2%, while that of very large producers is 12.2%. Of the 62.7% of overall producers' VA that is created by small producers with less than 5 ha of cotton crops, very small producers account for 41%. Net operating income figures show the same distribution; the operating accounts of the four types of producers are summarized in annex 8.91.

²⁹ Assuming that the distribution of seed farmers among the 4 types of producers is the same as for all producers. This hypothesis is plausible given that the seed production system is based on choosing seed villages.

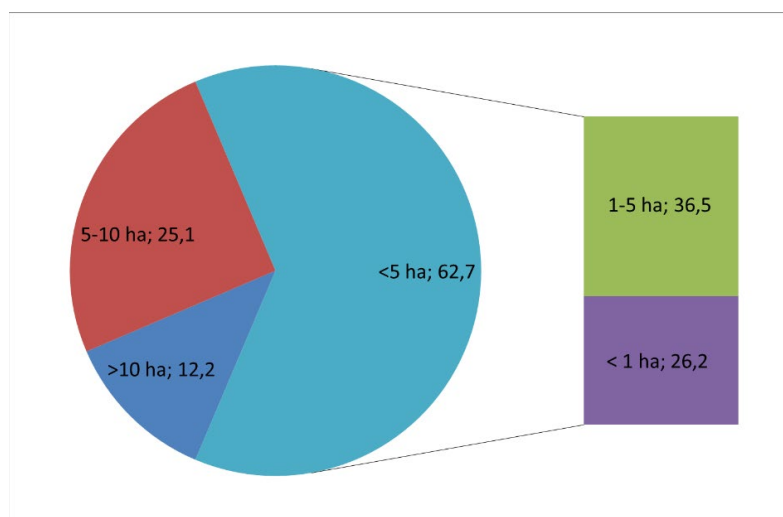


FIGURE 3.13: SHARES OF PRODUCER TYPES BY COTTON CROPS AREA IN THE VA OF ALL PRODUCERS

3.4.4 Distribution of jobs created

VC-related employment mainly benefits people in rural areas, although it is mostly part-time or temporary employment. The 1,545 active PAs have at least 6,180 people paid for their operation, 10,815 people receiving bonuses for their management and at least 9,270 people, mostly young, are financially compensated for conducting the seasonal commercialization activities.

For the other direct players, permanent and full-time jobs are found at the SDCC, CICAM and CNPC-C. At the SDCC, there were 1,960 employees in 2017, along with 1,300 to 1,600 seasonal workers. CICAM operates with about a thousand permanent employees. At the CNPC-C, the number of employees has stabilized at around 130 individuals. In all three agencies, the employees are overwhelmingly male.

In order to assess the jobs provided by the VC, given that not all salaries are distributed to employees and that jobs and compensations are varied, we converted the salaries in number of months and years equivalent of the minimum monthly wage, which was CFAF 36,000 in 2018 (Table 3). The number of years at minimum wage is the number of people the VC could have employed at that salary level. The salaries distributed almost corresponded to 50,000 full-time annual jobs at minimum wage, of which 29,000 were provided by the SDCC. Cotton cultivation and the tasks carried out in the PAs provide just over 9,000 jobs, which is more than at the CICAM and the various service providers, where salaries are distributed to actual employees.

	Producers + PAs	SDCC	CICAM	Providers	Total
Wages, 10 ⁶ FCFA	4 003	12 582	2 630	2 324	21 539
Months of min. wage	111 202	349 505	73 051	64 543	598 301 ^c
Years of min. wage	9 267	29 125	6 088	5 379	49 858
Note: minimum monthly wage is FCFA 36,000					

TABLE 3-5: MINIMUM WAGE EQUIVALENTS CREATED BY THE COTTON VC IN CAMEROON

3.4.5 Impact of governance

Four major elements of governance impact the degree of inclusion and the level of income of producers and the SDCC. Three of them relate to the partnership between the SDCC, the CNPC-C and the PAs, and the fourth is beyond their control.

The process of clearing up the inputs credit consists in selecting eligible producers. This can be perceived as a process of excluding certain farmers based on their failure to repay credits they had previously taken out and/or on their lack of productivity. Yet it is a solution to avert the risk of collapse of the input credit system that was open to all producers. Moreover, not being given access to the inputs credit does not mean that one is excluded from cotton production, as it is also possible to purchase inputs directly or to find arrangements with farmers who have access to the inputs credit. The current system therefore appears to be a compromise between a certain amount of inclusion, and concern for the sustainability of the inputs credit. The large proportion of very small producers (with less than 1 ha of cotton), who represent 70% of the producer population, rather seems to indicate a low level of exclusion.

The price risk management device, through the guarantee of a pan-territorial price and protection against world price fluctuations, is a plus for producers' income. The collegial management of the device, in which the SDCC, the CNPC-C and five ministries concerned with the development of cotton-growing zones are brought together, ensures that the interests and respective financial situations of the SDCC and the CNPC-C are taken into account in a concerted way.

The current governance of input sales is unfavourable to producers, who acquire inputs at their cost price, calculated according to formulas that include all costs, sometimes a little excessively. The method of calculating the cost price could be optimised by taking into greater account the interests of producers and not just the sustainability of the inputs credit system. Producers bear the brunt of transport costs that are inflated by the remoteness of the cotton-growing areas from the port where imports arrive. Moreover, agricultural inputs do not enjoy preferential VAT rates. Unlike producers in other French-speaking African countries, some of whom are far less penalized by the distance from the port of import, producers in Cameroon do not benefit from any subsidies.

Finally, the export tax clearly weighs heavily on the SDCC's income. The application of this tax is questionable under the terms of the MINFI circular of January 2018. As exported cotton fibre was clearly processed during ginning, it should not be subject to the export tax. Removing this tax would increase the SDCC's net income by a quarter.

Structuring Question 1: What is the VC's contribution to economic growth?		INDICATORS	RESULTS
CQ1.1	Are VC activities profitable and sustainable for stakeholders?	Net income of the players, in 10 ⁶ CFAF	
		Producers	
		Type 1	3,580
		Type 2	10,502
		Type 3	8,292
		Type 4	4,107
		Seed producers	6,249
		Total	32,730
		SDCC	8,469
		CICAM	-3,980
		Artisans	2,830
		Direct stakeholders	40,048
		PA	1,320
		CNPC-C	707
		Carriers	683

		Suppliers of goods	4,251
		Service Providers	1,230
		Indirect stakeholders	8,191
		State	
		VC	48,240
		Comparison of farmers' net income with minimum wage, subsistence needs and/or other employment opportunities	
		Producers' net income in months of minimum wage	
		Type 1	1,1
		Type 2	9,2
		Type 3	45,2
		Type 4	81,5
		Seed producers	6,6
		Producers' net income in months of average wages	
		Type 1	0,4
		Type 2	2,9
		Type 3	14,4
		Type 4	25,9
		Seed producers	2,1
CQ1.2	What is the VC's contribution to GDP?	Total VA 10 ⁶ CFAF	95,928
		Salaries	21,964
		Financial expenses & insurance	7,671
		Taxes	9,227
		Amortization	8,922
		Net operating income	48,239
		Share of total VA in GDP (%)	0.6
		Rate of integration into the economy (total VA / VC production) (%)	55.9
CQ1.3	What is the VC's contribution to the agricultural sector's GDP?	Share of VA in the agricultural sector's GDP (%)	4.3

CQ1.4	What is the VC's contribution to public finances?	Balance for public finances, 10 ⁶ CFAF	9,227
CQ1.5	What is the VC's contribution to the trade balance?	VC trade balance, 10 ⁶ CFAF	51,000
		Total imports / VC production (%)	19.3
CQ1.6	Is the VC viable in the international economy?	Nominal protection factor (NPC)	0.90
		Domestic Resource Cost Ratio (DRC)	

INDICATEURS D'ANALYSE ECONOMIQUE

Structuring Question 2: Is this economic growth inclusive? (Question to be analysed with complements from the Social Analysis)		INDICATORS	RESULTS
CQ2.1	How are revenues distributed among VC stakeholders?	Total farm income	32,730
		Type 1	7,960
		Type 2	12,052
		Type 3	8,542
		Type 4	4,176
		Share (%) of the final price earned by producers	55.4
		Total wages and salaries	2,280
		Type 1	1,666
		Type 2	488
		Type 3	111
		Type 4	14
CQ2.2	What is the impact of the governance system on income distribution?	Distribution of income	
		Producers	67.8
		SDCC	17.6
		CICAM	-8.3
		Artisans	5.9
		Direct stakeholders	83.0
		PA	2.7
		CNPC-C	1.5
		Carriers	1.4
		Suppliers of goods	8.8
		Service Providers	2.5

		Indirect stakeholders	17.0
CQ2.3	How is employment distributed along the VC?	Number of salaried jobs, self-employed people and entrepreneurs	
		Salaried employment	
		SDCC	1,900
		CICAM	1,000
		Artisans	
		Direct stakeholders	2,900
		PA	6,180
		CNPC-C	128
		Carriers	
		Suppliers of goods	
		Service Providers	
		Indirect stakeholders	6,308
		VC	9,208
		Other Jobs	
		SDCC	1,500
		CICAM	
		Artisans	24,000
		Direct stakeholders	25,500
		PA	16,995
		CNPC-C	41
		Carriers	
		Suppliers of goods	
		Service Providers	
		Indirect stakeholders	17,036
		VC	42,536

TABLE 3-6: ECONOMIC ANALYSIS INDICATORS

4. SOCIAL ANALYSIS

The social analysis of the cotton VC in Cameroon was carried out from a sociological perspective by applying the social profile methodology (see VCA4D methodology). Six core questions are used to answer the framing question for the social analysis in this chapter: “Is Cameroon’s cotton VC socially sustainable?” These six questions are:

1. Are the working conditions in the VC socially and sustainably acceptable?
2. Is the degree of respect for water and land rights socially and sustainably acceptable?
3. Is gender equality throughout the VC recognised, accepted and promoted?
4. Are food and nutrition conditions acceptable and safe?
5. Is social capital strengthened and distributed equitably throughout the VC?
6. What are the living conditions and standards of health, education and training infrastructure and services, and do the VC’s operations contribute to improving them?

In addition, we provide an answer from a social perspective to another of the framing questions, which has already been partially answered but from an economic perspective:

7. Is the VC’s economic growth inclusive?

This fourth chapter therefore covers social areas, without however losing sight of economic considerations and of certain agronomic and environmental realities such as soil fertility and grazing. In order to understand the complex social relations in the cotton sector and therefore the social facts (Weber 1922, Mills 1958) of this globalized sector, we also include social structures in our analysis, as one basis among others to better understand governance and to answer framing questions. Aspects that might have appeared in the functional analysis are addressed in the social analysis. Thus, we further elaborate on questions on governance, the role of women, and social and institutional dynamics here, to complement the functional analysis (see above) and even parts of the economic analysis, in a way that is integrated with the other elements of the social analysis.

Furthermore, answers to the social analysis’ core questions are preceded by reflection (which we call “sociological analysis”) aimed at better understanding the stakeholders’ historical, cultural and territorial context.

4.1 Methodology

This work was carried out in three phases: a documentation and literature study in January, then Mission M1 was led with the team from 24 February 2019 to 14 March 2019 in Yaounde and the North region, and finally Mission M2 lasted from 24 April 2019 to 6 May 2019 in the Far North (only one visit).

In the field, several group interviews, with 50 to 80 participants in the North and 400-500 participants in the Far North, all cotton producers (men, women and youths) at village level, formed the basis of information gathering to understand the context. Interview visits to the capital completed the work in the North (see list of interviews in annex 8.99).

Note that the vast majority of these field interviews were with cotton producers. They took place in the following villages and/or PAs (SDCC region in brackets): a) North: Bah Tao and Landau 1 (Mayo-Galké); Laina Gawtal, Ouarou Dandi and Lama Laouane (Ngong); Guider-Lamarde (Guider). In the Far North: Domba and Doyang (Kaélé); Saourigwa (Tschatibali). Meetings lasted about two hours. The SDCC and CNPCC teams were readily available at meetings and willing to answer all our questions. Note that the surface area of the region in which surveys were conducted corresponds approximately to that of Switzerland. Safety issues in the Far North did not allow planned visits to be carried out.

Information on references marked with a "D" (Document) can be found in annex 8.99. The "I" (Interview) marks indicate the source of the meetings with the place and date (same annex).

4.2 Results of the sociological analysis

4.2.1 Institutional, historical and structural characteristics

Cotton in Cameroon is now produced and ginned in two of the three provinces of the "North", a region that was created by decree in 1983 and covers 30% of the country's territory (Figure 1.1). More than 95% of the fibre is transported to Douala for export. Historically, the production of cotton, as well as the manufacture of textiles and garments, is an old tradition, which largely precedes the colonial era as it dates back to the early 19th century. This sector has been an abundant source of jobs, wealth and pride. When the CFDT (Compagnie Française pour le Développement des Fibres Textiles) set up operations in the North of Cameroon (Kaélé) to develop cotton production in 1951, cotton had already been traditionally cultivated for a long time (Boutrais 1984). The same author describes its socio-economic role, which has not changed significantly since:

"The success of cotton cultivation in northern Cameroon is indisputable. It is due to a convergence of favourable assets: population density is high without being excessive, the soil lends itself well to it, and millet can be cultivated during the dry season. It is therefore of all the more obvious interest for the country. Cotton brings foreign currency to the State and monetary resources to the farmers. It has been a driving force in the agricultural development of the northern region, allowing it to shift out of a subsistence economy and helping to introduce new techniques such as harnessed cultivation. As shown above, it is largely responsible for the population migrations that have mitigated historically inherited settlement imbalances. It is precisely these benefits that make it a priority today to ensure the sustainable success of the new crop by placing the issue of soil conservation at the forefront of our concerns."

The regional society of the North has been built since the 1980s on the basis of its common language, Fulfulbé, which is spoken by the majority of adults. Migrants from Chad and other neighbouring countries contribute to diversity in this society. The three cities of Maroua, Garoua and N'Ggaoundéré, all important urban centres, concentrate at least 1/6th of the region's population. Due to safety issues caused by Boko Haram since 2013 (annex 8.99: D32), the tourism industry has swiftly collapsed, adding a heavy burden to inhabitants especially in the Far North region. Poverty in the two northernmost regions is the highest in Cameroon (annex 8.99: D28, D35, D36, D39, D40).

The social environment is characterized by great ethnic diversity (annex 8.100). In the Far North, more than 20 ethnic groups, including the Foulbé, cultivate cotton, each with their technical and cultural particularities and differences in the roles of cotton and its forms of integration into livestock farming. In the North region, and therefore in the south of the Far North, cotton is particularly appreciated by immigrant ethnic groups and producers, especially owing to government programmes, in less fertile and therefore less populated areas. Since the 1950s, the sector has been organised in an industrial way on a contractual basis for fibre production (seed cotton). There was a boom in yields and productivity that lasted until 1980, i.e. during the 30-year period of the VC's modern-industrial system (1952-1982). Since then, a slight but steady decline in cotton yields per area has been recorded (annex 8.101). Historically, the first region (Kaélé), which started in 1952, has seen a 40-50% drop in cotton yield in recent years (from 1.7-2 tonne to 1.0-1.1 tonne per hectare).

Villages or village groups (neighbourhoods) remain central in social life and in the economy, as well as in the activities of cotton producers, who are organized in PA and federated at the level of the entire VC in the production region by the CNPCC (in green in Figure 1.1) (annex 8.102).

The evolution of agrarian and pastoral societies in northern Cameroon over the last 30 years is marked by the origin of population settlement of this region. At the beginning of the 19th century, the Fulbe came from the west and conquered the plains of northern Cameroon with their military organization and cavalry, evicting most of the indigenous populations to the peripheral mountain ranges (Boutrais, 1984; Beauvillain, 1989). They thus acquired the right to manage agricultural and pastoral land in these plains. The traditional social organization in this region is still structured around a higher authority of Fulbe ethnicity, the *laamii'do* (plural *lamibé*), who is at the head of a given territory, the *lamidate* (Ndembou, 1998). The territory is divided into *ar'do*, each of which covers several villages. The village (*wuro*), which is the smallest traditional administrative unit (and the smallest Commune in the "modern" administration), is commanded by the *jawro* [*Djaoro*], whose equivalent in other parts of Central Africa is the village chief. These *lamidates* are mostly inhabited by rural people: farmers engaged in subsistence production and cotton cultivation, and stockbreeders (Fulani and Mbororo) whose livelihood depends on extensive ruminant breeding. The Mbororo are neither sedentary nor sociologically linked to the Fulbe who arrived two centuries ago. They are the minority facing the most discrimination (CESCR, 2018).

Today, the villages are administratively integrated into communes, which were formally established around 2008 and are still undergoing administrative, financial and social consolidation. At the present stage, they are not yet very operational and are rarely mentioned by cotton producers as actors that offer useful services. The communes will functionally replace the sub-prefectures and thus be responsible for managing land issues, among other things. For the broad plan of political governance and the functioning of the State in relation to cotton in particular, see annex 8.103 and Figures 4.4 and 4.9 below.

The population is predominantly rural and made up of farmers, with a low rate of urbanization. More than 80% of families, almost 100% of the rural population, depend on the primary sector. The structural characteristics of the social environment and of the region's farms are summarized in Table 4 (source: GmbH). Cereals (primarily maize, but also sorghum, rice, millet and cowpea) are their staple foods. Given the scarcity of off-farm employment, self-sufficiency remains the only known and practiced survival strategy. Many young people are well aware that their future will be different from that of their parents, but they do not yet "see" a way out. "Our backs are against the wall. How can we make it?" (I46 of annex 8.99). The problem perceived as most serious is either lack of land or lack of money. Other recurrent problems include the decline in soil fertility over the last 20-30 years (which is less acute in the new cotton areas in the south); lack of drinking water; damage to fields caused by animals, especially elephants (I46, I21 of annex 8.99 (due to a lack of fencing); pests; lack of inputs. People's expectations for basic public services are not being met by the State. The largest sources of income are still in the agricultural sector: primarily cotton money, ahead of groundnuts and maize (source: GmbH 2017). In the Far North, millet and livestock are more important than maize, and all the families that meet the SDCC's eligibility conditions (annex 8.7) and have at least 3 ha are cotton producers.

Characteristics of Northern regions, including the North of Adamaoua (Source: GIZ 2017)	
- In 95.6% of households, the head of household is a man. - The average age of heads of households is 45,9 years old. - 5,3% of heads of households have attended classes on agriculture (broadly defined). - 89.4% of men and only 66.7% of women work in agriculture. - Labour coming from family members represents on average 84% of total labour. Only 5.1% of households also have permanent staff. - Labour input from salaried workers is equivalent to 0.29 full time employees, or <u>51.7 man days</u>, per household. - 25.4% of households use organic fertilizers. This rate is generally lower in the North than in <u>Adamaoua</u>. - Households cultivate in average 3.1 Ha of arable land (4.2 Ha in Ngong) - Organic fertilizers are used on 11.3% of usable land - Only 2.6% of household say they prepare compost	- Chemical pesticides are used on 60.6% of usable land. - 35% of households claim that their soil quality has diminished in the last three years. - 82.8% of households wish to buy more land. - 37.2% of households keep cattle. 81% of households wish to have more cattle or different animals. The rate is higher in the North than in <u>Adamaoua</u>. - 12.6% of households said they were part of an agricultural association. - 55.7% of households say they never were in contact with any technical consultant in the field of agronomy, breeding, housekeeping or environmental protection. - Households who do save money save FCFA 245,000 per year on average - 47.6% of households have revenue-generating activities outside of agriculture - 30% of households always have all the food they want, 50% sometimes have enough to eat but not of the food they want, 20% of households go through periods when there is not enough food.

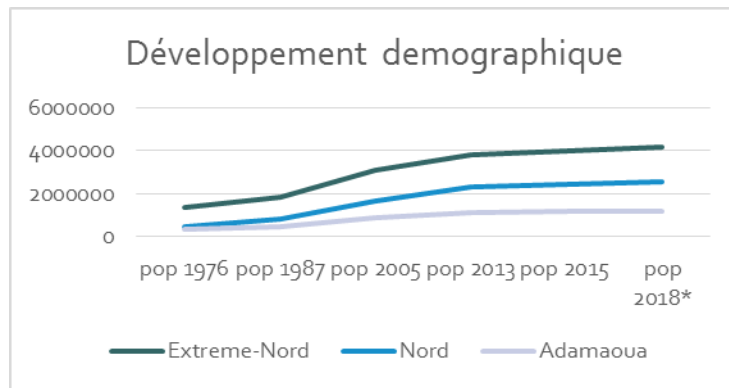
TABLE 4-1: CHARACTERISTICS OF FARMS ACCORDING TO GMBH, 2017

The differences in characteristics between the households of farmers shown in Table 4.1 (i.e. all farmers) and the households of cotton producers can be summarized as follows: “Non-cotton” households: (i) have less available land and proportionately include fewer farmers with more than 5-10 ha than do cotton producers; (ii) use less than 20% of their surface area for cotton, and sometimes just 1/4 ha; (iii) have less or no need for temporary workers (cotton is harvested between October and December); (iv) have less technical training; (v) apply more organic fertilizer; and finally (vi) have lower yields due to lack of animals for manure. This last point (productivity) will be discussed in more detail in Chapter 4.4.1.

In the North overall, i.e. for the two regions of the North and the Far North, two governance structures coexist: one traditional and one modern (Figure 4.7 and Figure 4.8). Traditional governance is often dual, especially in the Far North, where the villagers are under the lamidate and (at least) symbolically also under the traditional “king”, who may even be outside Cameroon (e.g. among the Toupouri, who’s king is in Chad).

Demography is the main cause for the shortage of agricultural land. In the Far North alone, the population has increased from 1.4 million in 1976 to 4.2 million in 2018 (Figure 4.1 and Table 4). Human population density, including protected areas, is about double in the Far North with more than 150 inhabitants/km². On the other hand, a large part of the North region is reserved for ZICs (*Zones d’Intérêt Cynégétique*: wildlife management zones) (Figure 4.1). Assuming that at least 50% of the land remains in the protected zone (ZIC and park), the real density in the North is probably around 60 inhabitants/km².

FIGURE 4.1: DEMOGRAPHICS AND OCCUPATION OF SPACE



North and Far-North space occupation (km2)	
Agricultural zone	50'790
Wildlife M. zone	23'790
Mountains	14'000
National Parks	7'678
rest	4'095
Total	100'353

(source: Sodecoton)

The instability and insecurity for society in the North since 2013 has contributed to accelerated migration to southern Cameroon (see also Chapter 2.1). Another effect is the impoverishment of many herders in the North region due to lack of pasture. It is likely that these former breeders have turned into bandits now living on ransom (source: I16, I17 in annex 8.99). Ransoms are estimated at several billion per year (Government Report) and are a social and economic factor in the Far North.

The field surveys allow us to draw a global and structural sociogram reflecting the perspective of cotton producers, particularly for the North region (Figure 4.2). Within the farming population, cotton farmers share the agricultural land with indigenous farmers, crop-livestock farmers and stockbreeders. Together, they are moving towards natural protection areas, and conflict is inevitable.

	pop 2018	pop concernée 2010 **	estimation pop concernée coton 2017	estimation* % pop concernée	producteurs coton 2017 (formels)	n GP (2017)	n circle (2017)	agents de suivi (2017)	agents de suivi (femmes)	ratio ferme coton/agent
Extreme-Nord	4'169'801	2'624'795	1'250'940	30%	65466	712	9818	631	2	104
Nord	2'581'584	1'687'959	903'554	35%	86802	1355	19620	1516	34	57
Adamaoua	1'327'335	280'225	0	0%	0	0				
total	8'078'720	4'592'979	2'154'495		152'268	2'067	29'438	2'147	36	71
		** SDCC	*9.5 pers/ménage au Nord; 19 pers au E-N							

TABLE 4-2: DEMOGRAPHICS AND COTTON PRODUCERS IN THE FAR NORTH (ESTIMATES)

The proportion of cotton-producing families in the total population is estimated at between 30 and 40%. It is higher in the North (35%) than in the Far North region (30%), where half of the surface area is not suited to cotton and the available surface areas are often less than 1 ha of cotton per family. Note that there are also families in the cotton industry who are not registered as cotton producers with the CNPC-C. These producers supply grain cotton to CNPC-C producers and thus falsify statistics on the productivity and yield of cotton in Cameroon. It is therefore important to differentiate between agronomic yield (the actual yield in the field) and administrative yield (in Sodecoton's books). We estimate this difference to be between 300 and 500 kg/ha. Figures on cotton yield should therefore be read with caution. From a sociological point of view, the fact that farmers are "misleading" institutions with unofficial production goes to show the importance of cotton as a household survival strategy. Households heads seek to escape poverty through cotton by evading the strict eligibility criteria. Well aware of the need for productivity, producers use this strategy to ensure they will continue to be able to supply cotton. They do not want to experience the same financial issues as others who were removed from the list of eligible farmers (see Chapter 2.1.4).

Sociogram

Key actors in the cotton system

OI International organisations
 CS Civil Society
 CO Communes
 CNPCC National confederation of cotton producers

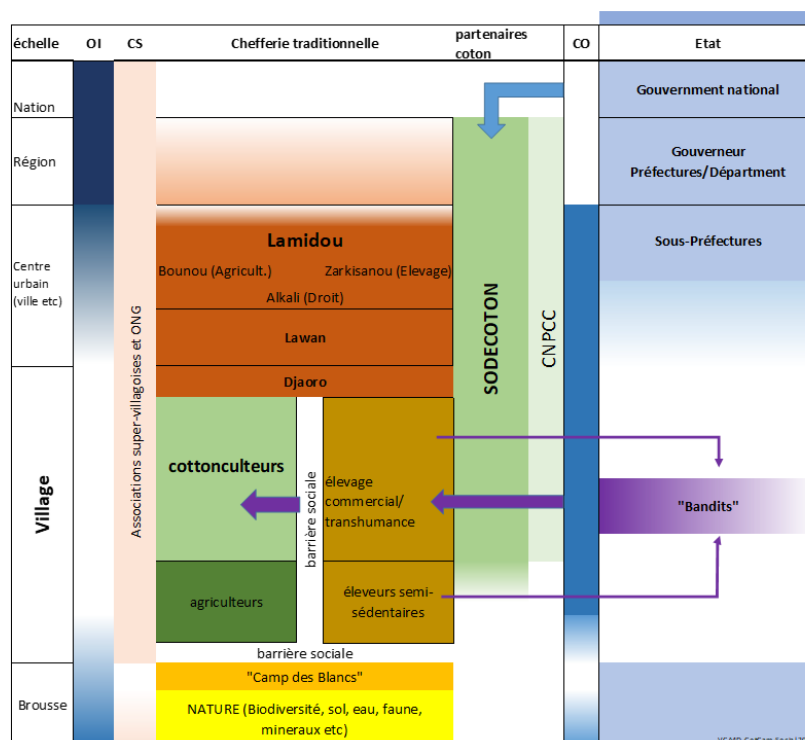


FIGURE 4.2: SOCIOGRAM

There are therefore, in contrast to the situation in 2012, more non-cotton farming households than there are cotton farming households. The lack of statistics makes it impossible to provide an accurate picture.

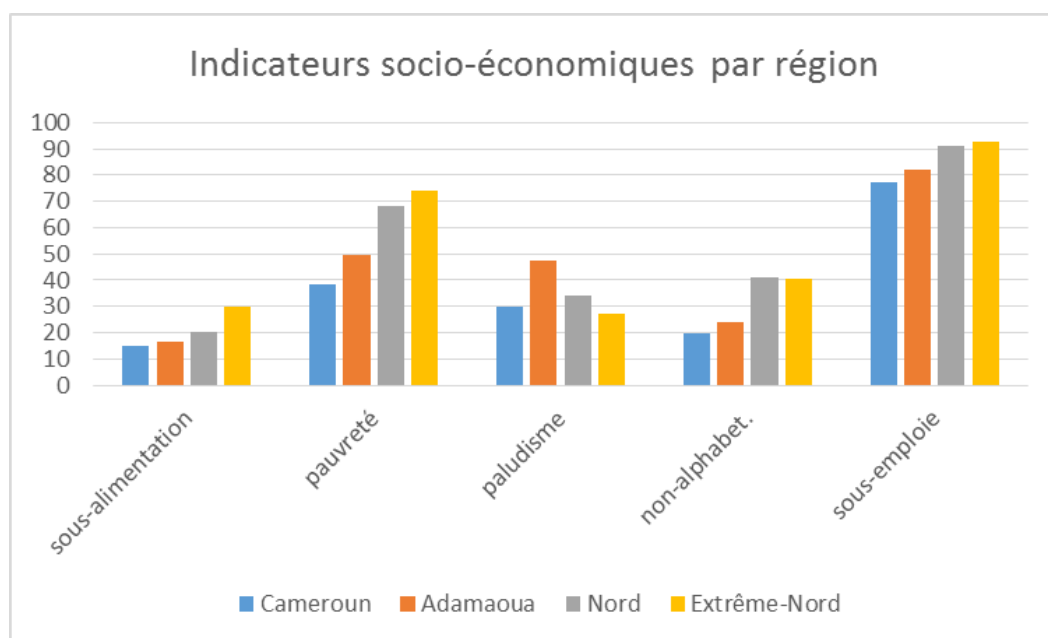
The sociogram (Figure 4.2) also shows a social barrier between farmers/cotton producers and herders (especially the Bororo; but also herd owners in urban centres). Villages located near "Whites' camps" (the name given by locals to commercial hunting sites; especially in the North region) complain about the severe punishments applied by employees, who do not hesitate to kill their animals when they cross the line into their camps. Bandits, another group that has become important in the region, are causing considerable damage and suffering to families in many villages, especially in the North, with their demands for ransom.

Civil society, defined as the space constituted by neither traditional nor governmental nor private sector stakeholders, is still marginal but emerging; especially with young people, who are often organized by the government but increasingly seek their own paths. It is also made up of farmer-citizens who have positioned themselves in society without a strong attachment to a particular ethnic or political group.

The three northern regions are the poorest in Cameroon, with a North-South gradient (Figure 4.3). In particular, the "poverty" and "undernourishment" indicators are the highest in the country, and the literacy rate is the lowest. However, this mission did not assess the impact of cotton by measuring the difference between cotton producing families and farmers without cotton. According to the interviews in the 8 villages with more than 1,500 participants (all cotton producers), the difference with respect to poverty is significant. Cotton farmers are convinced that they are less poor than families who do not or no longer produce cotton. This explains the strong motivation of producers to remain in the sector and to do everything possible to meet the eligibility criteria (in particular to produce the required yield of between 900 and 1,100 kg/ha, depending on the agro-ecological area).

Cotton production on less than 5 ha is not profitable enough to allow for social mobility, even though it can allow parents to pay for tuition fees with cotton money. It is just sufficient to avoid falling into the sub-working class.

FIGURE 4.3: SOCIO-ECONOMIC INDICATORS OF THE THREE NORTHERN REGIONS OF CAMEROON



More than 1,600 cotton producers' associations, the vast majority of which are in the North, structure cotton producers at the village level (Table 4). These groups were formed over a period of 30 years. They constitute a considerable social capital and the foundations of the CNPC-C.

Region	Number of recognized PAs	Active Pilot PAs	Number of active PAs			Number of PAs with purchases	
			Fully accredited (PA team)	Partially accredited (neighbouring PA's team)	With specific contract (CNPC team)	Direct / on field	In silos
<u>Maroua 1</u>	253	158	130	26	2	158	0
<u>Maroua 2</u>	251	204	152	16	36	204	0
<u>Kaélé</u>	208	165	149	16	0	165	0
<u>Tchatibali</u>	189	140	132	8	0	140	0
<u>Guider</u>	274	261	226	35	0	261	0
<u>Garoua</u>	310	268	227	10	31	268	0
<u>Ngong</u>	255	190	190	0	0	190	0
<u>Mayo Galké</u>	155	132	126	6	0	132	0
<u>Touboro</u>	172	121	117	0	4	121	0
Total	2 067	1 639	1 449	117	73	1 639	0
%			89%	8%	3%	100%	0

TABLE 4-3: DISTRIBUTION OF PAs IN THE NINE SDCC REGIONS, 2016/2017 CROP YEAR

Figure 4.4 and Figure 4.5 show the distribution of cotton credits (in million CFAF) by zone, and the distribution of main crops within a sample of fairly large cotton producers (with an average of 5.9 ha of cotton). The cost of labour (MO) for the harvest is CFAF 21,755 on average. Fertilizers make up 50% of the costs covered with the cotton

credit, followed by insecticides, at 27%. This explains why more than half of the farmers, especially those with a small area of less than 3 ha, do not produce cotton. The expectations of cotton producers are: (i) to produce more, to diversify production with the cotton credit, and to earn more; (ii) to resolve conflicts related to livestock holders; (iii) to obtain State support (health, education, security, other); in short, to have a better life (see more in A8). Needs vary from village to village and from county to county, as there is considerable socio-cultural and ecological diversity.

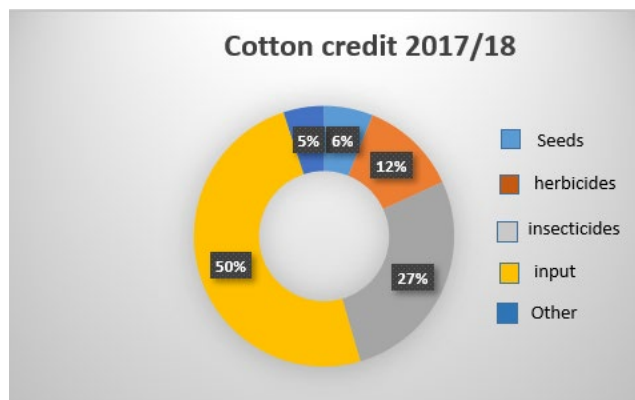


FIGURE 4.4: AVERAGE COSTS FINANCED WITH COTTON CREDIT, 2018

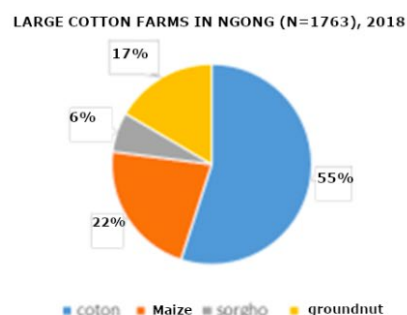
Many women would like to reduce fertilizer costs and deal with the problem of soil fertility. They say that the lack of means does not allow them to get small ruminants. They have virtually no knowledge about the use and production of biopesticides (Neem).

The key organizations in cotton are the SDCC and the CNPC-C (see Sections 2.1.1 and 2.1.2), which are strongly regulated by the government framework. The recovery plan foresees a production of 400,000 tonnes in 2022, of which 15% should result from a 15% increase in productivity (which is currently around 1,400 kg/ha seed cotton) and the rest from an increase in the cotton area (Sodecoton, 2017). Only a slight increase in Type 1 and 2 farms is expected (and considered).

An increase in actual, and therefore agronomic, productivity is highly unlikely given the degradation of soil fertility and the quality of the soils in the still relatively unexploited south. From a social point of view, given the demographics and the lack of alternatives to agriculture, as well as the attachment of young people to the land and traditions, it seems like the plan to produce more than 400,000 ha will remain unrealistic, at least for the next 20 years.



n cotton growers	1'248 (0.6%)
Average age	42
% of women in study	3,85%
Cultivated area	5,9 ha
Cotton area	2,4 ha (41%)
Co : Ar : Ma : So/Ni	41: 21: 19: 15
Labour costs	36'801 FCFA
Labour costs for harvest	21'775 FCFA (59%)
Families with a cell phone	70%



Note :

- Strong correlation between cotton area and number of children (1-5 ha: 7.2; 5-10 ha: 11.2; >10 ha: 16.7)
- Producers with 5-10 ha are more efficient than very large farms (>10 ha) (1.56 vs 1.42 t/ha)
- Even producers with <1 ha get 1.2 t/ha
- Women and youths are more innovative and wish to diversify production more

FIGURE 4.5: CREDIT COSTS BY REGION, IMPORTANCE OF LARGE PRODUCERS AND PROFILES OF COTTON GROWERS

We will now look at the specific questions emerging from the social analysis according to the VCA4D methodology and its six dimensions. The profile shows weaknesses with regard to gender, land and water rights and, to a lesser extent, food and nutrition security.

FIGURE 4.6: SOCIAL PROFILE

4.3 Results of the social analysis

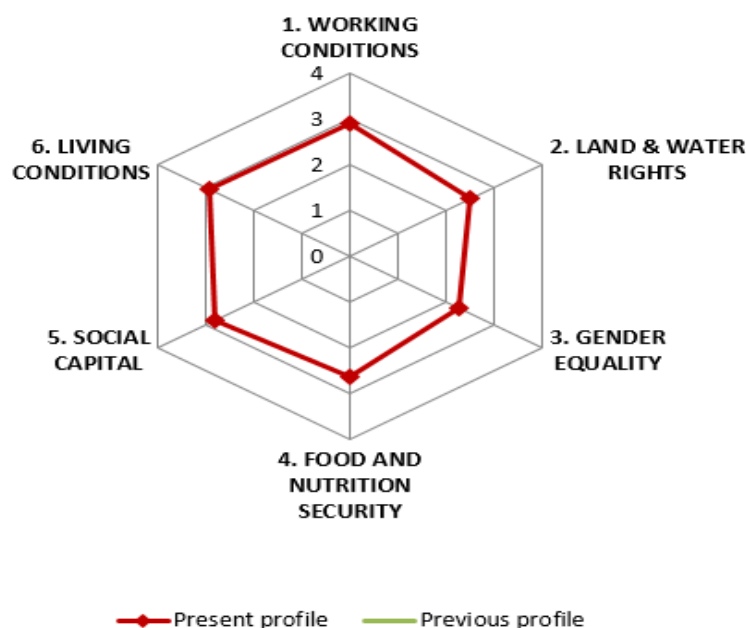
The analysis is based on the social profile (VCA4D methodology) with its six domains: working conditions, land rights and access to water, gender equality, food and nutrition security, social capital, and living conditions. Its

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Land
Land



results are shown in the diagram in Figure 4.6. The profile indicates fairly satisfactory situations – and therefore a substantial degree – in the dimensions working conditions (1), food nutritional security (4), capital (5) and living conditions (6). The most problematic areas, i.e. access to land and water gender equality, and the reasons for their limitations, explained below.

rights and access to water: rights are left a priori to the jurisdiction of traditional chiefs. The lack of dialogue between chiefdoms and the

modern state administration often causes land conflicts. Large-scale investments in cotton production – farms that can now be as large as 40 ha – risk creating social tensions with the mass of producers who are already experiencing a shortage of land and employment. Only people with privileged links to influential authorities have a chance to obtain official (cadastral) land titles. On the other hand, in villages with no shortage of land, cotton farmers are fairly confident in the titles delivered by chiefs. The main problem comes from leased land, as it can be taken away any year. This precludes investment in these leased plots. Our figures also show that yields are better on land that is cultivated by its owner than on rented land. The most affected groups are first- and second-generation immigrants and families with low social status. Concerning the current conflicts between farmers and cotton growers, damage to cotton is rarely compensated by those responsible for it and the State does not intervene.

Gender equality: in households with a relatively large area of cotton, women lack opportunities to develop their own fields, as the husband's field remains the household's priority. Women do not have the right to create their own PAs and few women are in positions of power within PAs. Female cotton farmers rarely have the necessary ploughs and tools, and cannot inherit cattle. Yet women are likely to be more productive than men, as they are motivated by the need for cotton money to raise their children, which are mostly their responsibility. Cotton improves women's conditions, especially if it is combined with small-scale farming and other crops such as groundnuts. At Sodecoton, women are employed in positions where they are more efficient workers than men, and the trend is towards increasing the number of women compared to men. Women are in charge of their own affairs, but rarely of the affairs of the "family household". In the lower classes, women do not have the power to influence decisions. The workload of women in all tasks combined is over 14 hours a day and far exceeds that of men, which is about 8-9 hours a day.

Other areas are less problematic than access to land and gender inequalities:

Working conditions: Employment at Sodecoton is considered a privilege in a society where formal employment is under-developed. Once they enter the system, cotton farmers wish to remain in the sector. Children's schooling is a priority and therefore forced labour is rare (although we noted that the December holidays allow children to work in the fields during the harvest, without missing classes). The CmiA regulation, which forbids having children

apply pesticides, seems to be respected. Remuneration at Sodecoton is relatively good. On the other hand, wages for farm workers (which are particularly important for the cotton harvest) are very low (around 1,200 CFAF/d). In comparison, a construction worker earns between 3,000 and 4,000 CFAF/d. Conditions among young people in cotton producing households are better than among non-cotton farmers, thanks to fixed markets and guaranteed inputs. Freedom of association is guaranteed (also a condition of the CmiA). On the other hand, women's freedom is severely limited and subject to tradition and the weight of the family and clan.

Food security: Thanks to the inputs credit, the production of cash crops is generally higher on cotton farms than on non-cotton farms. For example, the production of maize and other cereals is stimulated by the inputs credit, and the training provided, although minimal, allows for improvements in production. Problems arise when cotton money arrives late (as it did last season). In this case, families are forced to sell cereals at the wrong time (low prices), and thus lose twice. The months of June to August are these households' hunger gap. Also, heads of households who, due to the increase in the number of their wives, aim to expand their cotton crops at the expense of food crops, often deteriorating food conditions for most of their family. It seems that the behaviour of household heads is a more important factor than cotton *per se* in explaining household living conditions. Another factor is prices in Nigeria: the cotton area increases when maize prices in Nigeria are low; they have an influence on the food situation at the household level. Institutions in the sector (Sodecoton, CNPC-C) do not intervene in food and nutrition issues. In short, the calculable and regular income from cotton money, combined with the intensification of cereal production, reduces the likelihood of food shortages. The most vulnerable farms are those with small acreages, those that are run by men who care less about the well-being of their families than about enhancing their social status by increasing their number of children and wives, and those that are run by women who are not spared by food crises.

Social capital: the most visible form of social capital, especially at village level, are the more than 2,000 PA. The close links between the CNPC-C and the SDCC at all levels are remarkable and demonstrate the importance of cotton for all the VC's stakeholders. Good social cohesion is demonstrated in particular when it comes to building social infrastructures such as school classrooms, health posts, cereal banks or waterpoints. The whole population benefits from it and cotton thus cements the grassroots community together. We met a community that built a health post in 1980 and has been keeping it stocked with medicine ever since, but the State has still not assigned a nurse to it. There is however a growing divide between large producers (who are no longer in a PA and supply cotton containers by themselves) and smaller ones who still depend on the village community. The breakdown of social capital above the village level is due to the general governance structure (see Figure 4.8). Beyond the cotton VC's stakeholders – through Sodecoton and the CNPC-C – the links between villages and commune/boroughs or between villages and towns remain precarious.

Living conditions: as we have just seen, VC stakeholders in the North benefit much more from health services. Cotton producers subsidise a large part of these services (54 facilities in 2018), but often fail to organize health workers. On the other hand, in the education sector, in addition to building classrooms, PAs manage to hire teachers for primary school (paid a measly 15,000 CFAF/month). Women – especially those who grow cotton – who manage to save money give priority to paying for education beyond the basic – village – level for their children. This strategy for the future ("I want my children to live like Sodecoton employees one day") is diametrically opposed to men's strategy, who invest in their own security based on traditional values ("who will look after me if I am old without my wives; the more children I have, the better my comfort will be"). Collective drinking water is the third area in which cotton growers' money is invested. As of late, the SDCC reported over 254 wells and 201 drill holes. But the lack of water is still a problem for many villages. Inhabitants have also been faced with flooding, partly due to deforestation and to the soil being hardened by decades of nitrogen dosing. In these areas, village wisdom has not led to any solution yet.

More detailed information and the sources used to draw these conclusions (structuring aspects, major risks, mitigation or proposed measures) are available in the Excel document "Social profile VC2019 CotonCam".

4.3.1 Working conditions

The framing elements of working conditions are Sodecoton's organizations and, alongside them, the CNPC-C, which define work in cotton villages and factories as well as on the roads, with the fleets of trucks. Secondly, the

institution of patriarchy, especially the chieftaincy, very strongly determines working logics and conditions. Finally, the delegation of responsibility from the State to the Sodecoton/CNPC-C twosome involves risks pertaining to their tendency to enlarge production structures (encouraging larger producers) and thus to reduce the potential for employment as farmers/cotton growers and replace these livelihoods with the precarious temporary positions that are indispensable for the harvest period between October and January. Some major risks have been identified regarding the social acceptability of working conditions along the VC (Table 4), including lack of labour during harvest, the risk of child labour in cases of increased poverty, and poisoning.

	Major Risks	Proposed Mitigation
Respect for labour law	Only hypothetical: if the SDCC's management and strategy were to change radically and the general development framework were to deteriorate.	Not necessary
Child labour	Hypothetical: If the poverty situation of families deteriorated and there was a shortage of labour during the harvest. Child labour could then become a problem.	Monitoring the socio-economic situation of cotton producers
Occupational safety	Intoxication with pesticides, which are particularly harmful to pregnant women	To continue raising awareness and training all farmers involved in cotton production.
Attractiveness	Lack of manpower for harvesting in the Northern Region	Discussing options to consider better compensation for workers, especially during harvest.

TABLE 4-4: RISKS RELATED TO WORKING CONDITIONS AND PROPOSED MITIGATIONS

4.3.2 Land rights and access to water

The framing elements of this dimension are the chieftaincy, present from village districts to areas beyond that covered by Sodecoton factories, and organized within the ethnic framework (see Annex 100). State structures (Commune/District) are weaker at the local level and less present and accessible to the population at higher levels (Department with its Prefect, and Region with its Governor). Land tenure is becoming increasingly important as a crucial element of formal law, in view of demographic pressure, ecological deterioration (deforestation, loss of biodiversity, declining soil fertility) and declining cotton yields. Sodecoton, without a mandate or legitimacy in this area, will never be able to replace the State. The risks for the future are thus outlined (Table 4):

	Major Risks	Proposed Mitigation
Adherence to VGGT	No risk	Not necessary
Transparency, consultation, participation	The lack of transparency and factual absenteeism of the state at the local level increases the likelihood of violent inter-ethnic (northern) and social conflicts over scarce land resources and unsustainable levels of poverty.	Dialogue for governance and participation, including transparency. Use the newly created Communes (still in the early stages of maturity) to improve the legal situation, especially if new projects within the SDCC are planned (e.g. organic cotton).
Fairness, compensation and justice	See above: State absenteeism is dangerous (the SDCC is not perceived by farmers as "The State")	The public sector should play a more active role in development, taking into greater consideration the customary system and vernacular languages.

		Diversifying the government's commitment independently of the SDCC.
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TABLE 4-5: LAND AND WATER RIGHTS ISSUES

Are land rights and access to water at socially acceptable and sustainable levels? The deficit in transparency, participation and consultation – which are all beyond the direct influence of the VC – poses major risks, caused in particular by the absence of the State in the villages and in the new communes of the Far North. See “Discussion” chapter below (4.4).

4.3.3 Gender Equality

The framing elements of this dimension are still patriarchy and the weight of customs on rights, but also Sodecoton's new policy to enlarge cotton farms and gradually replace farms of less than 5 ha. This trend will further increase gender disparities and weaken the situation of women. Combined with the strategy of expanding cotton farms, the persistence of male domination, which is legitimized by tradition, will further accelerate a galloping demography, thus weakening the position of women and posing more challenges for future generations and young people. Gender equality improved when women were given the opportunity to manage their own cotton fields and have access to cotton money. So far, especially in the Far North, the cotton VC has encouraged gender equality, but the situation could change.

Are the principles of gender and social inclusion recognized, accepted and reinforced throughout the VC? Five major risks were identified (Table 4) in the scenario of cotton farm expansion with no reform of social structures and women's rights. This dimension requires much more attention, both from the SDCC and directly from the government and the State.

	Major Risks	Proposed Mitigation
Economic activities	Men continue to increase the cotton area with each additional wife (polygamy) and have additional children when their cotton area increases. Economic rationalization (increase in cotton production) is not followed by corresponding social transformations.	Provide women with access to credit for small ruminants, so that women can better cope with soil fertility issues and improve their income. Education (for children and adults) and awareness-raising on social transformations.
Access to resources and services	Marginalization of women due to limited access to land and other resources (animals, etc.). This risk lies within society, and beyond the influence of current stakeholders.	Social transformation programmes, mainly through primary education, business training (learning the concept of "planning") and better and more accessible radio programmes (see above).
Decision-making	If cotton farms become larger (mainly in the North), women are likely to become even more absorbed by cheap labour on their husbands' farms.	Being wary of the strategy of focusing only on cotton farms larger than 5 hectares; there should be more entrepreneurship projects for women. Testing the wider introduction of organic and Fairtrade cotton in 2-3 communes (ideally in collaboration with GmbH).
Leadership and Accountability	The absence of projects to promote women's economic activities could reduce the leadership and empowerment gained over the past 30 years.	More women's projects promoting leadership combined with economic activities (such as breeding, compost and manure making); and related projects for young people, who are the other neglected strata of village society.

Toughness and division of labour	With the expansion of cotton, women's workload will increase even more.	More consultation with women leaders before launching new major projects that will have an impact on them.
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TABLE 4-6: GENDER-RELATED RISKS AND PROPOSED MITIGATIONS

4.3.4 Food safety

The framing elements of this aspect are the actions of Sodecoton (inputs credit) and the State (policy with strategic guidelines for the cotton VC, including the current strategy for restructuring the sector in favour of farms larger than 5 ha). Second, the functioning of cereal and cotton markets (including Nigeria's) play a role in food security, as they have an influence on the area used for different crops. This factor remains linked to traditional and modern governance structures (from the family to the international level, see Figure 4.9). For more than 60 years, the VC has undoubtedly had a very positive impact on food, although greater diversification could have further improved food security.

Reducing food security risks in the North is possible with Sodecoton's new strategy (Table 4), provided that other programmes and structures are put in place to meet the needs of the population and benefit from the region's potential in sectors providing income and employment, as well as helping to repair damage to natural resources.

	Major Risks	Proposed Mitigation
Availability of food	The new focus on farms with more than 5 ha of cotton presents risks for small farms, which will find it more difficult in the future to obtain the necessary support from the SDCC and the CNPC-C.	Differentiate support into two broad categories of producers with appropriate strategies: large (>5 ha) and fairly large (3-5 ha) vs. small (<3 ha).
Food Accessibility	If an excessive amount of agricultural land is used for cotton (>60 to 90% on the largest farms) and if farms expand, cereal production could drop considerably in the future and impact local food security.	The government, the SDCC and the CNPC-C should take responsibility for not increasing excessively the space dedicated to cotton in the agricultural system of the Far North. They should revise their strategy for small farmers and test organic cotton as a socio-ecological strategy for the Far North.
Use and nutritional adequacy	Specialization in cotton farming in the context of a smallholder structure and mediocre public institutions could affect nutritional quality.	Monitoring the nutritional situation better through regular surveys. Analysing the impact of different pesticides on human health.
Stability	Food and nutritional security must be taken care of by the different strata of society (associations) and the State (regional to communal) and not be entrusted only to the strong and well-organized organizations of the cotton sector (mainly the SDCC).	Strengthen public institutions in charge of food and nutrition securityi In particular MINADER and IRAD.

TABLE 4-7: FOOD SECURITY RISKS AND PROPOSED MITIGATIONS

Are food and nutritional security conditions acceptable and secure? For the moment, food and nutritional security has been significantly improved thanks to the cotton VC. A concentration on and specialization in cotton with less than 60% of the area for cereal and non-cotton crops could reduce food security.

4.3.5 Social capital

The framing elements of this dimension are village communities, PA and all the individual and institutional stakeholders in the cotton VC. This “family” has created a fabric and a mechanism that now shapes the socio-economic landscape of the North, and even has an effect at national level, with six ministries involved. However, the hierarchical structure of this VC and its weak level of integration with other sectors and VCs reduce the positive impact of this important form of capital. It is not too late to take stock of this situation, for the future.

Is social capital strengthened and distributed equitably across the VC? Social capital is significantly strengthened by the CNPC-C's structuring action and the SDCC's three functions. But it risks being eroded (Table 4) if specialization centred on cotton materializes and if small farms are formally excluded from the cotton VC.

	Major Risks	Proposed Mitigation
Strength of producer organizations	Village groups and the CNPC-C could be weakened if more large cotton farms were independent of communities at the village level.	To improve the self-organization and self-help skills of village groups. Test the idea of a SDCC “solar container store” as a pilot project (see below).
Training and confidence	The rather closed information system on the cotton system leads to an over-emphasis on the role of cotton.	Commitment to diversified agricultural systems, based on farmers and herders, male and female. Organize villagers’ training in the use of Android (smartphones) to obtain digital information for development.
Social Involvement	The fragmentation of communities reduces the chances of success for local development.	Leadership training at village level to end the attitude of “assistentialism” and instead build self-confidence for self-development. Strengthen the new Communes. Use Fulfulbé as the regional language and, if possible, local languages at meetings.

TABLE 4-8: RISKS PERTAINING TO SOCIAL CAPITAL AND PROPOSED MITIGATIONS

4.3.6 Living conditions

The framing elements of this dimension are basic social infrastructures, such as classrooms, health centres, waterpoints and rural roads, all built with money from producers’ cotton. These structures have done much to improve the lives of the population, even those who do not grow cotton (who are now the majority). Although this level of development is very modest compared to international and national standards, without cotton, public authorities would have had to invest large amounts of money to reach it. Along with these material aspects are pride, cohesion in the village and the convivial life appreciated by young people who prefer to stay in the village rather than venture into big cities or migrate to Europe. Cotton money and its redistribution made this possible.

What is the state of infrastructure and social services (health, education, training), and what is the VC’s contribution to their improvement? The current state of cotton farmers’ standard of living depends mainly on the success of the cotton VC. This dependence presents a risk (Table 4), as it is faced with the fragility of the State, the geopolitical context of the Lake Chad region, the world market, and the SDCC’s performance. The structural problem is that the State delegates all responsibility for the well-being of the population of the Far North to the SDCC, without assuming the multiple tasks indispensable for sustainable social development. In the specific case of social infrastructures, the VC’s contribution is very important for all three categories (health, education, training), along with its contribution in the maintenance of 4,000 km of rural roads, to avoid seclusion.

	Major Risks	Proposed Mitigation
Health Services	The weakening of the cotton VC is deteriorating the conditions of health infrastructure in the two northern regions.	Keeping the cotton industry profitable and attractive for farmers, based on village groups that also invest in the construction of health posts. The Ministry of Health is also responsible for this.
Drinking water supply	The weakening of the cotton VC deteriorates the drinking water situation in the two northern regions.	Keeping the cotton industry profitable and attractive for farmers, based on village groups that also invest in drinking water infrastructure (wells, boreholes). The Ministry of Water and Sanitation also assumes this responsibility.
Education and training	The weakening of the cotton VC is detrimental to basic education in the two northern regions.	Keeping the cotton industry profitable and attractive for farmers, based on village groups that also invest in the construction of school classrooms (infrastructure). The Ministry of Education also has this responsibility.

Mobility	Geographical and social mobility (freedom) could be reduced if land becomes scarcer for farmers (even far from the village, where young people can migrate) and for stockbreeders (especially in the northern region, where cotton continues to replace pastures), and few economic alternatives open up in the near future. This may increase the likelihood of escalating conflicts between the various interest groups.	Two measures would help: (i) the SDCC must better integrate the social and environmental context into its Development Planning; and (ii) the State and its international financial partners must invest more in education, the local economy (tax reforms, potential for transformation, targeting young people and women, diversification, civil rights) as well as in local governance focusing on the communes.
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TABLE 4-9: RISKS RELATED TO LIVING CONDITIONS AND PROPOSED MITIGATIONS

4.4 Discussion

4.4.1 Social conflicts and institutional impasses

The combination of the view of structures that the sociological analysis affords and the profile it draws of the VC allows us to better understand the “social” situation of the current cotton VC in Cameroon. Based on the empirical observations above, we can draw more precise and structural conclusions on the social aspects of the VC. Social conflicts at village level in the cotton growing zone, which are currently of concern to cotton farmers, have specific local causes. In the North region, they are related to crop-livestock interactions and the complexity of “indigenous-migrant” relationships. In the Far North, conflicts stem from insecurity caused in particular by poverty, Boko Haram (as a direct effect of poverty) and the devastation caused by elephants in some villages, which sows mistrust towards the State and divides opinions on the steps to be taken. The inadequacy of public service institutions and organizations aggravates these conflicts and may even be their cause. Each additional visit to the villages makes it possible to draw up a more precise inventory of issues, but one constant remains: the absence of the State and its services, which are indispensable for local development. Those who are affected by it are mainly women, young people and future generations. The current good organization of the cotton VC under the leadership of the SDCC has so far helped to mitigate conflicts and avoid certain deadlocks. As an exceptional structure (together with the CNPC-C) it contributes in providing the necessary services for the cotton VC to function, notably access to social infrastructures (rural roads, drinking water, health posts, schoolrooms and primary school teachers). The aspects of technical organization for fibre production are fairly well mastered and efficient. But beyond the “technical VC”, if we are to consider social and ecological dimensions, the SDCC has neither a specific mandate nor sufficient resources to meet the needs it is faced with. When it comes to meeting the multiple needs of village populations, especially for drinking water, health, education, security and the development of light industry (processing and other), the State remains silent, especially for families and villages that do not produce cotton and hardly benefit from the cotton VC.

First of all, the two cotton producing regions are quite different from a sociological perspective. The Far North is much more rooted in customs and traditions, with functional social fabrics. The distance from the urban centres (cities) of Cameroon is geographical but also social. Even though natural soil fertility is better (vertisol etc.), the long history of cotton cultivation has already considerably reduced its agronomic potential and people see no solutions to deal with this decline and to break out of the vicious circles. “Pilot” cotton (cotton produced by friends or contractors of cotton producers) falsifies cotton productivity statistics. In terms of insecurity, it is the impact of Boko Haram in the western part of the region that is being felt, more so than ransoms and banditry which are found in the North region (and Adamaoua).

Villagers are quite isolated, and the social distance from the large urban centres of Maroua and Garoua and from towns is considerable. Experts, consultants and officials visiting the region spend a lot of time in the city and are apparently not immersed enough in the painful realities of most villagers. The galloping demography raises fears

of even more unfavourable socio-economic developments if no systemic changes are made to reverse the cycle of destruction which impacts the natural environment in particular, but also society as a whole: the rights of women and of the elderly (better protection of whom would reduce pressure on young people and women), and poverty at the level of rural households. The youth's situation in the cotton system is noteworthy: young people in this system are almost exclusively boys and young men (deemed by convention to be those under the age of 35), since girls marry at a young age to constitute the important social group of women. Youth employment remains precarious outside the cotton season, that is, between January and mid-May, which causes under-employment.

The current system can be explained by Cameroon's political and institutional governance (Figure 4.7). Villages are administratively part of Communes and thus of decentralized territorial authorities. However, the farmers have limited means to participate in political activities to influence governance. This is true at least for the last and pending elections (2018 executive; legislative planned for 2019 – councils at regional, departmental and communal levels). The elite, who live almost exclusively in the two urban centres and the capital, are not attentive enough and rarely react to grievances, according to the villagers. There is political fatigue and a dangerous fatalism and wait-and-see attitude. The degree of self-organization at the village level, where actions must be taken – investing in more resilient farms, soil fertility, job creation outside the agricultural sector, launching private initiatives, etc. – is minimal. The “concept of planning”, which is so important in the psychology and sociology of development, is almost unknown at any level (personal, household, group/association, village, etc.). Yet it is the basis for imagining change and emancipation from the weight of tradition, where options are opening up thanks to technological and cultural development. The (hierarchical) network of the CNPC-C is too weak and rigid and is not broadly anchored at the base to fill the gap. But compared with communities in villages without cotton, the base is solid and ready to undergo necessary transformations.

As the vast majority of farmers cultivate at least 4 to 6 crops, and have trees and shrubs and animals (small and large ruminants, poultry), strategies for sustainable intensification of these agroforestry and pastoral farms must take into account socio-economic, cultural and ecological diversity. The complexity of such programmes requires that villagers and producers be central in them. It is necessary to start as early as possible to improve basic education, to encourage village and associative initiatives, even beyond the neighbourhood and the village, and to initiate and strengthen a culture of self-organization. The SDCC's concrete idea of piloting solar containers for groups of young people, with the aim of creating cells of initiatives, creating jobs and thus stimulating hope for a possible future should be lauded. The majority of mothers who spoke to us want their children to have an easier life than they do.

The “agriculture contract” initiated by the SDCC unquestionably contributes positively to poverty alleviation.

Cotton has achieved amazing and commendable results. It is not easy to imagine what would be of the Far North without the cotton VC. But there is no doubt that the next 20 years will be more complicated to navigate for decision-makers in the VC (especially the SDCC but also the CNPC-C and the Ministries involved).

Political and institutional governance in Cameroon (based on the Constitution)

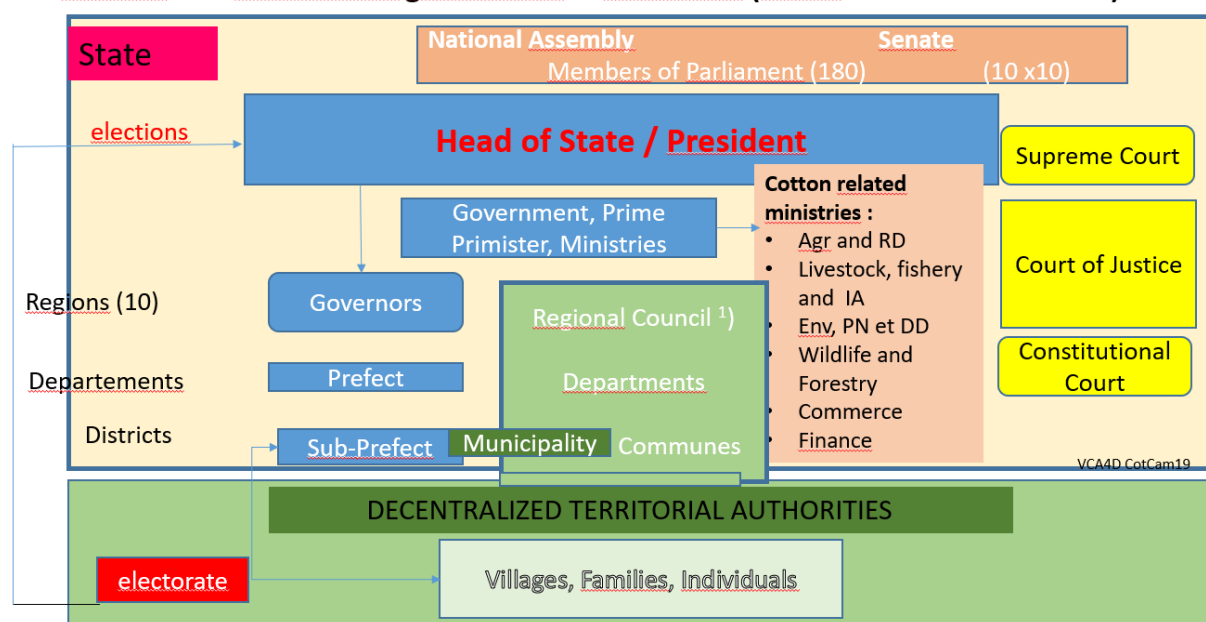


FIGURE 4.7: POLITICAL AND INSTITUTIONAL GOVERNANCE IN CAMEROON

Social reproduction around cotton as the driver of the economy must change the following parameters to return to a path of sustainable development, particularly from a social point of view :

- Social transformation and supra-ethnic cohesion must be based on thorough education;
- Women's rights: women must be involved in deciding how many children they have and they must be taken seriously. Patriarchy no longer corresponds to the values of women, young people and society as a whole. The extremely high rate of children per woman as well as the number of women per man (sometimes >10) will be very costly for future generations;
- Fulfulbé could function as the lingua franca of the North and more development work in local languages is to be encouraged;
- More transparency between traditional/customary and state systems of governance is required to reduce exclusion and strengthen cohesion and development. Cohabitation is possible and necessary to keep peace and order, provided it is transparent;
- Women and young people are the social categories most willing to take these urgent reforms to the village and commune levels;
- The importance of knowing more about the percentage of land that is leased should be recognized in discussions on land, for that is where obstacles to investing in intensification and soil fertility management are at play. The formalization of land tenure (cadastre) will not provide solutions for most producers and will contribute to the destabilization of rural societies. Under the VC's current system, there is no solution to the individual problem of "lack of available agricultural land". It is therefore necessary to transform this "problem of individuals and individual families" into a collective potential and opportunity. The possibility of creating an institution or mechanism that would allow the establishment of land lease contracts for 5-6 years should be examined, as it could improve land and soil management;
- The SDCC must better define specific strategies for small cotton producers (3-5 ha) and large ones (5-20, >20 ha). For example, mechanisation can be profitable from 60 to 100 ha and theoretically several large farms could be established if only a small portion of the GICs were

decommissioned. However, the question arises as to whether this measure would make sense in a context where job creation is a priority (and the nature of the soils in the ZICs is not well suited to intensive production). In addition, these entrepreneurs would have to take risks without relying too heavily on public resources (because a strategy based on large farms would not hold in the long term without subsidies, as natural and market hazards will unfailingly occur);

- Agricultural diversification, including crop-livestock integration and agroforestry, remains essential for food and nutritional security;
- Governance must be brought closer to citizens, villages, women, youth and PAs. The responsibility of “partner” countries must be taken into account. More transparency and dialogue are needed and should be reflected in the budgets of projects and programmes (see Figure 4.8);
- The function and performance of radio, an institution that is in place but is not listened to much, must be used as a means of mass communication;
- Organic agriculture and especially organic cotton for the Far North region should be studied. Relatively small farms with max 1-3 ha of cotton facing the challenges of high fertility decline, as well as women and young people who are likely to work towards sustainability without taking too many risks (inputs credit), constitute a potential for at least 20,000 farmers and 10,000 tonnes of seed cotton per year. This would add annual revenues from organic and fair trade premiums of more than CFAF 800 Million (at a price of CFAF 80/kg) for the poorest region of Cameroon (not counting the savings in foreign currency through the replacement of increasingly expensive inputs and the damage to the health of workers/producers and nature, on which we have no data). The current basis with the CmiA standard provides another favourable precondition for going further with the organic-fair trade standard, which is more demanding and ambitious than the current one. An organic cotton system, even if it were partial and covered only 10% of cotton production, would already change the constellation of social structures (Figure 4.8), given the new role it would give to the use of national and local capital (be it financial, human, social or natural).

According to multiple accounts, social conflicts and their structural causes deserve all the attention of stakeholders to ensure the sustainability of the cotton VC, since it remains completely dependent on its social and therefore political, cultural, economic and institutional context. In addition, there is great potential to revive the textile craft industry and to multiply efforts to process cotton industrially on a national scale, or even in a way that is in-between industry and craft on the village scale.

Cotton is a national crop (Figure 4.8). For more than 70 years, the State has done a very good job of exploiting the economic potential of cotton, to which there is currently no known alternative in this Sahelian agro-ecological zone. But cotton is only one component of Cameroon's economy, and stakeholders in the VC – notably Sodecoton – are not responsible for the country's development, even though it does have a knock-on effect on the cotton sector. It might be good to replicate this “SODECOTON” VC model for other supply chains (e.g. milk, sorghum/millet), without necessarily going through the parastatal status – and certainly without dismantling the present function of the SDCC. The current situation of socio-political insecurity in the North of Cameroon therefore requires structural transformations to ensure the social sustainability of the cotton VC.

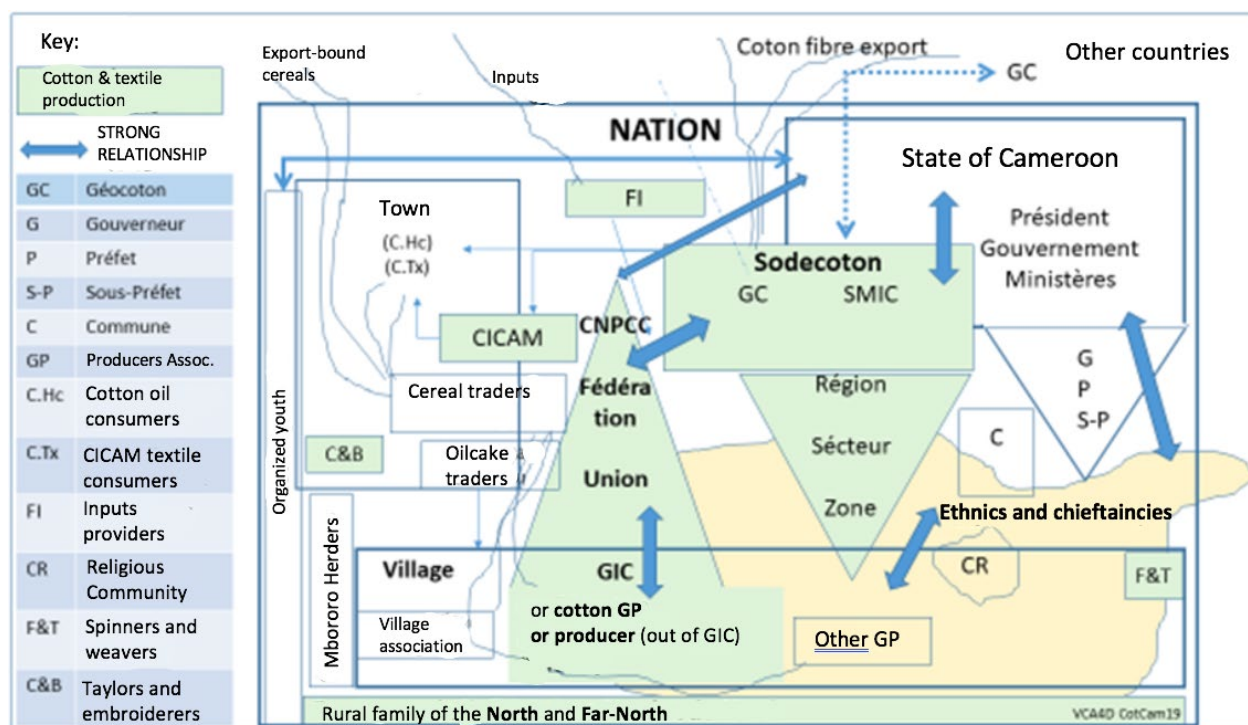


FIGURE 4.8: SOCIAL STRUCTURES OF CAMEROON'S COTTON SYSTEM

4.4.1 Impacts of the SDCC on the lives of cotton producers

The impacts of the SDCC on the lives of cotton producers over the last 20-30 years are remarkable. More than 150,000 producers, who account for the majority of rural households in the two regions, would be economically doomed and fall into a catastrophic crisis if the SDCC "machine" were to stop and move away from the real needs of the mass of cotton producers and villagers. Cotton money, on average CFAF 120,000 to 150,000 in gross margin per ha per year, provided by the SDCC scheme and its inputs credit, is essential to cover their needs. Small producers are wise enough to maintain some level of diversification and not to produce too much cotton and neglect cereals. They keep enough surface area for cereals to ensure a base level of food security and subsistence in their villages.

Over the last 30 years, the PA structuring work has constituted a considerable social capital and most often the most efficient socio-economic structure at the village and neighbourhood level. The harmony between the SDCC and the CNPC-C allows an open and progressive development of the cotton industry.

World demand for cotton remains constant and the demand for organic cotton has actually been rising steadily for over 20 years. In Cameroon, the lack of alternative crops in the increasingly difficult environmental context makes the socio-economic and therefore human, economic, financial, social and cultural capital that has been developed around cotton even more valuable.

On poverty:

The SDCC's contractual framework with producers can be considered a "success story". The degree of professionalization, performance and productivity of Cameroonian cotton producers is almost unparalleled in Africa (thanks to the entrepreneurial spirit of cotton producers, who are able to mobilize neighbours to secure production quotas), and the commitment of SDCC/CNPC-C to the needs of producers as the basis for consolidating its contribution to poverty alleviation. On the other hand, the constant loss of soil fertility, especially in the Far North (and soon in the North), needs to be taken into account more seriously if cotton is to remain sustainable beyond 2040. The natural environment can be protected from human destruction – and thus continue

to provide a habitat for more than 7 million men, women, youth and children in many villages – provided it is wisely and systematically managed by those in charge.

Impacts of cotton fibre by-products:

The production of oil cake is highly appreciated and allows the development of fattening and breeding, and thus improves farmers' income.

On-site fibre processing remains a challenge. For the time being, the impact on employment of the modern VC – which was introduced under the colonial system to replace traditional VCs with their artisans in almost all the villages of the sub-region – remains weak compared to its theoretical potential, considering the multiple possibilities of transforming fibre into fabric and textile goods.

Cottonseed oil produced by the SDCC is not only a great commercial success throughout the country, but also has social importance because of its nutritional quality, which is superior to other oils produced in Cameroon (mostly from palm and groundnut).

Impact of certified cotton

All cotton from Cameroon is CmiA certified. This enhances its reputation and contributes to improving the VC's social sustainability (child labour, workers' rights, farmers' organization among others). It is an asset and a steppingstone to take the next, even more ambitious step: organic, fair-trade cotton.

4.5 Conclusion of the social analysis

The seven answers to the questions of the VCA4D methodology are summarized here, but they are to be considered with caution, given the short time of immersion in a rather complex subject and a changing VC. The socio-economic and cultural diversity and dynamics at different territorial scales (village, region, central state, international market) make Cameroon's cotton VC a subject that warrants more time for further in-depth study. This is also why the author of the social analysis complemented the study of the 6 areas of interest with sociological reflections that help to better understand governance in the VC and more broadly the context in which the VC's activities take place, which influences its situation and performance.

4.5.1 Is the economic growth of the cotton VC inclusive?

The VC is highly inclusive insofar as it allows all producers, ranging from very small (0.25 to 3ha) to very large (>20ha), to participate in the production of SC. Even families and individuals who are not formally integrated into the cotton credit framework can succeed with informal contracts at village level to produce and sell SC on the market, and to earn some income from it. On the other hand, the cotton VC does not allow enough integration in the field of processing, as a very large proportion of the fibre is exported. Women and young people, the most vulnerable target groups, also benefit from the VC's advantages, but to a lesser degree than "men". For the moment, the cotton VC's economic growth is undergoing transformation, with a tendency to aim to reduce the share of families with less than 5ha of cotton. It seems to us that the aim to develop production up to 400,000 ha of SC is the maximum that could be achieved while maintaining sustainable and inclusive production.

The weak point of the VC is its very low processing rate, despite an excellent, well-equipped plant in Garoua.

4.5.2 Is the cotton VC socially sustainable?

We therefore summarize the observations from the various analyses and perspectives to formulate answers to our core questions.

Are the working conditions in the VC socially acceptable and sustainable?

It remains a privilege to be able to produce cotton for Sodecoton, which enjoys an excellent reputation in the North region. Working conditions are certainly harsh compared to work in cities and in services – and less prestigious – but in the context of agriculture, in rural households, working in cotton is widely deemed to be

desirable. The strong presence of young people in production, and women's sophisticated strategies for collecting manure and increasing productivity are evidence of this. The CmiA standard guarantees that conditions in the region are above average. For the time being, the lack of alternatives and farmers' attachment to their land and their communities ensure the sustainability of these working conditions.

Are land and water rights socially acceptable and sustainable?

This dimension is in a sense critical, but the situation is still acceptable thanks to individual and collective initiatives and the moral and social weight of Sodecoton. The management of conflicts related to land tenure and regulatory uncertainties generates much suffering, tension and economic costs. However, the sustainability of access to productive land is reduced by the fact that an increasingly large part of the land for growing cotton (and other crops) is rented, which means there is little incentive to invest in its fertility. Multiple recommendations have been made to address this problem. Access to water has improved as a result of the PAs' collective actions, and non-cotton farmers are also benefiting from this. The chieftaincies are still functioning, with great differences from one locality to another, but they deserve more support from the State and development partners, particularly to ensure good land tenure and conflict management.

Is gender equality throughout the VC recognized, accepted and promoted?

This is the second dimension that is critical in the cotton VC at this point. Women feel unequal to men, either: (i) because they are no longer able to manage their own plots due to the demands of their husbands whom they help in large fields, or (ii) because they find it difficult to be heard in male-dominated PAs. Patriarchy remains a burden for young women, and only a change in tradition and morals would enable them to change this "fate". Sodecoton is beginning to recognize the role of women and includes gender as a variable in its statistics. Women's rights and the social dimension of gender are not yet well accepted, but the cotton VC plays a pioneering role in this delicate area. It remains to be seen whether the ongoing recovery strategy of Sodecoton and of the central government will have an impact on women's situation.

Are the food and nutritional conditions acceptable and safe?

Thanks to the cotton credit, income as well as cereal and rotation crop production are positively stimulated at the household level. However, the study did not allow for a detailed analysis of the food and nutrition situation within families. There are surely substantial differences from one household to the next, depending on the behaviour of fathers and mothers. This situation is also affected by delays in payments, which were particularly long in the last season. In order to meet their monetary needs, farm managers have been forced to sell grain stocks at too low a price. Sodecoton is fully aware of this problem, which is due to its complex relationship with the State treasury and therefore the liquidity of their funds. Nevertheless, support measures must be envisaged.

Is social capital encouraged and distributed equitably throughout the VC?

Along with Sodecoton and the CNPC-C, more than 2,000 PA and hundreds of villages with their communities in each region constitute an impressive social capital that has been visibly reinforced by the VC since cotton farming began in 1952. This capital is also fruitful beyond the cotton VC, especially with social infrastructure and generally through the accumulation of economic and financial capital, which helps to ease a volatile social situation. The distribution of social capital is also changing. Sodecoton's new preference for producers larger than 5 ha risks reducing the fair distribution of access to the activity and its income. With a more differentiated strategy including the promotion of organic fair-trade cotton or pilot projects such as solar containers, possibilities exist to counteract this negative trend.

To what extent are key social infrastructure and services acceptable? And do VC operations help to improve them?

Living conditions are much better thanks to the cotton VC. We see no reasonable alternatives that could have replaced the function of the cotton VC in this semi-arid region, which also has a rich heritage in artisanal textiles. Social infrastructure financed by cotton farmers is important. Health posts, school classrooms, water points and rural roads contribute to better and more dignified living conditions. On the other hand, this function of the VC and especially the role played by cotton growers and their PA and umbrella organizations

is not sufficiently known and recognized in the region or among development partners, including State services in Yaoundé.

During the period of the study (2017/18/19), the cotton VC was socially sustainable, as it met basic requirements (income/profit with cotton and some of its by-products: oil, oilcake), promoted rotation crops, facilitated grassroots organization in Pas, and improved food security. This concerns in particular the large mass of producers and their family members who are its main beneficiaries, ahead of Sodecoton employees, CICAM factory workers, the traders involved, multiple state officials, Geocoton and finally the consumers in the global North and in Cameroon.

In the near future, the situation will become tougher. On the basis of values of freedom and reason, dialogue will be required to address challenges and limit potential risks before damage occurs at the social and societal level, and then at the economic and ecological level. Sodecoton and its partners will no longer be able to manage the situation on their own, particularly in the context of the new strategy.

5. ENVIRONMENTAL ASSESSMENT

The environmental assessment of cotton production in Cameroon was carried out on the basis of a Life Cycle Assessment (LCA). Life Cycle Assessments generally look at the environmental impact per quantity of a product and are therefore a measure of eco-efficiency.

Here, the LCA was used to clarify the following points focusing on three areas of protection:

1. What is the potential impact of the cotton value chain on human health?
2. What is the potential impact of the cotton value chain on ecosystem quality?
3. What is the potential impact of the cotton value chain on resource depletion?

To answer these three questions, the following aspects were analysed using LCA:

- a) Impacts on the three areas of protection (resource depletion, ecosystem quality, human health) per bale of cotton fibre³⁰, which is the main product in the cotton value chain in Cameroon made available for export.
- b) Impacts of the different stages of the production cycle, from cotton cultivation to the supply of cotton fibre bales for export.
- c) Impacts of the different cotton cultivation systems applied in Cameroon, to identify the cultivation system providing the lowest environmental impact per kg of seed cotton (SC), as well as to assess the difference between cotton cultivation in the North and the Far North in terms of eco-efficiency.
- d) The environmental impact of cotton production in Cameroon per unit of total output, i.e. the environmental impact of cotton fibre and the various by-products that result from the production of a bale of cotton fibre.

5.1 METHOD

5.1.1 System boundary and functional units

The boundary of the system includes the cultivation of cotton in the North and Far North of Cameroon, the ginning of cotton seeds, the pressing and packing of bales, the crushing of the seeds into marketable oil and animal feed, as well as all the transport processes from the field to bales FOB at the ports of Douala and Kribi (Figure 5.1). Capital goods were included in the environmental assessment. In order to examine the four aspects described above and to answer the framing questions (the potential impact of the cotton value chain on resource depletion, quality of ecosystems and human health), environmental impacts were referred to the following functional units:

- one bale of cotton fibre, which each weighs 220kg on average (cotton fibre plus packaging), to analyse the potential impact of the value chain and the stages of the production cycle contributing most to its overall environmental impact;
- kg of seed cotton to analyse the cotton cultivation systems applied in Cameroon and to compare cultivation in the North and in the Far North;
- total production output per bale of cotton fibre (system expansion: 217.7 kg of cotton fibre, 5.2 kg of linter, 64.6 kg of cotton oil, 315.8 kg of cattle feed based on oilcake) to analyse the environmental impact of cotton fibre and the various by-products that result from the production of a bale of cotton fibre.

Inventories were compiled and environmental impacts calculated in SimaPro version 9.0.0.35 (PRe Consultants 2019).

³⁰ A bale of cotton fibre weighs 220 kg, this is the unit that was chosen to carry out the environmental analysis.

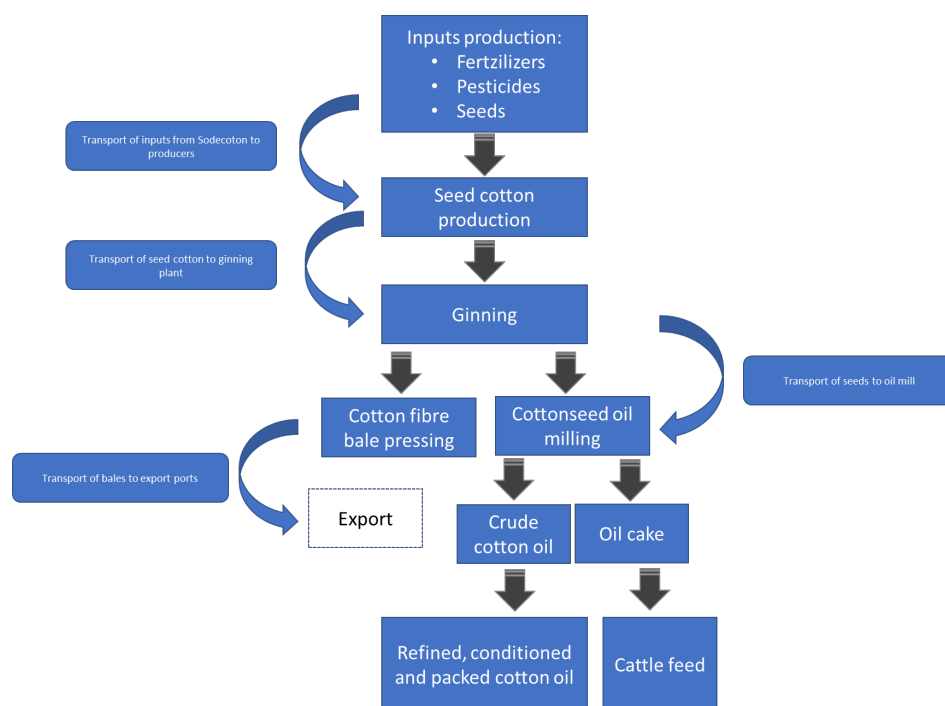


FIGURE 5.1: FLOWCHART OF EVALUATED PROCESSES (IN BLUE)

5.1.2 Foreground and background data used for inventories

Seed cotton production

For SC production, the SDCC survey (annex 8.15) was available for a total of 1,248 cotton producers in the North and Far North. For the LCA, the survey contained information on cotton yields obtained during the 2017-18 season, the type and quantity of fertilizers used, and the pesticides used. Pesticide application rates were taken from the SDCC data sheets. In addition, the survey allowed us to sort producers according to the size of their cotton cultivation area (see Chapter 2.1.4) and the region of cultivation (North or Far North).

Producers who, according to the survey, did not deliver cotton during the 2017-18 season, or who declared 0 ha of cultivated area despite delivering some quantity of SC were removed from the data set. Producers with yields greater than 2,500 kg/ha and smaller than 200 kg/ha, and producers with yields greater than 1,000 kg/ha without fertilization as well as producers with more than 1,200 kg of manure per livestock unit were also removed from the data set. These data points are very unlikely, and may have occurred due to errors during data collection in the survey or they just represent outliers. After this filtering process, data of a total of 956 producers (486 in the North, 470 in the Far North) remained in the data set, that could be used for LCA inventories.

An LCA inventory was established for each type of producer (according to the size of the cultivated area), and separately for the North and the Far North (8 different inventories in total for cotton cultivation). On the basis of the relative distribution of producers (Table 2-1), an inventory of average cotton cultivation was drawn up for the North and the Far North from the four inventories to form a weighted average of cotton cultivation in each region.

Ginning and milling

The average relative distribution shown in Chapter 2.5.2 was assumed for the by-products of cotton seed milling. The data on milling in Appendix 71 were used as a basis for differentiating the different oil extraction processes in the two regions: hexane extraction in Garoua and mechanical extraction in Maroua.

The inventories "Cottonseed oil, crude {RoW}" for hexane extraction and "Soybean meal and crude oil production, mechanical extraction CA-QC" for mechanical extraction in the Ecoinvent 3.5 database (Wernet et al., 2016) served as the basis for the inventory of cottonseed cake and oil production. The Ecoinvent inventory "Cottonseed oil, refined {RoW}" was used as a basis for modelling the refining process. The inventories were adapted to Cameroonian conditions in terms of the cottonseed inputs processed by Sodecoton, the electricity mix and the size of the plant infrastructure. As data on electricity and gas consumption in Sodecoton's plants were not available, Ecoinvent's inventory values were adjusted to the annual quantity processed and used. Given that the environmental impact of industrial cottonseed oil production accounts for less than five per cent of the overall environmental impact in terms of total production, and industrial production for cottonseed cake accounts for less than one per cent, this shortcut is justified (see Chapter 5.2.4).

Packaging of bales

An average gross bale weight of 220 kg was assumed for cotton fibre bales. In Cameroon, bales are held together with 8 steel wires and wrapped in a woven polypropylene film. The average packaging weight of 2.7 kg per bale is taken from the Joint Cotton Industry Bale Packaging Committee specifications. (2018). Inventories for steel wire and polypropylene production are based on the inventories in the Ecoinvent 3.5 database. (Wernet et al. 2016).

Transport process

Most of the inputs to producers and of SC from producers to ginning plants are transported by the SDCC's fleet of trucks. Whereas cotton fibre bales are mostly transported by truck from the SDCC storage areas to the export ports of Douala and Kribi by private transport companies. In addition, some of the bales are also transported by train on certain sections of the route (see Chapter 2.4.2).

As the SDCC vehicles are equipped with GPS tracking, accurate mileage data was available. The SDCC also provided detailed information on the vehicle types, fleet age, fuel consumption and quantity of goods transported (Direction Parc Logistique Génie Civil, 2019). Based on these data, specific transportation by truck inventories could be established separately for the North and the Far North, taking into account actual fuel consumption per kilometre-tonne (annex 8.104). While compiling the transport inventories in SimaPro, it was also possible to differentiate the distribution of the different exhaust emission standards within the vehicle fleet on the basis of the SDCC's data, thus taking into account different vehicles' pollutant emissions.

The same inventories were used for road transport of cotton fibre bales from storage areas to export ports – which are carried out by private transport companies – as for Sodecoton's transports. The transport distances between the storage locations and the export ports were determined using Google Maps. As approximately 60% of the cotton bales are transported by train between N'Gaoundéré and the export ports of Douala and Kribi (Chapter 2.4.2), the Ecoinvent inventory "Transport, freight train {ROW} diesel" was used to model these transports.

Co-product handling

During the ginning of seed cotton and the oil milling process, co-products are obtained, to which the environmental impact of the process must be allocated. To assess the impact per bale of cotton fibre in Cameroon and to analyse the stages of the cotton fibre production cycle contributing most to the overall environmental impact, all allocation steps were carried out after economic allocation. Economic allocation makes sense in this case, as cotton fibre is the main motivation for planting cotton. Since cotton fibre is the most valuable product of cotton production, the largest share of the environmental impact is attributed to it. However, for the assessment of environmental impacts of cotton production in Cameroon in relation to total production output (Chapter 5) system expansion was used.

The relative distribution of co-products from the oil milling process was calculated based on the numbers given in Chapter 2.5.2. For the price of cotton fibre, the weighted average of the prices obtained during the 2017-18 crop season for cotton exported and sold on the local market was calculated. Cotton lint prices were taken from Chapter 2.4.3. For seeds, the internal sales price charged within the SDCC was used (Chapter 2.5.4). For cottonseed oil, the price indicated in Chapter 2.5.4 was used. For the calculation of the price of the solid products from the milling process, it was assumed that in the Garoua oil mill all solid products were sold as "Alibet" cattle feed and in the Maroua oil mill as "Nutribet" cattle feed (in report 4/5, see Chapter 2.5.4). A detailed summary of the allocation factors used can be found in annex 8.105.

5.1.3 Inventory emission modelling and impact assessment

Modelling of nitrogen and phosphorus emissions

The calculation of emissions of reactive nitrogen compounds (nitrous oxide, ammonia, nitrogen oxides and nitrates) resulting from nitrogen fertilization in cotton cultivation was carried out using a nitrogen emission model that takes into account interactions between the different nitrogen compounds (Meier et al, 2014; Meier et al., 2012). The model calculates the nitrogen balance at crop level by taking into consideration all nitrogen inputs (including inputs via the soil's nitrogen stock) and using a basic plant growth model. Nitrogen emissions (in particular maximum possible nitrate emissions) are compared with the nitrogen balance. As the model also calculates the nitrogen flux from the soil's nitrogen stock, which is necessary to supply sufficient nitrogen to the plant, the effects of previous crops are also indirectly taken into account. Data on crop quantities and residues in cotton were taken from Sharma and Verma (2013) and data on root mass as a function of yield from Lua et al (2015).

The calculation of phosphorus emissions from phosphate fertilization in cotton cultivation was carried out in the same way as in Ecoinvent's crop inventory modelling (Nemecek and Kägi, 2007). Phosphate losses due to soil erosion and runoff of surface water as well as losses to groundwater were taken into account.

Pesticide and heavy metal emission modelling

Emissions from pesticide application in cotton production (direct field emissions) to air, surface water and groundwater were calculated using the PestLCI 2.0 model (Dijkman et al., 2012). PestLCI is one of the most sophisticated pesticide emission models, which provides the most accurate characterization of pesticide emissions and can be widely used in life cycle assessments. PestLCI also takes climate data (especially precipitation) into account for emission modelling and provides data from different locations for selection. However, the locations database is limited to Europe, so climate data from La Coruña (Spain) were used for Cameroon, as they were best suited to northern Cameroon in terms of annual rainfall and rainfall distribution. Emission modelling also took into account the fact that the rainy season in northern Cameroon starts five months later than in La Coruña. Pesticides not included in the PestLCI database were modelled using pesticides of the same class or of a similar class of substances in the database (e.g., Rynaxypyr emissions were modelled using emamectin benzoate).

Modelling of heavy metal emissions from fertilizer application in cotton production was carried out using Freiermuth's (2006) model, which is also based on the modelling in Ecoinvent's crop inventories (see also: Nemecek and Kägi, 2007). In the absence of corresponding data for Cameroon, average heavy metal concentrations in organic fertilizers were taken from Freiermuth (2006), which are based on values measured in Switzerland.

Uncertainty analysis

In general, uncertainty in the outcome of an LCA for a product that includes an agricultural production stage is influenced primarily by variability in agricultural production. As a result of the aforementioned extensive SDCC survey of producers, a relatively differentiated picture of the variability in production data was available. Monte Carlo simulation in SimaPro was therefore used to determine the extent to which uncertainties in the data affected the overall result.

Based on the SDCC's survey, data variability was determined by calculating the standard deviation (SD) for each cotton production input, and differentiated between the different types of cotton producers and the two regions. Double standard deviations (2SD) were then used as uncertainty intervals for the Monte Carlo simulation in SimPro assuming a normal distribution. The 95% confidence interval is between -2SD and +2SD. The Monte Carlo simulation was calculated over 10,000 iterations. The results of the uncertainty analysis can be found in Appendix 116.

Impact assessment

The impact assessment was carried out using the ReciPe method (Huijbregts et al., 2017), which assesses environmental impacts at midpoint and endpoint level. Here, the environmental impact was calculated at the endpoint level. The impact categories are human health (expressed in disability-adjusted life years, DALYs), impacts on ecosystem quality (expressed as number of species lost in a year, species year) and resource depletion (expressed in monetary costs, USD2013).

5.2 RESULTS

5.2.1 Environmental impacts per bale of cotton fibre at point of export

The cotton fibre bales ready for export at the ports of Duala and Kribi are the main products of the cotton value chain in Cameroon. Approximately 51% of the human health impacts caused per bale of cotton fibre are due to global warming potential (Figure 5.2). About 35% of human health effects are caused by particulate matter and about 12% by human toxicity due to non-carcinogenic effects.

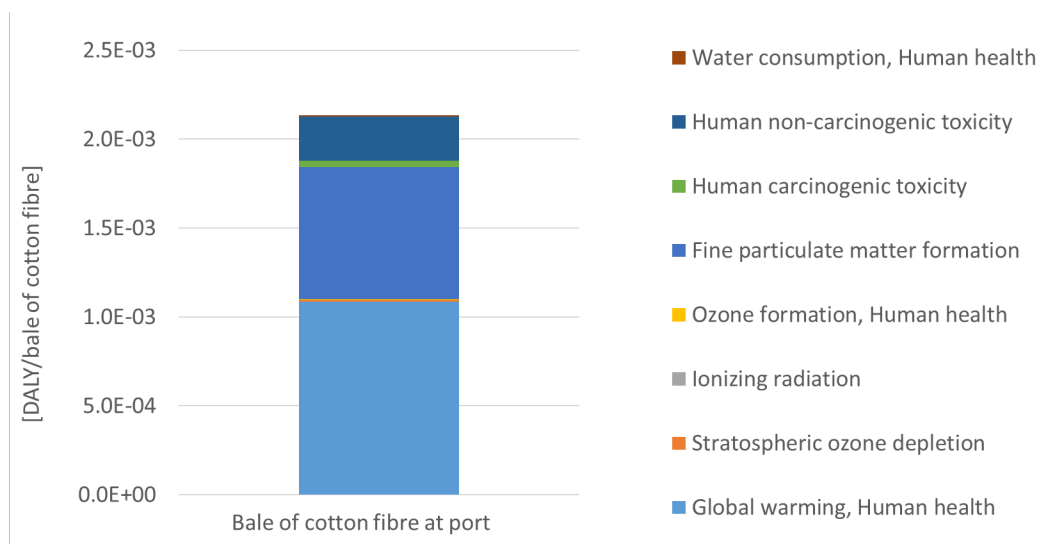


FIGURE 5.2: HUMAN HEALTH IMPACTS PER EXPORT-BOUND BALE OF COTTON FIBRE

Most of the impacts on ecosystem quality per cotton fibre bale come from land use, at rates as high as 87% (Figure 5.3). In addition, global warming potential (about 9%) and acidification of terrestrial ecosystems (about 3%) also play a role in impacts on ecosystem quality.

More than 99% of resource depletion is due to fossil fuel consumption along the entire value chain, from cotton cultivation to the supply of cotton fibre bales for export (Figure 5.4). Mineral resources account for less than 1% of resource depletion per bale of cotton fibre. The depletion of fossil energy sources, on the other hand, is mostly due to transport processes, which account for about 66% of it. With a share of about 17%, ginning also contributes significantly to the depletion of fossil fuels. About 16% of the depletion of fossil resources result from the use of pesticides and artificial fertilizers in agriculture.

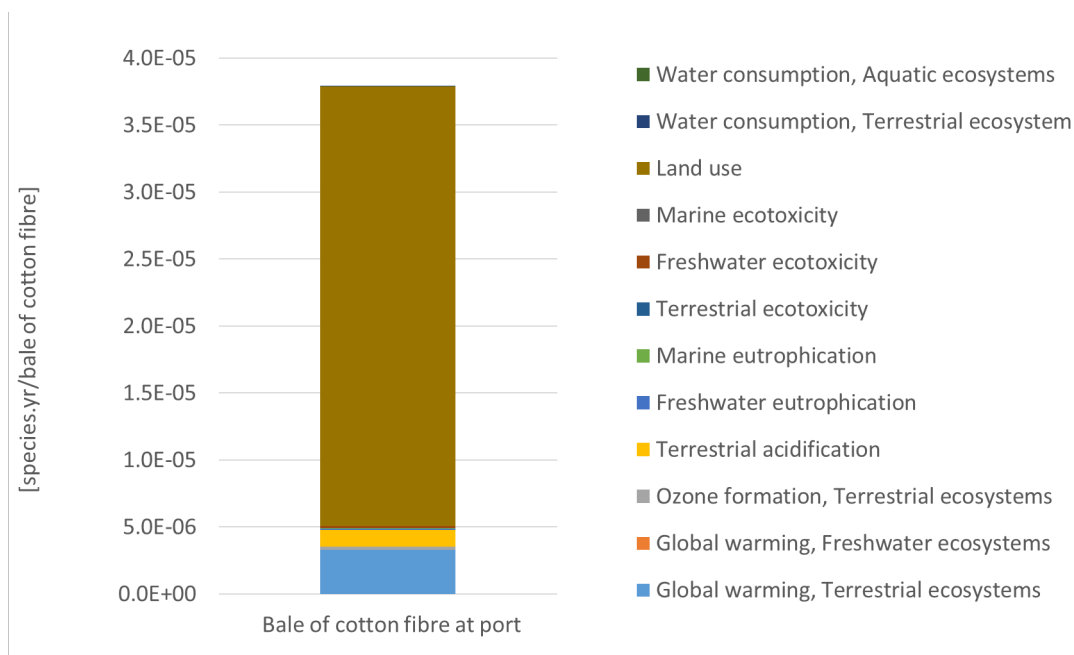


FIGURE 5.3: IMPACTS ON ECOSYSTEM QUALITY PER EXPORT-BOUND BALE OF COTTON FIBRE

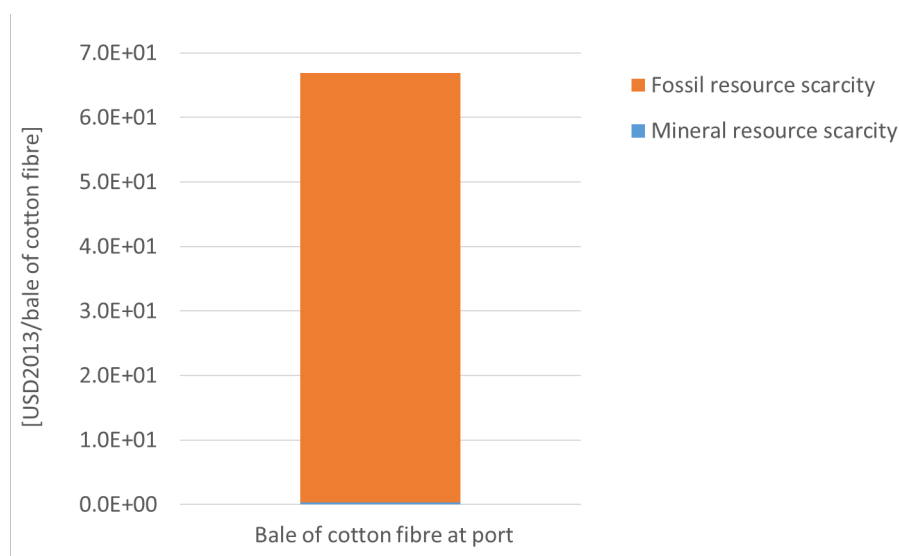


FIGURE 5.4: IMPACTS ON RESOURCE DEPLETION PER EXPORT-BOUND BALE OF COTTON FIBRE

5.2.2 Contribution of processes throughout the production cycle of a bale of cotton fibre

The cultivation of SC (direct field emissions and land use, pesticide, fertilizer and seed production) is the main cause of the effects of cotton fibre bales on human health and ecosystem quality (Figure 5.5)-causing 68% of the effects on human health and 96% of the effects on the quality of ecosystems. Within cultivation the main factors for the effects are the direct field emissions (from fertilizers and pesticides) and land use. With a 10% effect on human health, ginning also plays a certain role.

Cotton cultivation and ginning contribute 17% each to the resource depletion of a cotton bale (Figure 5.5). With 66% of resource consumption, transporting cotton along the value chain, from field to harbour, is the main cause of resource depletion.

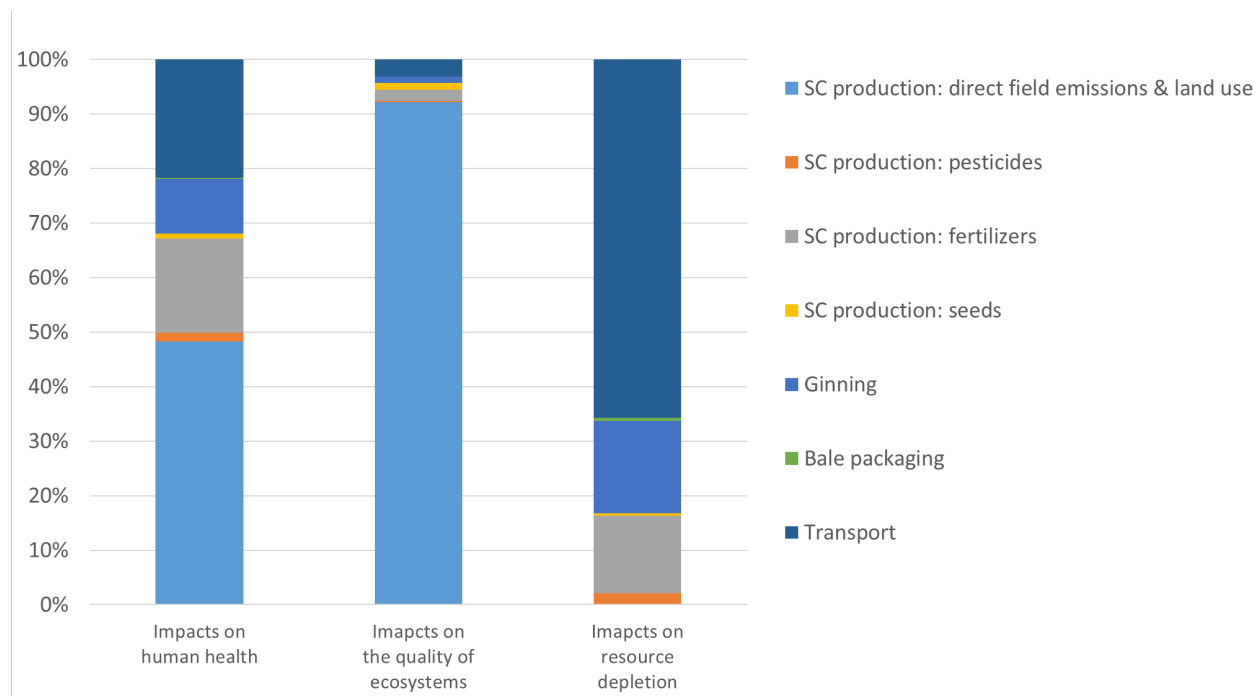
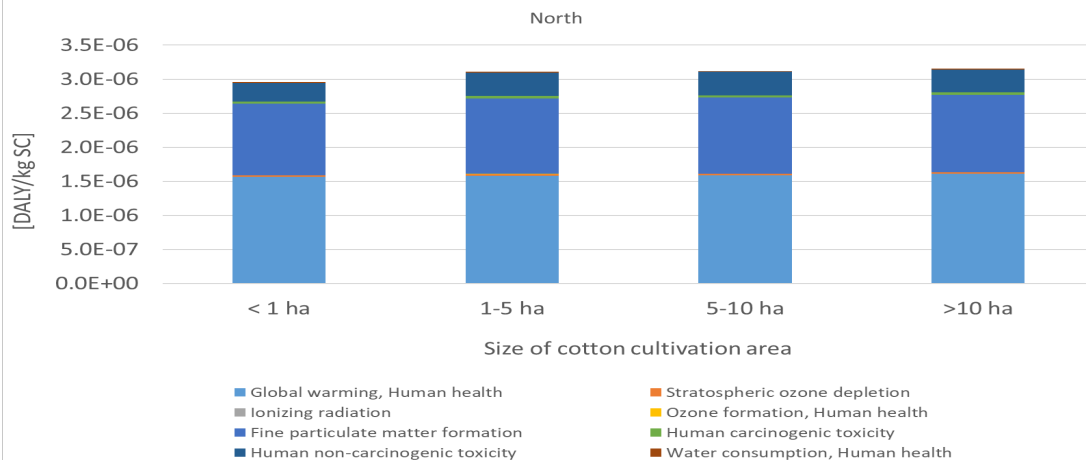


FIGURE 5.5 RELATIVE CONTRIBUTION OF LIFE CYCLE STATES TO THE ENVIRONMENTAL IMPACTS OF AN EXPORT-BOUND BALE OF COTTON FIBRE

5.2.3 Eco-efficiency of cotton cultivation systems applied in the North and Far North of Cameroon

Overall, the environmental impact per kg of SC (and thus eco-efficiency) differs only marginally between the different cultivation systems, and the difference between the North and the Far North is also small. In terms of impacts on human health (Figure 5.6), farmers with less than one ha of cotton cultivation area are the most eco-efficient per kg of SC in the North (Figure 5.6a) and in the Far North (Figure 5.6b).

a)



b)

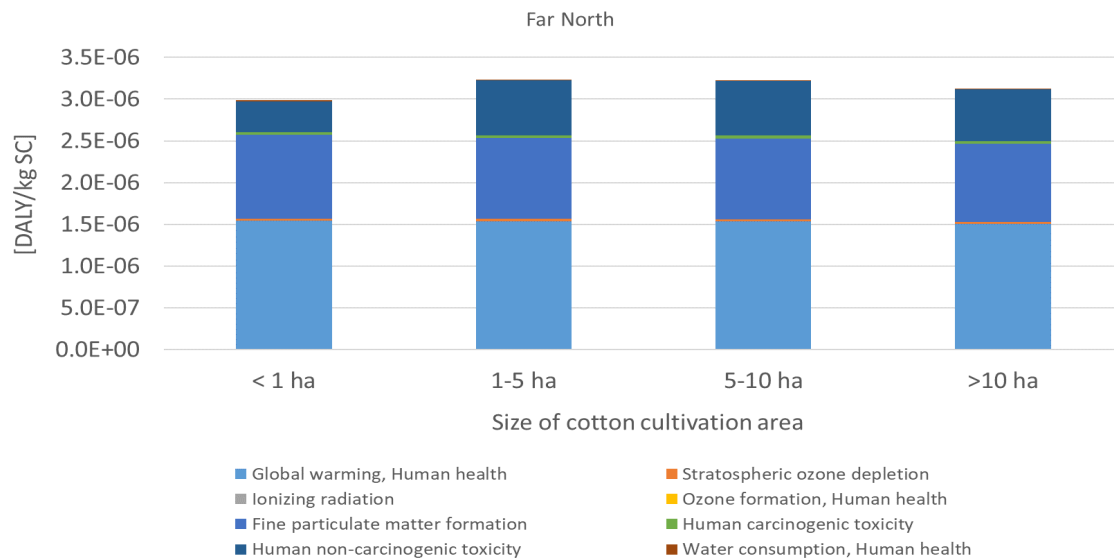


FIGURE 5.6: HUMAN HEALTH IMPACTS PER KG OF SEEDCOTTON IN THE FOUR DIFFERENT CULTIVATION SYSTEMS DIFFERENTIATED BY SIZE OF CULTIVATION AREA IN THE NORTH (A) AND FAR NORTH (B)

SC from producers with over 10 ha of cotton cultivation area is the least eco-efficient in the North in terms of impact on human health (Figure 5.6a). In the Far North, on the other hand, this is the case for SC from producers with 1-5 ha of cotton cultivation area (Figure 5.6b).

Regarding the impact on ecosystem quality, the overall eco-efficiency of seed cotton production is slightly better in the North than in the Far North (Figure 5.7a and 5.7b). In the North, 1 kg of SC from producers with less than 1 ha of cotton cultivation area has the lowest environmental impact while 1 kg from producers with more than 10 ha of cotton cultivation area has the highest impact on ecosystem quality. (Figure 5.7a).

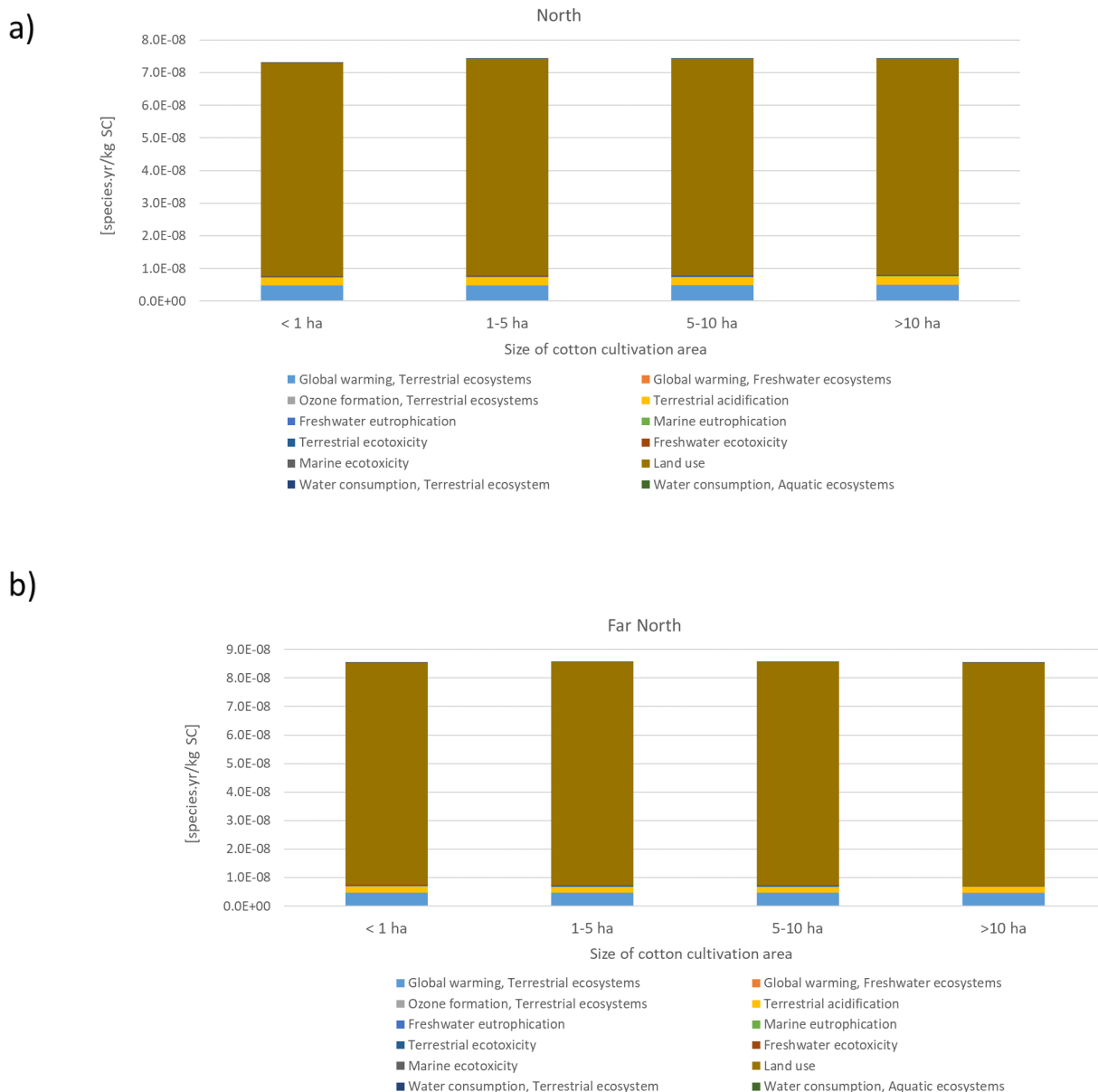


FIGURE 5.7: IMPACTS ON ECOSYSTEM QUALITY PER KG SEEDCOTTON IN THE FOUR DIFFERENT CULTIVATION SYSTEMS DIFFERENTIATED BY SIZE OF CULTIVATION AREA IN THE NORTH (A) AND FAR NORTH (B)

In contrast, in the Far North 1 kg of SC from producers with over 10 ha of cotton cultivation area has the lowest impact on ecosystem quality and 1 kg of SC from producers with a cotton cultivation area between 1 and 5 ha has the highest impact (Figure 5.7b). However, the relative difference is less than 1%.

In terms of resource depletion, production in the Far North shows slightly better eco-efficiency overall (Figure 5.8). In the North, 1 kg of SC from producers with less than 1 ha of cotton cultivation area and from producers with 1-5 ha of cotton cultivation area has the lowest impact on resource depletion. While the impact on resource depletion is highest for 1 kg of SC from producers with more than 10 ha of cotton cultivation area (Figure 5.8a). In the Far North, the opposite is true (Figure 5.8b)

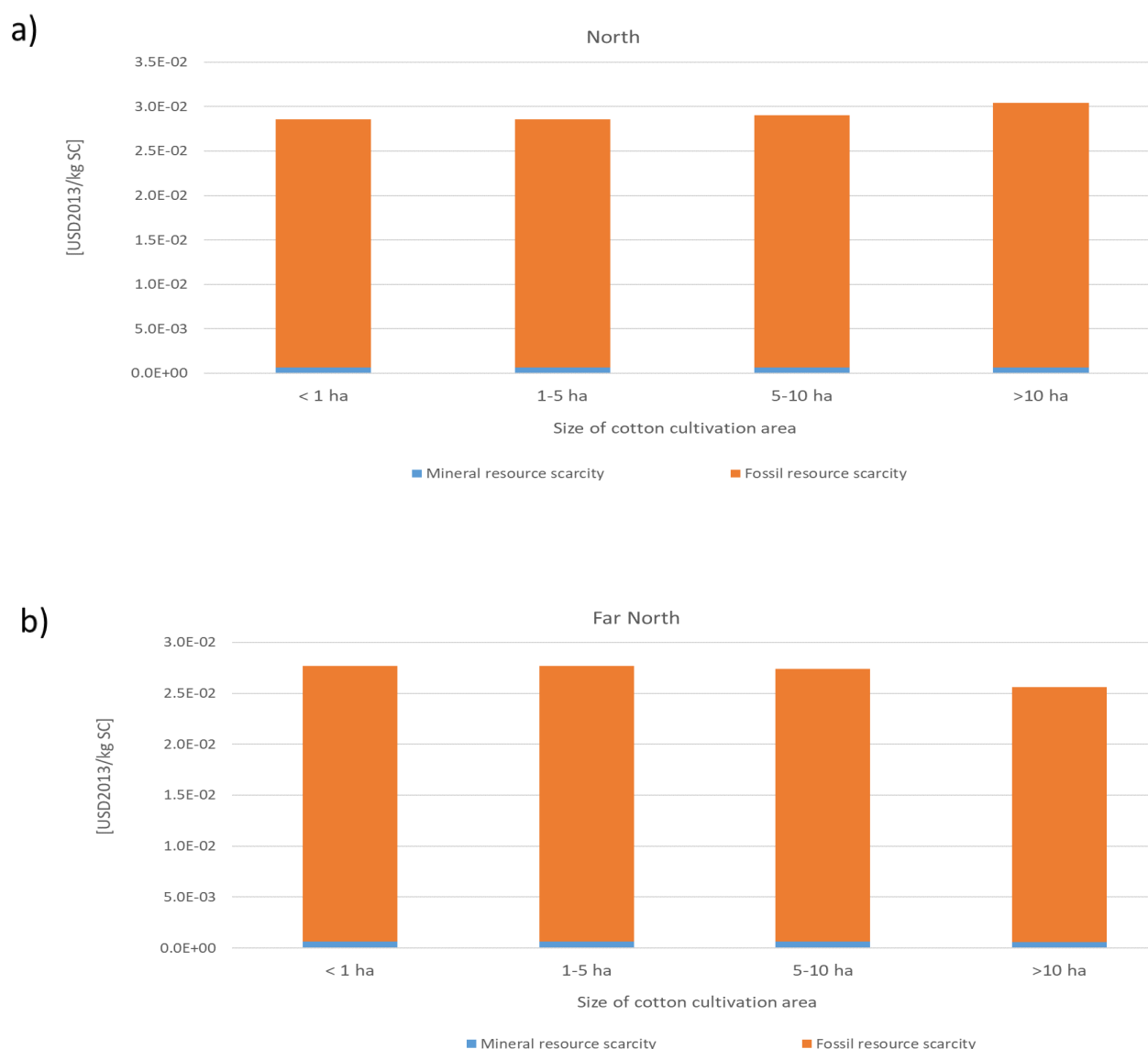
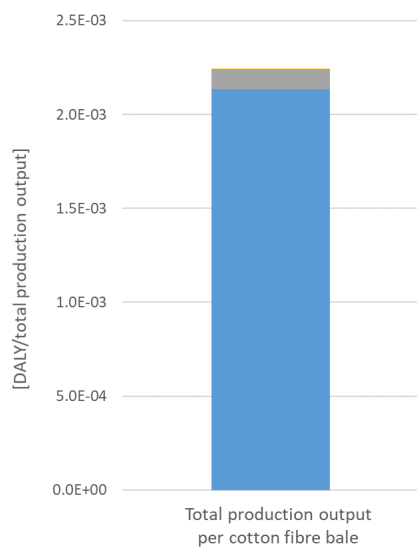


FIGURE 5.8: IMPACTS ON RESOURCE DEPLETION PER KG OF SEEDCOTTON IN THE FOUR DIFFERENT CULTIVATION SYSTEMS DIFFERENTIATED BY SIZE OF CULTIVATION AREA IN THE NORTH (A) AND FAR NORTH (B)

5.2.4 Environmental impact of total production output on the basis of one bale of cotton fibre

Looking at the total production output per bale of cotton fibre (cotton fibre, lin, cottonseed oil and meal), one sees that the impact on the three areas of protection – human health (Figure 5.9a), ecosystem quality (Figure 5.9b) and resource depletion (Figure 5.9c) – is mainly caused by the production of cotton fibre bales (>95%). In addition, the production of cottonseed oil contributes 2% to 5% of the total output's environmental impact. The effect of lin and cottonseed meal production, on the other hand, is insignificant relative to the environmental impact of the total production output.

a)



b)

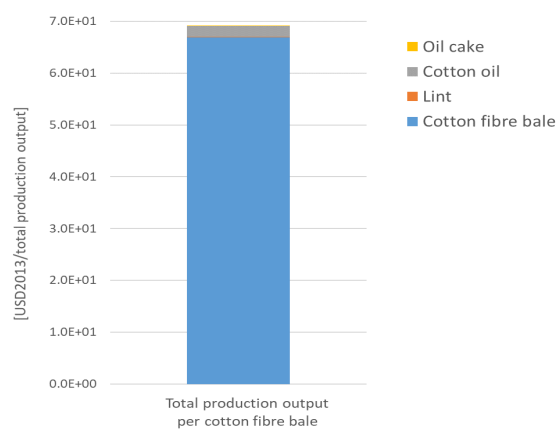
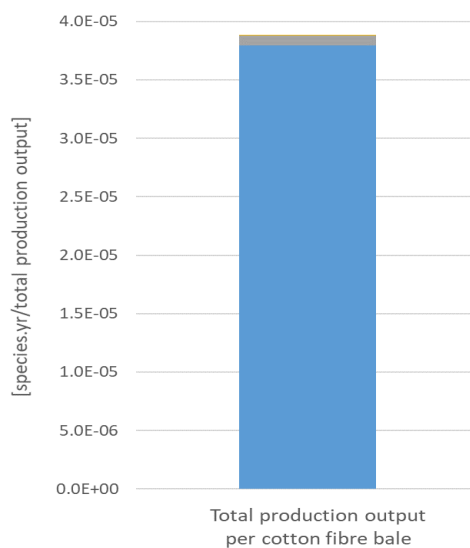


FIGURE 5.9: IMPACT OF TOTAL PRODUCTION OUTPUT PER BALE OF COTTON FIBRE ON (A) HUMAN HEALTH, (B) ECOSYSTEM QUALITY AND (C) RESOURCE DEPLETION

However, the results obtained are subject to the uncertainties set out in annex 8.106.

DISCUSSION

Current status of impacts

From SC production to the supply of cotton fibre bales for export, the impacts of the cotton value chain in Cameroon on human health and ecosystem quality stem mostly from field cultivation. Other studies came to similar conclusions (e.g. Thylmann et al. 2014). However, it is often difficult, if not impossible, to compare different LCA studies directly (e.g. Jewell 2017) because system boundaries are set differently among studies with different emission modelling on inventory level and impact assessment methods used. Since agriculture contributes the most to impacts on human health and ecosystem quality, focusing on agricultural production would be the most effective way to reduce these impacts.

Impacts on human health are mainly caused by emissions of greenhouse gases and particulate matter. Almost 50% of greenhouse gas emissions per bale of cotton fibre come from agricultural production through the application of nitrogen fertilizers (mainly nitrous oxide). In the case of fine particulate matter, over 40% of it can be attributed to field emissions from cultivation; ammonia, for instance, forms particulate matter in the atmosphere and thus contributes to particulate pollution.

In terms of impacts on ecosystem quality, land use is the main cause in the overall effect. Throughout the cotton value chain, demand for land is highest in agriculture. Agricultural land use leads to the destruction of natural and semi-natural habitats, which is a major driver of biodiversity loss (DeClerk et al., 2016; Walz & Syrbe, 2013). Further expansion of the agricultural area exacerbates this effect.

When it comes to resource depletion, almost 70% is accounted for by transport throughout the value chain. If the efficiency of transport processes could be increased, their contribution to resource depletion would decrease proportionately.

The share of agricultural production in resource depletion is relatively low, at around 16% in the current cultivation system. The depletion of resources from agricultural production results from the use of mineral fertilizers and pesticides, the production of which is intensive in fossil resources. As on-field cultivation methods are almost exclusively manual, there is no direct consumption of fossil resources in production *per se*. However, if a shift towards industrial production were to lead to the mechanization of cotton production, the share of agricultural production in resource depletion would increase considerably and thus make it likely a significant factor in this issue.

While the analysis of the performance of different producers according to the size of their cotton cultivation area shows that the highest yields are achieved in systems of 5 to 10 ha, the environmental assessment shows that none of the four cultivation systems has clear benefits in terms of eco-efficiency. The trend is rather towards farms with cotton cultivation areas of <1 ha producing 1 kg of SC with the greatest eco-efficiency. Despite higher yields, the eco-efficiency of cotton seeds from 5 to 10 ha is rather low, as relatively more inputs per hectare are also applied to these fields.

Potential effects of increased production

Life cycle assessment focuses on the evaluation of eco-efficiency. This means that the result of an LCA indicates which process provides a certain amount of goods with the lowest environmental impact. However, it is not possible to assess conclusively, on the basis of eco-efficiency, whether an agricultural production system is truly sustainable. Products from intensive agricultural production often show a high level of eco-efficiency if the increase in the amount of inputs used (fertilizers, pesticides, mechanization) leads to a relatively high yield increase. However, excessive amounts of inputs can lead to overexploitation of local natural resources (soil, water, biodiversity, etc.), so that they can no longer regenerate. In extreme cases, long-term agricultural

production is made impossible because, for example, soil fertility is lost through over-intensive use. Yet, this is not reflected in eco-efficiency calculations.

We have deliberately not articulated environmental effects per hectare per year in addition to eco-efficiency. The environmental impact per hectare per year shows only that the most intensive production system has the highest environmental impact in terms of surface area. However, also from this point of view, it is not possible to assess conclusively whether production intensity is within the limits of sustainable use. This result can moreover easily be derived from the material flows in the inventory data. In both regions, nitrogen and phosphorus fertilizer application per hectare was highest on cotton cultivation areas of between 5 and 10 hectares. Therefore, the environmental impact per hectare per year will be highest in this cotton cultivation system.

The results of the LCA nevertheless allow us to estimate the possible effects of an increase in cotton production in Cameroon, which could be achieved either by increasing the area under cultivation or by intensifying production on existing crop land. The extension of cotton cultivated areas can be done either inwards – on existing agricultural land – or outwards – by converting non-agricultural land into agricultural land. Inward expansion of land would be detrimental to food security because fewer crops could be grown for human consumption. From the point of view of social sustainability, this option is, therefore, not viable.

The conversion of non-agricultural land into arable land for cotton cultivation in the Northern region of Cameroon can be done only at the expense of protected areas. These are natural and semi-natural habitats that would lose their biodiversity in the process. As the eco-efficiency analysis has shown, land use contributes most to impacts on ecosystem quality. An increase in land devoted to cotton production would aggravate the impact on the quality of ecosystems in absolute terms in the North and Far North of Cameroon. And finally, an increase in land devoted to cotton cultivation would put a strain on the limited natural resources of this region's ecosystems.

Therefore, all that can be done is increasing cotton yields by intensifying cultivation on the existing cotton cultivation areas. This can be achieved by increasing the use of fertilizers and pesticides. Overall, however, this would lead to an increase in greenhouse gas and particulate matter emissions in the region. As the eco-efficiency analysis has shown, these two factors contribute most to human health effects. Due to the increased use of pesticides, greater effects on human toxicity and ecotoxicity can also be expected in the region. If intensification were accompanied by increased mechanization, the contribution of cotton cultivation to resource depletion in the value chain would increase.

Based on the knowledge gained from the analysis of applied cotton cultivation systems, it can already be reasonably concluded that eco-efficiency cannot be improved substantially by further intensifying cotton cultivation. Although the highest yields are obtained on farms with 5-10 ha of cotton, they are not the most eco-efficient per kg of SC. This means that the potential increase in yield that could be obtained by further increasing input rates is disproportionately smaller than the increase in inputs and that the eco-efficiency of such a system could, therefore, only be lower.

In addition, intensification on existing agricultural land would also have effects on soil quality – an aspect that is only superficially assessed in the LCA. Even at current production intensity, soils show in some places some signs of fatigue. In order to combat soil degradation in the event of further intensification, increased use of organic fertilisers and effective measures against soil erosion would be unavoidable.

Data Quality

A survey containing data on cotton cultivation of about 1,000 producers, a data source rarely available for this type of analysis on agricultural production, was available for the present study. Naturally, there are always errors in these datasets, either because the data are incorrectly reported by producers or because errors occur during data entry. In addition, there is an enumerator bias, since the data were collected by different people. An

aggravating factor is that certain data were entered using different units, without this being precisely disclosed (for example, the quantity of organic fertiliser was given in kg as well as in numbers of trolleys). The individual entries had to be standardized by means of multiple checks.

Through the process of filtering the survey data, gross errors, at least, could be eliminated. However, the filtering process also resulted in a reduction in sample size, which reduced the informational value of the analyses performed. In particular, the analysis of data from producers with cotton cultivation areas > 10 ha should be considered with caution, as data from only 17 producers in the North and 7 in the Far North could be assessed. The number of available data points in the Far North was also problematic for producers with cotton-growing areas between 5 and 10 ha, where data from only 49 producers remained after filtering.

Finally, the uncertainty analysis (Appendix 106) also showed that the results of the environmental assessment of cotton cultivation from farms with more than 10 ha of cotton cultivation area in the North and Far North and of 5-10 ha of cotton cultivation area in the Far North are spread over a wide range, making it impossible to obtain conclusive answers regarding the eco-efficiency of these categories. In the end, the sample size for these categories was too small to reflect the existing variability.

5.3 CONCLUSIONS

In comparison with the other stages of the cotton value chain in Cameroon, the cultivation of cotton accounts for most of the overall environmental impact along the value chain. In particular, cotton cultivation has the highest impact on human health and ecosystem quality. Therefore, changes in cotton cultivation, such as intensification of production, have an effect on the environmental impact of the entire value chain in Cameroon.

It is very unlikely that eco-efficiency could be increased by further intensifying cotton production on the existing cotton cultivation area. Even if intensification leads to an increase in yields, the environmental impact per kg of SC produced would probably be greater than it is today.

Additionally, an intensification of cotton production would also increase the local environmental impact in the North and Far North in absolute terms, and the pressure on human health, ecosystem quality and resource depletion would increase overall.

In order to ensure the long-term sustainability of cotton cultivation in Cameroon, the effective preservation of soil fertility is essential, which requires a more efficient use of existing organic fertilizers and a level in production intensity that is adapted to the regenerative capacity of the local ecosystem resources.

6. VC, territory and biodiversity

Most of the territorial analyses below are based on interviews held during the mission in Yaoundé and Garoua, and on maps collected by the experts.

The cotton-producing North region has the particularity of being dotted with wildlife protection areas (*Zones d'Intérêt Cynégétique*) (Figure 6.1). It is estimated that these areas cover nearly 45% of the region's surface area.

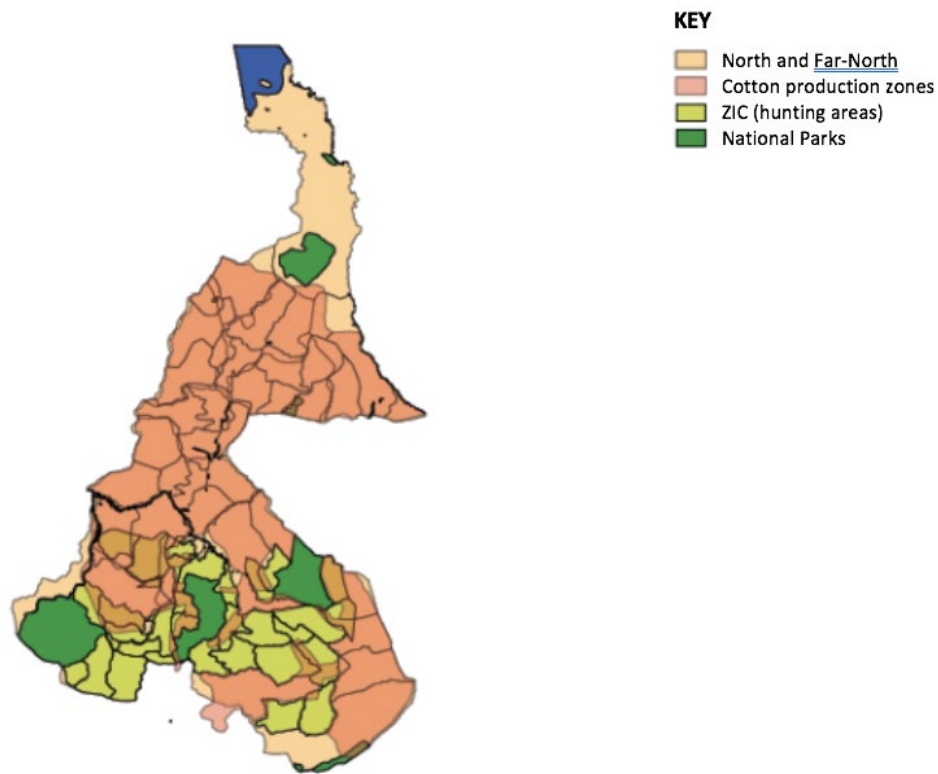


FIGURE 6.1: EXTENSION OF COTTON PRODUCTION AREA AND OVERLAP WITH PROTECTED AREAS

6.1 A VC with unavoidable territorial impacts

According to all the stakeholders we met, from Yaoundé to the outskirts of the Benue National Park, the cotton VC – and the SDCC in particular – is one of the two or three most determining stakeholders in the management of rural land in the North region, for the following reasons at least:

- Rural public services: in a context of weak presence of the central State in the North (with a poverty rate at twice the national average, an underdeveloped and poorly maintained road network, scarce social infrastructures), the stable incomes but also the public services provided by the VC in rural areas appear to be not only considerable in absolute value but also and above all crucial in relative value (versus services provided by the State, to be confirmed), which places the cotton VC at the centre of the social evolution of the North;
- Sedentarization of population flows: for reasons pertaining mostly to the pedoclimatic situation and security issues, large numbers of Cameroonians have been migrating for several years from the Far North to the North, where the population growth rate is now twice the national average, and even higher near roads and tracks. The sedentarization (or not) of these populations is directly correlated to their integration into networks of farmers, at the forefront of which are networks belonging to the cotton VC, which are therefore also decisive in terms of demography;
- The SDCC and CNPC-C: while the SDCC and the CNPC-C are often named in tandem in studies of the cotton VC, it appears that a majority of our interviewees were more prone to spontaneously citing the SDCC as a leader, if not in the decision-making process itself, at least in the organization of negotiations not only within the cotton VC but also and especially in the North region as a whole;

- *De facto* land-use planning: for the three reasons mentioned above, to which should be added its on-site geo-referenced socio-economic monitoring and assessment capacities, the SDCC is, on the ground (if not on paper), a key player in the development of the North.

This influence of the cotton VC, and more particularly of the SDCC, on the rural territory of the North appears to be crucial for the future of the entire region, well beyond cotton-growing areas alone, for the following reasons at least:

- Were the presence of other stakeholders influencing the rural territory to wane, whoever remained would be left alone to steer development:
 - Central government and decentralized services: as a result of successive structural adjustments, erosion of current power, endemic corruption and armed rebellions and/or banditry on both sides of the country's eastern and western borders, the influence of the central State and its decentralized services has declined in 3 of Cameroon's 10 regions, particularly in the north. Consequently, it can be considered that the cotton VC, and the SDCC in particular, now has more on-site influence on the practical planning of the rural territory of the North than MINEPAT, MINFOF, the *Gouverneur* or the *Sous-préfets*,
 - Lamidates: Much more than in other regions of Cameroon (especially more than in the forest regions), the customary authorities of the North (of Peulh origin, therefore structurally linked to pastoralists) have a preponderant influence on most social and territorial issues in the region, but this influence also appears to be in decline (with a break-up of the united political front and an increase in local conflict and turmoil). This is probably due not only to dishonest political compromises and poor governance, but also to the relative emancipation of farmers from pastoralists, which is largely due to the development of the cotton VC;
 - Communes: for many reasons, including the relative decline of the state and the resistance to the bad governance of on-site social stakeholders (CSOs, economic groups, religious groups, etc.), the Communes seem to be the "rising" stakeholders of territorial governance in Cameroon, although less so in the North than elsewhere, probably due to the persistent preponderance of customary authorities (see above). Hence, the cotton producers we interviewed did not mention the Communes among the influential stakeholders in their territories. The CDPs (Communal Development Plans), which are orchestrated in the capital under the coordination of the PNDP, are more wishful thinking associated with phantom budgets than a concrete plan. Municipalities do not seem to be real stakeholders at the moment.

It is therefore particularly noteworthy that the cotton VC seems to over-determine rural land use planning in the North region.

Moreover, the population of this region is so predominantly settled in rural areas and economically dependent on the primary sector (90%), and so isolated from the rare urban areas by the under-development of communication infrastructures and social institutions, that it can be said that, just as the cotton VC determines the evolution of the rural territory of the North, it also largely determines the evolution of the whole North region.

6.2 A VC that must take into account biodiversity issues

The cotton VC cannot avoid being at the heart of the evolution of the North region's territory, but 45% of this territory is now classified as areas intended to preserve biodiversity (national parks) or to exploit it (ZICs, which are hunting areas). The cotton VC and in particular the SDCC will therefore have to deal with the issue of these protected territories and, beyond it, the issue of "biodiversity" in the North region, at least in:

- Addressing the biodiversity issue to take responsibility for the cotton VC's growth strategy. The State, as a shareholder of the SDCC, wants to double the amount of cotton processed by the SDCC (from 300,000k to 600,000 tonnes/year), an objective that does not seem to be achievable by increasing yield alone, and which will therefore require an increase in the fertile areas cultivated partly with cotton. If this objective

were confirmed, then it would become very likely that the SDCC would increasingly enter into competition (be it open or not) with the conservators and operators of protected areas in the southern part of the North region, thus jeopardizing the biodiversity heritage of the region, the country and the sub-region.

- Participating in the regulation of territories, including biodiversity, to avoid the worst as observed in Central African Republic CAR (and which is gradually getting nearer the Far North):
 - Decline in regulations: whether it is to grow or to consolidate its achievements, the cotton VC needs the maintenance of a baseline of regulatory mechanisms, particularly with regard to land tenure and land management. Experiences in the sub-region (e.g. in CAR) show that when the so-called protected areas are converted to other uses without respecting the laws, regulations and/or local agreements, it is very often correlated to a failure of land regulation mechanisms, which then quickly and negatively impacts other legal land uses;
 - Increase in conflicts: the whole cotton VC would be negatively impacted if conflicts between farmers and pastoralists kept increasing. These conflicts are partly due to the lack of land available for the various needs (agriculture, breeding, mining, park/conservation, tourist hunting) and the extensive growth strategies adopted by these two types of VC (see above for cotton), and partly due to the degradation of the regulation systems, particularly land regulations, which are themselves correlated to the regulation of areas dedicated to biodiversity (see above);
 - Armed rebellion by those left behind and spiralling violence: worse than being negatively impacted, the North's cotton VC could be led to rapid decline (as is currently observed in other sub-regions of sub-Saharan Africa) if the aforementioned land-use conflicts, for want of being better regulated, were to degenerate into armed rebellions (especially of young pastoralists breaking with their customs and in opposition to sedentary people). Many interviewees, including in the cotton VC, deem this scenario to be increasingly possible.
- Supporting protected areas to seize an opportunity to stabilize and secure territories:
 - Restoring "islands of integrity": in several regions where the worst had happened (banditry, massacres, rapes, child soldiers, etc.): this has been successfully tested through the co-management of national parks with the relevant international organizations (in CAR, East-DRC, North-DRC, etc.). Without waiting to reach these levels of bankruptcy, states such as Chad have also tested this strategy of territorial stabilization with success (cf. Zakouma). Northern Cameroon appears to be a region where preventing problems is still possible, rather than waiting to resolve them, and the Sodecoton seems crucial in this respect;
 - Renegotiating territorial compromises: relying on the authorities restored to integrity in the Virunga, Garamba or Zakouma parks, negotiations between local stakeholders and technical and financial partners (TFPs) have enabled the revival of activities in agriculture, fishing, forestry, livestock, hydroelectricity and even tourism. Once again, North Cameroon, structured around the cotton VC, can avoid waiting for the worst to happen before embarking on this path;
 - To enforce compromises: territorial compromises are valid only if they are respected. Because they have adequate human, logistic and financial resources, including on security issues, these protected areas with delegated management in unstable regions also and above all serve as support for law and contract enforcement actions. In the current context of demographic explosion and strong land tensions, they could already be a stabilizing factor for North Cameroon, and in doing so, for the cotton VC.

7. Dynamics of the VC, conclusion and recommendations

7.1 Risk Matrix

Risk categories	Specific risks	Relevant indicators	Likelihood, in %	Damage intensity
World price	Decline in the world price after several years of the USD being reliably favourable Volatility of the world price with fluctuations of around 20% while the USD remains stable	*Price of cotton *Price of cotton	*15% (2 year term) 10% (2 year term)	*Decrease in the SDCC's net result by CFAF 10 billion per 10% increment in world price change * CFAF 18 billion decrease in the SDCC's net result for - 20% in the world price
Geopolitical situation	Exacerbation of the current trade/cold war, involving two major cotton countries (USA & China) Difficulty in containing cotton areas as a result of Nigeria's economic policy	*Demand for cotton *Price of cotton and raw materials *Volatility of the USD *Surface area of cotton rotation crops (maize, cowpea, groundnut...)	*45% (<1 year term; sales of US grown soy have already stopped in China) *80% (1 year term)	*The SDCC's net income falling by nearly CFAF 50 billion, from +12.3 to -37.3. *SDCC deficit in tens of billions of CFAF due to amounts of SC in excess of processing capacities
National economic policy	Insufficient support for the modernization of CICAM	*Tonnage of cotton fibre bought by CICAM	*70% (1 year term, the expected support did not materialize in 2019)	*Increased deficit of CICAM *Little VA brought to the VC by CICAM
Agricultural policy	Cotton development objective in excess of ecological capacities Uncontrolled clearing of ZICs, mostly in the North region Lack of diversification of income sources in cotton farms	*Cotton crop surface and production *Number of cotton producers *Cotton crop surface *Cotton production *Number of cotton producers *Cotton crop surface *Cotton production	*70% (1 year term, with the policy target of 4-600K tons of SC) *60% (1 year term, ZICs are already being increasingly occupied) *70% (end of soy and maize sales)	*Ecological damage *Financial damages matching the lack of enhancements in industrial processing capacities *Ecological damage * Financial damages matching the lack of enhancements in industrial processing capacities *Ecological damage * Financial damages matching the lack of enhancements in industrial processing capacities

Supply chain policy	Continued inadequacy of ginning capacity with a contained increase in production Persistence of the bad sales of solid crushing products	*Tonnage of SC ginned outside of the optimal period *depreciation of SDCC stocks *Tonnage of unsold solid products *Financial loss from stock depreciation	*70% (2 year term, no increase in capacities is currently planned for) *70% (1 year term, no proactive steps are planned to be taken)	*Decrease in net income of about ten billion CFAF *VC sustainability in jeopardy *Deepening of the ginning function's deficit *Loss of the SDCC's activities' profitability
Social conjuncture	Persistence of insecurity caused by jihadists in the Far North and of ransom kidnapping throughout the cotton zone Persistence or even accentuation of conflicts between farmers and herders, discouraging large producers Reduction in women's ability to produce cotton independently	* Number of cotton producers *Cotton crop surface *Number of large producers *Cotton crop area of large producers *Number of women growing cotton and their crop area	*70% (2 year term, given the current situation) *50% (1 year term, no real actions planned for) *50% (1 year term, no actions planned for)	*VA reduction in the tens of billions of CFAF due to a decrease in adhesion to / intensification of cotton cultivation *Reduction in VA as a result of the decrease in the share of large producers in the North region *Decrease in the level of education of children and in the quality of life, especially for women.
Ecology	Reduction of the possibility of land clearing, forcing farmers to expand cultivated area by renting land Fall armyworm infestation on maize with possible expansion to cotton Loss of soil fertility and continued environmental degradation due to overexploitation and deforestation.	*Percentage of rented land *Number of conflicts at the level of communes *Maize and cotton crop areas *Cotton yield *Cotton yield	*50% (1 year term, no real actions planned for) *40% (2-3 year term, there is not enough hindsight on expansion to cotton) *60% (3-4 year term, time for a higher rate of fertility loss)	*Declining economic performance of the VC *Increase in local socio-political tensions *Decrease in cotton crop profitability by 20-30% *Decrease of overall VA in the tens of billions of CFAF *20-30% loss in the profitability of cotton cultivation in the short/medium term *Decrease of overall VA in the tens of billions of CFAF

TABLE 7-1: RISKS TABLE

7.2 SWOT Matrix

Strengths	Weaknesses
• Efficient execution of roles shared between the SDCC, the CNPCC and PA. • Good level of productivity in the field; Research with products of recognized quality • Operational mechanisms in inputs acquisition and distribution • Very good rate of credit repayment by producers • Attractive purchase price and effective price risk management systemInclusiveness of cotton production, which is open to producers of various types • Involvement of women in cotton production • Financial compensation by the State for public service missions • Implementation of an inputs fund • Recently perfected and renovated outbound SC loading docks, which are now technically up to the task • Technical skills in ginning and crushing • Good sales of cotton oil • Recognised quality of cotton fibre • Pool of nearly twenty cotton fibre buyers	• Context of insecurity and conflict • A production mode that hasn't really evolved in decades • Cost of imported inputs raised by transport from port to areas of use • Producers' profitability weighed down by the use of inputs at cost price or even higher prices. • ZICs and producer differentiation are not taken into account in the SDCC's support system • Partial and late compensation for public service missions • Mechanism still shaky for the acquisition of credits by the SDCC • Structural and unavoidable delay in the payment of the SC sold by PAs. • Poor condition of the road network for outbound SC • Inadequate ginning, crushing and transportation capacities at the SDCC • Sub-optimal moisture content of cotton bales • Bad sales of solid crushing products • Manual and visual grading of cotton fibre • Undiscounted list of sales types and lack of relation to international standards • Export of cotton fibre subject to revenue shortfalls • Very little industrial textile processing
Opportunities	Threats
• Favourable world prices and exchange rates • International development partners' intentions to provide financial support • Regional perspective for the textile industry	• Context of trade war involving two major players in cotton • Delay in mobilizing support due to the pace of operation of international aid agencies • Limited capacity for state support in a context of instability in the English-speaking part of the country

• Willingness of the State to support the textile industry	
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TABLE 7-2 : ANALYSIS OF STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS

7.3 Conclusion and Recommendations

The cotton VC involves only one cotton company (SDCC) in cotton fibre exportation. The level of vertical integration of the SDCC, up to the crushing of cotton seeds to produce oil, oilcake and animal feed, is the highest in Francophone Africa. The performance of the VC is good technically, at the level of the fields where cotton production gives rise to a very commendable social dynamic thanks to the work of the PAs. However, the economic performance of the VC is fragile due to the inadequacy of the SDCC's industrial processing and transport capacities to cope with farmers' keenness to produce cotton. Although Cameroon is the only country in the sub-region to maintain an industrial textile activity, this relies entirely on a single company, whose infrastructures and equipment are outdated.

The cotton VC contributes positively to the economic growth of Cameroon:

- Activities are profitable for all the agents involved, except the CICAM. In the case of the SDCC, the profitability of cottonseed crushing is hampered by the difficulties of finding outlets for solid products, whereas cottonseed oil has gained a foothold in the domestic market.
- Sustainability can be asserted without any possible dispute for the artisanal textile processing activities we have studied. The sustainability of the SDCC's activities will rely on its industrial and transportation capacities being upgraded to operate at maximum capacity and under the best conditions during the optimal 150-day period from November to April. The sustainability of producer, PA and CNPC-C operations is bound to that of the SDCC.
- During the 2017-18 campaign, the VC created a VA of 95.9 billion CFAF, 80.1% of which was contributed by direct stakeholders (producers, SDCC, CICAM and village textile artisans), the remainder of indirect VA was from PAs, the CNPC-C, and providers of goods and services for the SDCC's activities. The VC's VA contributes 0.6% of GDP, and 4.3% of wealth created by the agricultural sector.
- The VC contributed CFAF 9.2 billion to public finances, while receiving only CFAF 0.095 billion in the form of a grant.
- The VC provided the trade balance with a net of 51 billion from the export of cotton fibre worth CFAF 107 billion.
- The VC appears viable in the international economy, especially if industrial performance is improved by upgrading the SDCC's ginning and transportation capacities.

The economic growth generated by the VC is undeniably inclusive:

- Producers, the agents with the fewest financial resources, monopolize 62.2% of the income generated by the VC, whereas the SDCC derives only 16.1% for all its integrated activities. Among the producers, those with cotton crops of less than 5 ha receive 61.1% of the total income while representing nearly 95% of the total number of producers.
- Four major elements in governance impact the degree of inclusion and the level of income of producers and the SDCC. The process of cleaning up input credit involves the selection of producers eligible for input credit, which has little exclusionary effect. The price risk management system, which involves the SDCC, the CNPC-C and five ministries, ensures that the respective interests and financial situations of the SDCC and CNPC-C are taken into account in a concerted manner. The current governance of input distribution is unfavourable to producers, who bear all the costs incurred, such as transportation, at

actual or even somewhat overestimated levels. Finally, the income of the SDCC is clearly penalized by the export tax, the application of which is questionable under the terms of the ministerial circular of January 2018.

- The VC is the source of 9,200 salaried jobs, mainly at the PA level (with almost 6,200 not paid during the whole year but seasonally), which accounts for far more than the SDCC (1,900) and the CICAM (1,000), and 42,500 other jobs in self-employed positions, such as village textile artisans (24,000) and PA (nearly 17,000). The overall payroll corresponds to the annual remuneration of nearly 50,000 people at the legal minimum rate of 36,000 CFAF/month. The SDCC pays more than the equivalent of 29,000 annual jobs at minimum wage, compared to nearly 9,300 for producers and PAs considered together, a little less than 6,100 for the CICAM and nearly 5,400 for the SDCC service and goods providers.

From a social point of view, the VC appears to be quite sustainable, albeit precariously:

- Working conditions are generally acceptable and sustainable but are subject to labour shortages (with the risk of child labour).
- Conditions of access to land and water are acceptable but suffer from a lack of transparency, participation and consultation.
- Gender equality conditions are acceptable, but with a rate of women producing cotton for their own account that has increased to 16% of total cotton producers indicating further work overload. However, women's conditions may vary depending on the size of cotton farms.
- Food and nutritional security conditions are favourable but could be jeopardized by further specialization in cotton growing.
- Social capital is undeniably cultivated and distributed in an equitable manner by the associative process at the PA level and by their structuring right up to the CNPC-C. However, this phenomenon could be negatively impacted by excessive specialization in cotton.
- As far as infrastructure and social services contributing to living conditions are concerned, the conditions are acceptable but this is owing only to the investments made by the producers themselves using whatever meagre means the PAs have.

From an environmental point of view,

- An increase in cotton production in Cameroon is practically possible only by intensifying production on the existing cultivated area. As cotton cultivation contributes most to the environmental impact of the cotton value chain in Cameroon, an intensification of cultivation on the existing land area would increase pressure on human health, ecosystem quality and overall resource depletion.
- Even though crop intensification leads to increased yields, it is unlikely that the eco-efficiency of cotton cultivation can be improved. Even today, more intensive cultivation systems are less eco-efficient than more extensive systems because they rely more heavily on inputs.
- In order to enable cotton cultivation in Cameroon to remain sustainable in the long term, it is of vital importance that soil fertility be effectively preserved. This can be achieved through increased use of organic fertilizers and adjusting cultivation intensity to the site.

The VC's performance is exposed to several major risks:

- at supply-chain level, for the whole VC, due not only to the continuing inadequacy of the SDCC's industrial processing and transport capacities, but also to the continuing reduction in soil fertility,
- at national level in relation to conflicts between farmers and transhumant farmers, and security issues in the form of bandits taking hostages for ransom,
- national and regional issues in relation to the persistence of jihadist attacks,

- of an international nature in connection with the volatility of the price of cotton and the euro-dollar exchange rate, the threat of which is accentuated by the current context of a trade war or even “cold war” between the United States and China, two major countries in cotton production and transactions.

The SDCC is already an exemplary cotton company compared to other economic structures in the region. However, it will have to go further than its current performance to contribute more to sustainable development and social peace in its area of operation. The recommendations for achieving this, derived from the study's four-dimensional analyses, are summarized in annex 8.107. Table 7.3 summarizes the main ones by positioning them according to the sectors concerned and the domains of impact; some recommendations have an impact in only one area while others have impacts in two to three different areas.

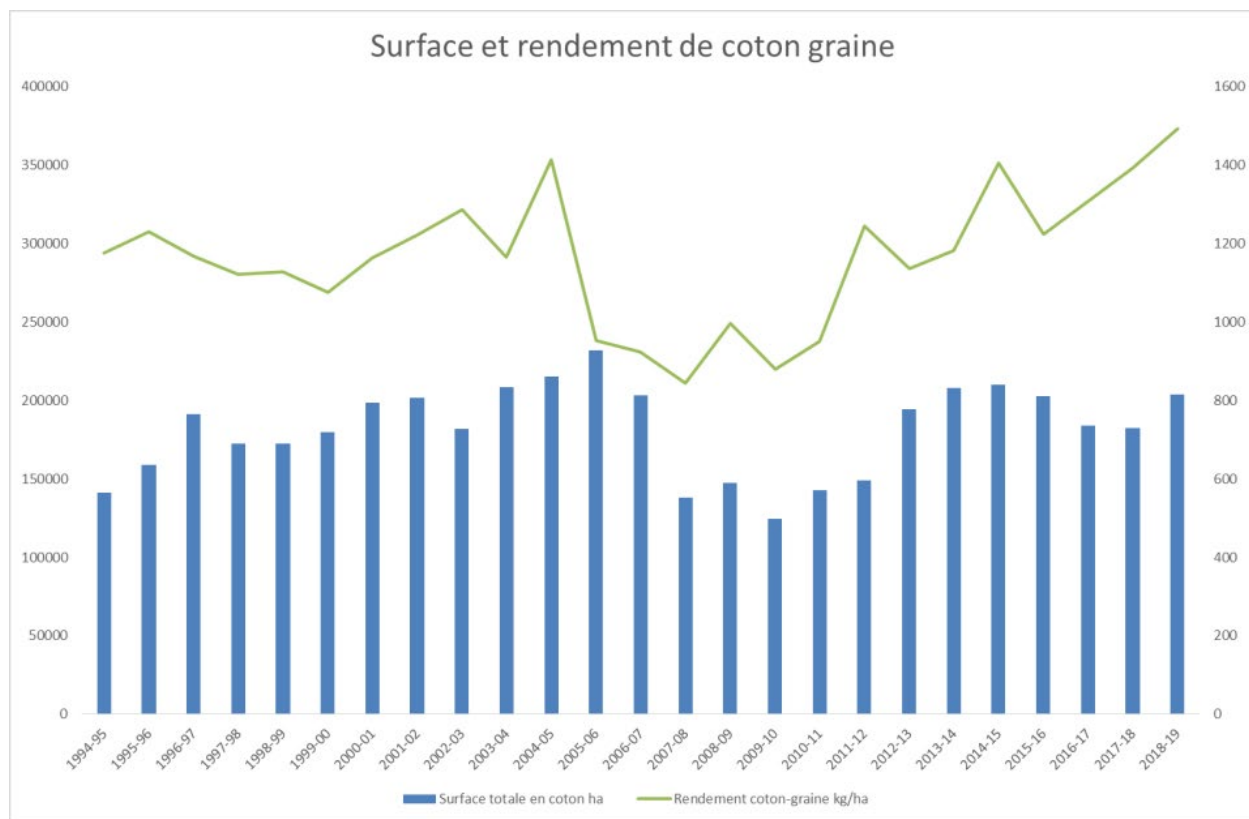
Sector	Impact domains			
	Total VA	Producer revenues	Social impacts	Environmental Impacts
Agricultural production	Development of technical itineraries based on controlling the cotton plant's vegetative phase to increase yield.		Drop the requirement to present ID to apply for the inputs credit	
		Studying the feasibility of organic cotton		
		Developing socially acceptable solutions to reverse the decline in soil fertility		
		Identifying economic, social and environmental impacts better through skills support in processing the SDCC's survey data		
	Promote mechanisation that is adequate to farms' structures			
	Exploiting genetic variability to combine productivity in the field, fibre quality and crushing yield	Adapting technical advice to producers according to their typology		
		Reducing the selling price of inputs for producers, by adjusting the cost price calculation or even by offsetting the costs of enclavement	Keeping records of safety issues and cases of conflict between farmers and herders	
		Granting liquidity credits to reduce the impact of late payment of producers by institutions		
Ginning sector	Adequately upgrading the SDCC's industrial processing and transport capacities			
	Better valorizing export-bound cotton fibre by updating the types of sales, analyzing the price management device's reference price and re-evaluating the regulatory framework for contracts.			
Crushing sector	Raising the price of cottonseed oil to match its			
	Expanding markets for solid products of seed crushing			

Textile sector	Implementing the CICAM's modernization plan	
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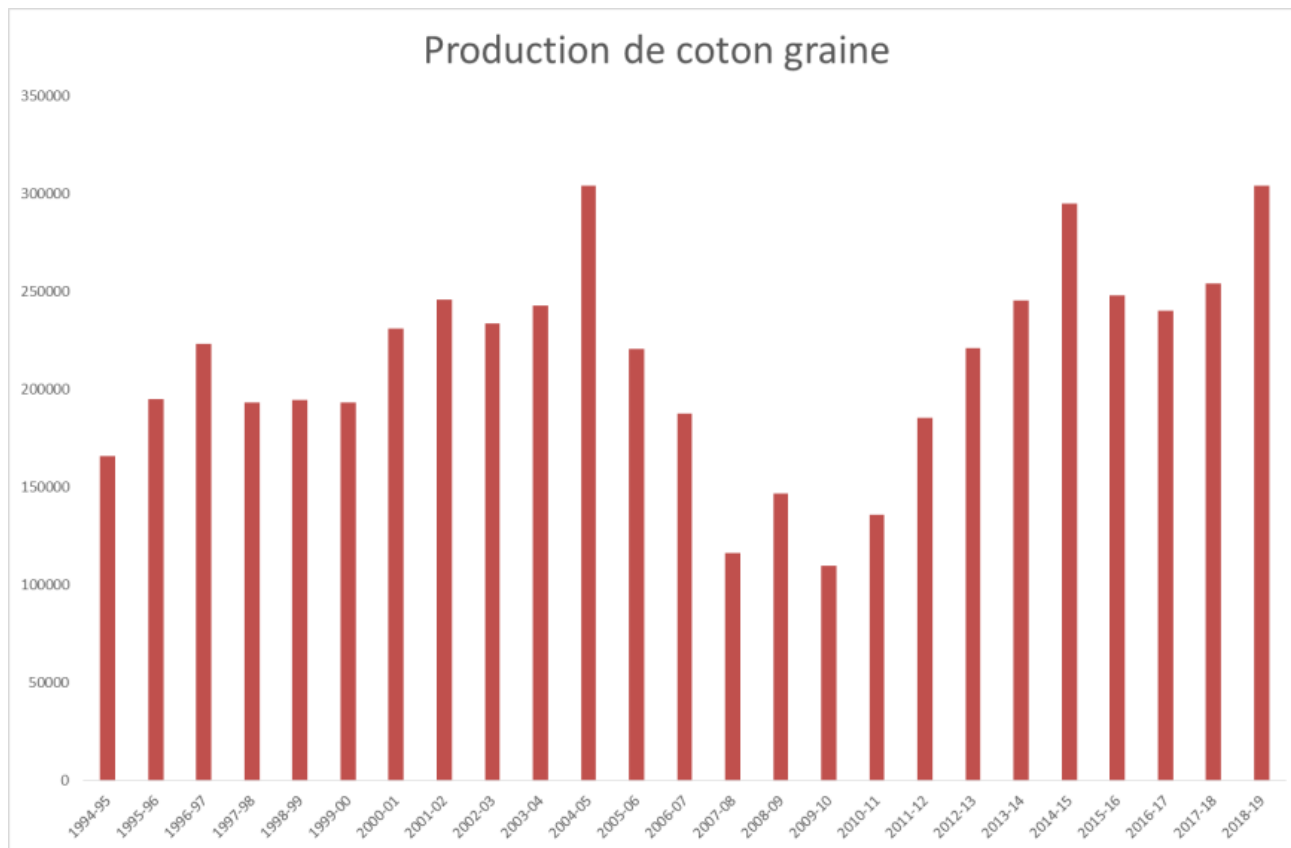
TABLE 7-3 : KEY RECOMMENDATIONS BY SECTOR AND IMPACT DOMAIN

8. Annexes

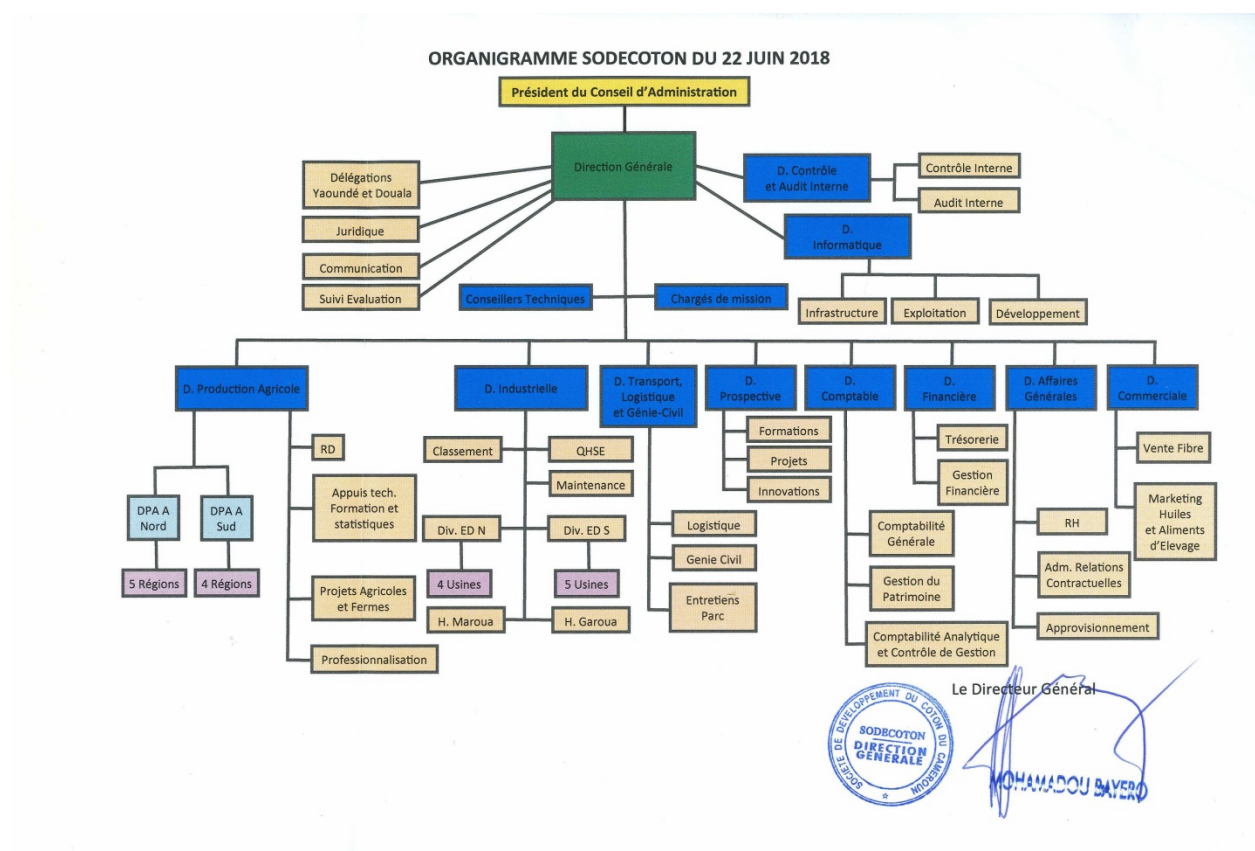
8.1 Evolution de la surface et du rendement en coton-graine



8.2 Evolution de la production de coton-graine



8.3 Organigramme de la Sodécoton depuis juin 2018



8.4 Historique et mode de fonctionnement de la CNPC-C

Le dispositif associatif des producteurs de coton porté actuellement par la CNPC-C a résulté d'un processus ayant débuté avec des groupements informels sans statut ni reconnaissance juridique jusqu'à 1994. C'est la mise en œuvre du DPGT qui a permis de légaliser les groupements de producteurs au niveau local sous forme d'association avec le statut de GIC. Le regroupement au niveau national a débuté en 1996 avec la création de la CPCC de manière informelle et fonctionnant avec 10 représentants. C'est en juillet 2000 que l'OPCC-GIE a été formellement établie fonctionnant avec 40 représentants.

La CNPC-C est l'héritière de l'OPCC-GIE, l'entité faîtière qui chapeaute les confédérations régionales, recouvrant elles-mêmes les unions des GP au niveau des villages. En 2019, il y a environ 2000 GP recensés dont 1545 "actifs", c'est-à-dire habilités à exécuter les fonctions principales qui leur sont dévolues, la gestion du crédit intrants et la commercialisation du CG. L'organisation de la CNPC-C est calquée sur celle de la SDCC, les 48 unions et les 9 fédérations sont calées respectivement sur les 48 secteurs et les 9 régions de la SDCC.

Les modes de fonctionnement des GP, des unions, des fédérations et de la confédération sont assez similaires. Un GP comprend en moyenne une centaine de membres, producteurs de coton regroupés au sein de Cercles de Caution (CC) constitués autour de 5 à 10 producteurs. Il fonctionne avec un comité directeur, un bureau élargi composé du comité directeur³¹ et les chefs de tous les CC. L'Assemblée Générale (AG) est l'organe suprême pour les décisions. Les fédérations et la confédération disposent en plus de commissions pour prendre en charge les sujets spécifiques.

La composition des comités directeurs des GP présente un caractère démocratique prometteur si l'on se réfère à la place des jeunes et même à celles des femmes (annex 8.11). Les jeunes, âgés de 35 ans au plus, sont largement représentés. Il n'y a qu'à Mayo Galké et Kaélé où ils ne sont pas majoritaires. Dans les régions de Touboro, de Ngong et de Tchatibali, tous les membres de tous les comités directeurs sont âgés de moins de 35 ans. La part des femmes est très variable, de 3% à peine dans la région de Touboro à 38% dans la région de Maroua 1. Il semble que les femmes se voient le plus souvent attribuées le poste de trésorier, en témoignage du sérieux et de la rigueur en gestion qu'on leur reconnaît dans les villages.

³¹ Composé d'un délégué, d'un délégué adjoint, d'un trésorier, d'un trésorier adjoint, d'un secrétaire, d'un secrétaire adjoint et d'un conseiller.

8.5 Présentation succincte des conventions liant la CNPC-C et SDCC

La CNPC-C opère de concert avec la SDCC suivant plusieurs conventions dont certaines sont établies depuis près de vingt ans :

- La convention, signée en 2000, pour la gestion d'un fonds d'épargne qui a été constitué par les producteurs au cours des années 1996 à 1998 en prévision de la privatisation de la SDCC. Le fonds est logé à la SDCC contre une rémunération de 4% et il a atteint le montant de 7 milliards de CFAF. La gestion du fonds est confiée à la SDCC pour être notamment mobilisé pour l'importation des intrants dont la CNPC-C a la charge ;
- La convention, signée en 2004, pour la gestion des intrants et des équipements à acquérir par importation ou achats locaux. La CNPC-C a la charge de commander et de payer les intrants et équipements et de prendre livraison au niveau de N'Gaoundéré ou de Pitoa (près de Garoua). La SDCC a la responsabilité, contre rémunération forfaitaire par la CNPC-C, de la mise en place des intrants dans les villages, de leur attribution à crédit au niveau des GP (de même que les équipements par achat local) ainsi que de récupérer les remboursements des crédits.
- La convention, signée en 2002, pour le partage de la fonction d'animation et qui est appelée aujourd'hui professionnalisation des GP avec affectation de personnel respectivement par la CNPC-C et la SDCC. La mise à disposition d'un agent de la SDCC pour assurer le rôle de directeur exécutif est une annexe de cette convention.
- La convention élevage, signée en 2001, pour établir un service élevage selon un financement paritaire par la CNPC-C et la SDCC. Les activités du service concernent les soins vétérinaires et de prophylaxie des animaux de trait étendus au troupeau bovin, l'alimentation des animaux, la promotion de la fumure organique et plus généralement de l'intégration agriculture-élevage ainsi que de l'organisation de la profession des agro-éleveurs.
- La convention de mécanisme de gestion du risque prix associant la SDCC et la CNPC-C comme co-présidents d'un comité de pilotage comprenant 12 autres membres dont cinq venant de quatre ministères impliqués (commerce, finance, agriculture, aménagement du territoire).

8.6 Evolution du personnel de la CNPC-C

CNPC-Cameroun
B.P. 1371
GAROUA

TABLEAU DE L'EVOLUTION DU PERSONNEL PERMANENT

ANNEE SEXE	2010		2011		2012		2013		2014		2015		2016		2017		2018	
	H	F	H	F	H	F	H	F	H	F	H	F	H	F	H	F	H	F
MASCULIN	78		79		92		99		109		110		115		116		118	
FEMININ		8		8		8		9		9		9		9		9		10
MOINS DE 35 ANS	24	6	24	6	18	5	16	4	14	4	12	2	9	2	9	2	4	3

TABLEAU DE L'EVOLUTION DU PERSONNEL SAISONNIER

ANNEE SEXE	2010		2011		2012		2013		2014		2015		2016		2017		2018	
	H	F	H	F	H	F	H	F	H	F	H	F	H	F	H	F	H	F
HOMMES	36		36		36		36		41		41		41		41		41	
FEMMES										1		1		1		1		1
MOINS DE 35 ANS	25	0	22	0	22	0	22	0	20	0	17	0	16	0	16	0	14	0

8.7 Critères d'éligibilité des paysans au crédit intrants pour produire du coton

CRITERES D'ELIGIBILITE AU CREDIT INTRANTS CAMPAGNE 2018/2019

A- Producteurs sous contrats de culture coton en 2017/2018

1- Critères généraux de base :

- Critère 1 :** Etre en possession de la CNI ou de la carte consulaire ;
Critère 2 : Aucun impayé sur la campagne agricole 2017/2018 et les campagnes antérieures.

2- Critères spécifiques coton + sorgho	2- Critères spécifiques maïs (Région Nord exclusivement)
1- A vendu la totalité de sa production de coton graine à la SODECOTON. 2- A livré un minimum de 700 kg/ha dans la Région Extrême-Nord ; A livré un minimum de 800 kg/ha dans la Région Nord. Crédit accordé : i) Régions Maroua, Kaélé, Tchabalibali et Guider : - Si production livrée à la SODECOTON < 700 kg/ha : Pas de crédit ; - Si production livrée comprise entre 700 kg et 1.0 t/ha : Surf. coton maxi = réalisations 2017/18 ; - Si production livrée ≥ 1.0 t/ha : surface sur appréciation CDZ + Comité crédit du GP. ii) Régions de Garoua, Ngong, Touboro et Mayo Galké : - Si production livrée à la SODECOTON pour les régions de Ngong et Garoua < 800 kg/ha et pour les régions de Touboro et Mayo- Galké < 900kg/ha : Pas de crédit ; - Si production livrée entre 800 et 1.1 t/ha pour les régions de Ngong et Garoua et entre 900 et 1.1t/ha pour les régions de Touboro et Mayo Galké : Surf. coton maxi = réalisations 2017/2018 - Production livrée ≥ 1.1t/ha : Surface sur appréciation CDZ + Comité crédit du GP.	a) A cultivé du maïs sous contrat en 2017/2018 1- A remboursé intégralement son crédit maïs. Crédit accordé : - Si crédit maïs 2017/18 remboursé avec revenus du maïs : Surface maïs autorisée = 50% surface coton plan de campagne 2018/2019. - Si crédit maïs remboursé avec revenus coton : Surface maïs autorisée = 25% surface coton plan de campagne 2018/2019. b) N'a pas cultivé du maïs sous contrat en 2017/2018 1- Engagement écrit pour remboursement totalité crédits maïs avec revenus hors coton. Crédit accordé : - Surface maxi. de maïs = 50% de la surface de coton plan de campagne 2018/2019.

NB : Les formulaires des engagements par écrit seront mis en place par la DPA

CRITERES D'ELIGIBILITE AU CREDIT INTRANTS CAMPAGNE 2018/2019

B- Producteurs hors contrats de culture coton en 2017/2018

1- Critères généraux de base :

- Critère 1 :** Etre en possession de la CNI ou de la carte consulaire ;
Critère 2 : Aucun impayé sur les campagnes antérieures.

2- Critères spécifiques coton + sorgho	2- Critères spécifiques maïs (Région Nord exclusivement)
1- Engagement par écrit à vendre la totalité de sa production de coton graine 2018/2019 à la SODECOTON ; 2- Expérience en culture cotonnière (ancien ou nouveau). <u>Credit accordé :</u> i) Ancien producteur de coton revenant à la culture: - Si niveau de productivité 2016/2017 ou antérieur < 700 kg/ha pour les Régions Maroua, Kaélé, Tchabalibi et Guider ou < 800 kg/ha pour les Régions de Garoua et Ngong ou < 900 kg/ha pour les régions Touboro et Mayo Galké: Pas de crédit ; - Si niveau de productivité 2016/2017 ou antérieur compris entre 700 kg et 1.0 t/ha pour les Régions Maroua, Kaélé, Tchabalibi et Guider ou compris entre 800 kg et 1,1t/ha pour les Régions de Garoua et Ngong ou compris entre 900 kg et 1,1t/ha pour les régions Touboro et Mayo Galké: surface max. coton et sorgho= réalisations 2016/2017 ou antérieures ; - Si niveau de productivité 2016/2017 ou antérieur >1.0 t/ha Régions Maroua, Kaélé, Tchabalibi et Guider ou >1,1 t/ha pour les régions Garoua, Ngong, Touboro et Mayo Galké: surface sur appréciation CDZ + Comité crédit du GP. ii) Nouveau producteur de coton : - Surface sur appréciation CDZ + Comité crédit du GP.	1- Engagement écrit pour remboursement totalité crédits maïs avec revenus hors coton. <u>Credit accordé :</u> - Surface maxi. de maïs = 50% de la surface de coton plan de campagne 2018/2019.

NB : Les formulaires des engagements par écrit seront mis en place par la DPA

8.8 Contrat de partenariat Triennal GP/CNPC-Cameroun/SODECOTON

Contrat de partenariat Triennal GP/CNPC-Cameroun/SODECOTON Campagnes 2017/2018, 2018/2019 et 2019/2020

Entre :

Le Groupement de Producteurs de coton de
secteur de ci-après dénommé le Groupement, et
représenté par Monsieur, son Président/Délégué ;

D'une part ;

La Confédération Nationale des Producteurs de Coton du Cameroun ci-après
dénommée CNPC-Cameroun, et représentée par Monsieur
Président de l'Union des GIC de producteurs de coton et vivriers (UGPCV) du
secteur de.....;

De seconde part ;

La Société de développement du coton du Cameroun, ci-après dénommée la
SODECOTON, et représentée par Monsieur, Chef de secteur ;

De troisième part ;

Il est convenu et arrêté ce qui suit :

1 - Objet du contrat

Le présent contrat a pour objet la demande d'appui du Groupement à la CNPC-Cameroun et à la SODECOTON pour la réalisation des programmes de production cotonnière et vivrière des campagnes 2017/2018, 2018/2019 et 2019/2020.

Il vise :

1. L'appui en conseil technique aux cultures cotonnière et vivrière prévues aux programmes de production du Groupement ;
2. L'appui à la professionnalisation du Groupement (gestion du magasin, gestion interne du crédit, règles de fonctionnement du groupement, tenue et restitution des comptes...);
3. La mise à disposition des intrants et équipements agricoles à crédit et au comptant nécessaires à la réalisation des plans de campagne du Groupement (Coton et vivriers) et objet de la commande.

2 - Constitution du Groupement

Le Groupement est enregistré en, immatriculé(e) sous le numéro.....au bureau du Registre de ou à la Préfecture de :

Chacun des producteurs membre du Groupement répond à l'un des critères suivant :

- Appartient à un cercle de caution de 5 producteurs au moins et de 10 au plus.
- Appartient à un cercle de 2 à 4 producteurs si la surface totale du cercle est au moins de 4 hectares.
- A l'intention de produire une caisse planteur (**8 tonnes de coton graine**) et a déjà livré un minimum de **8 tonnes** de coton graine chaque année pendant les 3 campagnes précédentes.

L'ensemble des producteurs et de leurs cercles de caution seront validés par l'AG du groupement.

La liste complète est donnée en **annexe 1** (Liste bleue validé par la CNPC-Cameroun).

3 - Engagement du Groupement de producteurs (GP)

Le Groupement nommera pour le suivi technique de son Programme agricole un (des) agent(s) de suivi des cultures qui supervisera (ont) la réalisation du Programme et qui assurera (ont) la fonction de relais technique avec le dispositif d'encadrement agricole de la SODECOTON.

Pour la réalisation de ce programme, les membres du Groupement s'engagent à respecter les itinéraires techniques recommandés par la SODECOTON.

Pour ce faire, et pour le compte de ses membres, il passe commande à la CNPC-Cameroun, par l'intermédiaire de la SODECOTON, des intrants et matériels.

Le matériel commandé pour achat au comptant sera livré une fois que le reçu de versement correspondant aura été remis au magasinier.

Pour le matériel commandé pour achat par voie de crédit court terme (CT), les procédures en vigueur sont maintenues.

3.3 – Sécurité du stockage des intrants et équipements

Le Groupement assure l'entière responsabilité des stocks d'intrants déposés par la SODECOTON à sa demande dans le magasin intrants du groupement ou mis à la disposition du Groupement à titre gratuit par la SODECOTON. Il nommera à cet effet :

- 1 Magasinier,
- 1 Gestionnaire du crédit, et
- Un (des) gardien(s) du magasin intrants.

A l'aide de ce personnel, le Groupement assurera les fonctions suivantes :

- Fourniture du cadenas et gardiennage permanent du magasin intrants ;
- Bonne tenue du magasin et des fiches de stock intrants ;
- Distribution des intrants et équipements commandés aux producteurs suivant le code de procédure donné en **paragraphe 3.4.** ;
- Tenue au jour le jour des fiches individuelles de distribution d'intrants et d'équipements (FIDI) ;
- Tenue au jour le jour du carnet d'état des sorties journalières d'intrants par Cercle de caution et producteurs individuels ;
- Etablissement des fiches d'engagement individuel des crédits des producteurs ;
- Etablissement des fiches d'engagement du Groupement vis-à-vis de la CNPC-Cameroun.

En contrepartie des crédits qu'il a sollicités et qui lui sont accordés par la CNPC-Cameroun et la SODECOTON, le Groupement :

- Demande et accepte l'appui-conseil du Responsable de la Professionnalisation des Groupements (RPG) et du Responsable Régional de la professionnalisation (RRP) de la structure mixte CNPC-Cameroun/SODECOTON dans la gestion du magasin, intrants, la tenue des documents de gestion et de crédit, le respect des procédures, l'organisation et le fonctionnement interne du Groupement ;
- Accepte les contrôles externes qui seront effectués par les Contrôleurs des Groupements (CG) de la CNPC-Cameroun ou par l'Inspection générale de la SODECOTON concernant les stocks intrants, la tenue des documents de gestion et de crédit, l'utilisation des fonds perçus relatifs à la rémunération des prestations du Groupement, au recouvrement en espèce des crédits CNPC-Cameroun/SODECOTON, aux excédents de pesées Pont bascule.

Les contrôles doivent être impérativement réalisés en présence du Magasinier et du Délégué/Président du Groupement ou de son représentant.

En cas de manquant sans effraction :

Le Groupement sera considéré comme responsable et il lui sera facturé la valeur des manquants qui devra être impérativement réglée lors de la commercialisation du coton graine.

En cas d'effraction avérée :

Les responsables du Groupement déposeront une plainte pour effraction auprès du Commandant de la Brigade de gendarmerie la plus proche. Une copie de la plainte sera envoyée au Chef de région SODECOTON par le biais du Chef de secteur et à l'Administrateur de la CNPC-Cameroun. Le Groupement restera pleinement responsable de l'effraction vis-à-vis de la CNPC-Cameroun.

Une commission composée du Contrôleur des Groupements (CG) de la CNPC-Cameroun et le Président de l'Union de GIC du Secteur sera constituée en vue d'appuyer la plainte du Groupement auprès de la Brigade de gendarmerie.

3.4 – Livraison des intrants et équipements aux producteurs

Les distributions d'intrants et d'équipements aux producteurs se feront par le Magasinier du Groupement et en présence du Chef de Cercle de Caution ou de son représentant, en respectant les procédures suivantes :

1. Les producteurs se présenteront au magasin regroupés par Cercle de caution solidaire.
2. Le Responsable du Cercle de caution assistera obligatoirement, en qualité de témoin, à la distribution des intrants et équipements aux membres de son Cercle. En cas d'impossibilité, il pourra se faire représenter par un membre du cercle.
3. Le Magasinier procédera, à la distribution des intrants en respectant strictement les commandes passées par les cercles de caution. La distribution se fera dans le respect de l'avis technique de l'Agent de suivi des cultures et après ordonnancement (quitus) de sortie d'intrants du Délégué/Président ou de son représentant :

M/Mme N° CNI.....
accepté par l'Assemblée générale du Groupement.

4. Le Groupement déposera les signatures du Délégué et de son représentant auprès de le Responsable Régional de la Professionnalisation (RRP).
5. Le Responsable de Cercle de caution, ou son représentant, contresignera avec le Gestionnaire du crédit et le producteur les Fiches individuelles de distribution d'intrants ou d'équipements et les Fiches de distribution journalière.
6. Le magasin sera ouvert de heure à heure chaque jour.
7. Le gardiennage du magasin intrants sera assuré de 17 h. à 6 h. du matin pendant toute l'année par le Groupement

3.5 – Personnel du GP et rémunération

Le Groupement s'engage à recruter :

- Un Magasinier formé par la Division Professionnalisation.
- un (des) Agent(s) de suivi des cultures formé(s) par la Direction de la Production Agricole SODECOTON.
- Un Gestionnaire de crédit formé par la Division Professionnalisation.

- Un (des) Gardien(s) du magasin intrants.

Les rémunérations (montants et mode de règlement) du Magasinier, des Agents de suivi des cultures et du Gestionnaire de crédit seront définies lors de la signature des contrats de tâcheronnat entre le Groupement et ces derniers.

Le paiement de ce personnel se fera chaque mois par la Caisse du Secteur SODECOTON, sur présentation d'une demande de déblocage de fonds (DDF) émise par le Président du Groupement et visée par le Président de l'Union des GIC du Secteur et qui sera libellée au nom des personnes concernées.

3.6 – Gestion interne du crédit aux producteurs

Les crédits intrants et équipements sont accordés par la CNPC-Cameroun, via l'Union des GIC du Secteur au Groupement par l'intermédiaire de la SODECOTON.

Ce crédit est rétrocédé par le Groupement aux producteurs individuels membres de Cercles de caution solidaires.

Le Groupement s'engage vis-à-vis de la CNPC-Cameroun et de la SODECOTON à gérer en toute transparence et dans le respect des procédures le crédit individuel de ses producteurs.

En fin de campagne agricole et au plus tard le 1^{er} Décembre, une situation individuelle du crédit, par Cercle de caution solidaire et par culture, sera établie ainsi qu'une situation récapitulative pour l'ensemble du Groupement.

En cas de non remboursement des crédits par des producteurs, le Groupement se réserve le droit de porter plainte pour détournement contre ces producteurs.

En cas de négligence ou de malversation avérée du Groupement ou de ses responsables dans la gestion du crédit :

1. La CNPC-Cameroun, via l'Union des GIC du secteur et sur avis technique de la SODECOTON, se réserve le droit de ne plus accorder de crédit aux membres des Groupement qui n'arrivent pas à rembourser le crédit dans le respect des délais requis ;
2. La CNPC-Cameroun, via l'Union des GIC du secteur, se réserve également le droit de porter plainte pour détournement.

3.7 – Reports de stocks d'une campagne sur l'autre

En cas de report de stocks d'intrants agricoles d'une campagne sur l'autre résultant d'une consommation par les producteurs moindre que les commandes passées, le Groupement reste responsable de la sécurité des stocks restants.

Ces stocks seront reconduits pour la campagne agricole suivante et ils seront déduits des nouvelles commandes d'intrants passées à la CNPC-Cameroun par le biais de la SODECOTON.

Lors de l'inventaire des stocks, et dans tous les cas au plus tard le 20 Novembre, il sera procédé à un procès verbal signé entre le Groupement, la CNPC-Cameroun et la SODECOTON déduisant du montant du crédit à rembourser par le Groupement la valeur des stocks résiduels.

3.8 – Engagements techniques du Groupement et de ses membres

Afin d'obtenir la meilleure production possible et de garantir le remboursement du crédit accordé, le Groupement et l'ensemble de ses membres s'engagent à respecter les recommandations techniques de la SODECOTON, à savoir :

1. Choix de parcelles de culture et des assolements ;
2. Regroupement des parcelles, ne serait-ce que par Cercle de caution ;
3. Piquetage des parcelles avant le 10 mai, date de début des semis ;
4. Préservation et protection des bornes et des bandes antiérosives aménagés durant la campagne et durant les campagnes antérieures ;
5. Respect des fiches techniques et des conseils du dispositif d'encadrement de la SODECOTON ;
6. Distribution des semences lorsque les parcelles sont piquetées et chaulées
7. Distribution des engrais aux producteurs qu'une fois les parcelles levées, démarquées et propres.
8. Suivi des consignes liées au traitement insecticide
9. Pratique de la récolte soignée pour l'amélioration de la qualité du coton graine

Le Groupement recrutera un (des) Agent(s) de suivi des cultures qui assurera (ont) le relais de l'encadrement technique SODECOTON (Chef de Zone, Chef de secteur et Chef de Région) en matière de vulgarisation, de conseil technique rapproché et de recensement des données techniques agricoles. Cet agent bénéficiera d'une formation et d'un appui technique rapproché de la SODECOTON.

A la réception du rapport de tournée effectuée par l'encadrement technique de la SODECOTON, les responsables du groupement s'engagent à en informer les producteurs. En cas de problème sérieux signalé, ils s'engagent à prendre les dispositions nécessaires avec les producteurs pour le régler.

3.9 – Commercialisation du coton graine, du soja et dépôt vente des céréales

En contrepartie de l'accès au crédit et à l'appui-conseil donnés par la CNPC-Cameroun et la SODECOTON, le Groupement s'engage :

1. **Concernant le coton et le soja, à :**
 - Vendre la totalité du coton graine et du soja produit à la SODECOTON ;
 - Dénoncer et lutter contre toute fuite de ces produits au sein du Groupement, vers d'autres groupements, villages ou pays voisins ;
 - Dénoncer et lutter contre toute tentative de « coxage » au sein du Groupement.

2. Concernant le maïs, à :

- Mettre en dépôt des sacs de maïs en stock sécurisé dans le magasin du Groupement, en vue de garantir le remboursement du crédit engrais vivriers.
- Rembourser le crédit maïs en espèces avant le 31 mars.

Le Groupement assurera la collecte primaire du coton et du soja (organisation et préparation des marchés) et constituera une équipe d'achat (avec contrôleur qualité, peseur, agent de recouvrement du crédit, peseur, payeur et manœuvres pour les manutentions et chargement sur camion).

4 – Engagements de la CNPC-Cameroun

4.1 - Appui à la professionnalisation du Groupement

La CNPC-Cameroun, par le biais de la structure mixte CNPC-Cameroun/ SODECOTON, appuiera le Groupement en ce qui concerne l'organisation collective, le conseil en gestion, la formation des responsables et du personnel technique du Groupement selon le schéma général suivant :

4.1.1. Appui-conseil

- Au fonctionnement : légalisation, principes de fonctionnement, tenue des Assemblées générales, clarification des situations d'impayés, etc. ;
- A la gestion: lecture de relevé de compte, présentation et validation du budget prévisionnel, bilan de gestion annuel, restitution des comptes, commandes diverses, etc. ;
- Au suivi du stockage des céréales sur préfinancement CNPC-Cameroun et des activités d'alphabétisation et post alphabétisation, etc. ;
- A l'organisation des élections et aux Assemblées générales de prise de décision.

4.2.2. Formation

- Des membres du comité directeur sur la tenue des documents et aux principes de fonctionnement du Groupement ;
- Des responsables des cercles de caution solidaire sur leur rôle ;
- Du comité restreint, du bureau des élections, du comité de gestion, du gestionnaire de crédit, du magasinier, des agents relais, des commissions de crédit, etc.

4.2 – Mise à disposition du crédit intrants et équipements aux Groupements

La CNPC-Cameroun s'engage, via l'Union des GIC du secteur et par l'intermédiaire de la SODECOTON, à mettre à disposition du Groupement, les intrants et matériels à crédit et au comptant commandés, dans le strict respect de la liste bleue jointe en annexe.

Le stock d'intrants et de matériel sera réceptionné par les responsables du Groupement à l'occasion d'un inventaire global de début de campagne agricole.

4.3 – Appui à la gestion des stocks et des crédits intrants

La CNPC-Cameroun à travers la structure mixte CNPC-Cameroun/SODECOTON appuiera et formera le personnel des groupements en charge de la gestion des intrants et du crédit (Magasinier, Gestionnaire de crédit) par le biais du Responsable Professionnalisation des Groupements du Secteur.

La CNPC-Cameroun à travers la structure mixte CNPC-Cameroun/ SODECOTON mettra en place les documents de gestion au niveau des Groupements (fiche de stock, carnets, imprimés, cahier, etc.).

Lors de leurs tournées sur le terrain, les responsables de la CNPC-Cameroun (Responsables professionnalisation des groupements, Contrôleurs des groupements) et de la SODECOTON (Responsable régional professionnalisation) fourniront les conseils pour la bonne tenue des documents de gestion et la distribution des intrants.

La CNPC-Cameroun à travers la structure mixte CNPC-Cameroun/ SODECOTON formera le Magasinier du groupement aux procédures et à la tenue des documents de gestion des stocks, ainsi qu'à la bonne organisation du magasin intrants. Elle assurera sa formation continue à la tenue des documents de suivi individuel des producteurs qui permettent d'établir en fin de campagne la situation individuelle de consommation d'intrants.

La CNPC-Cameroun à travers la structure mixte CNPC-Cameroun/ SODECOTON s'engagent à former le Gestionnaire de crédits du groupement aux procédures de contrôle et à l'établissement des situations de crédits accordés au titre de la campagne agricole : individuelles, par cercle de caution et pour l'ensemble du groupement. La CNPC-Cameroun assurera sa formation continue à la tenue des documents.

En cas de problème grave constaté dans l'exercice des fonctions du Magasinier ou du Gestionnaire de crédit, la CNPC-Cameroun notifiera le Groupement en vue d'un contrôle et éventuellement de son remplacement.

4.4 – Contrôle des stocks et du crédit

La CNPC-Cameroun s'assurera, par des contrôles réguliers réalisés par les Contrôleurs des groupements, du respect par le Magasinier, de l'ensemble des procédures de gestion des intrants. Elle veillera notamment à la bonne tenue des documents de gestion des stocks.

La CNPC-Cameroun s'assurera du bon établissement des situations individuelles de crédit vis-à-vis du groupement et de la remise en Assemblée générale du Groupement du document « Engagement individuel ».

4.5- Etablissement des situations de crédits

La CNPC-Cameroun à travers la structure mixte CNPC-Cameroun/ SODECOTON appuiera le Gestionnaire du groupement dans l'établissement des situations des engagements individuels des producteurs vis-à-vis du Groupement et des engagements collectifs vis-à-vis de la CNPC-Cameroun.

4.6 – Autres Contrôles

Dans le cadre du présent contrat, et en contrepartie du financement du crédit intrants et équipement demandé par le Groupement et qu'elle lui accorde, la CNPC-Cameroun se réserve le droit d'envoyer des missions de contrôle de procédures, de comptes et de stocks au sein du Groupement dans les cas suivants :

- A la demande de membres du Groupement sur la base d'une lettre avec signature d'un minimum de 20 membres ;
- Sur demande de la SODECOTON dans le cadre du présent contrat ;
- Systématiquement, avant le démarrage de la campagne de commercialisation coton et soja et à la fin de cette dernière, afin de vérifier le bon respect des procédures de gestion, la véracité des situations de crédit et de remboursement, les stocks, la juste rémunération des agents du groupement conformément au contrat de tâcheronnat, l'utilisation des fonds résultant des excès de poids au Pont bascule, la qualité de la restitution des comptes en Assemblée générale du Groupement.

5 - Engagements de la SODECOTON

5.1 – Logistique intrants et équipements

La SODECOTON s'engage dans la limite de ses possibilités, à mettre en place les intrants et équipements commandés par le Groupement dans le cadre du plan de campagne.

Lorsque l'état des pistes ne permet pas une mise en place des intrants au village, la SODECOTON prendra en charge le coût du transport rendu village sur la base de sa grille de facturation.

Lorsqu'un magasin intrants appartenant à la SODECOTON existe dans le village, elle le met à la disposition du Groupement à titre gracieux.

La SODECOTON s'engage à assurer l'entretien des magasins dont elle est propriétaire.

5.2 – Appui technique à la production (coton et cultures d'assolement)

5.2.1. Vulgarisation agricole, Formation et Appui technique

La SODECOTON mettra à la disposition du Groupement toute l'assistance technique nécessaire à la bonne conduite et à la réussite du Programme agricole du Groupement

par le biais de son dispositif d'encadrement agricole : Chef de zone, Chef de secteur et Chef de région.

La SODECOTON formera les Agents de suivi des cultures du Groupement sur les fiches techniques des cultures, les innovations techniques vulgarisées, le contrôle et le suivi statistiques des parcelles cultivées, l'utilisation de des intrants et les règles d'hygiène et de sécurité. Ces agents ne pourront être mis en place pour la campagne agricole que s'ils ont réussi les tests d'aptitude SODECOTON.

La SODECOTON assurera le conseil technique aux producteurs par un suivi régulier sur le terrain réalisé par le Chef de Zone et le Chef de secteur, la publication de journaux, des émissions radio, des réunions d'information et des démonstrations.

La SODECOTON, par l'intermédiaire du Chef de zone (CDZ), évaluera de façon approfondie les réalisations agricoles du groupement au moins une fois par quinzaine. Cela inclut le suivi de l'ensemble des parcelles en culture intensive.

A l'issue de cette visite approfondie, le Chef de zone fera un compte rendu oral aux responsables du groupement, en présence de l'Agent de suivi des cultures et, si possible, des Responsables des cercles de caution et d'autres producteurs. Il remettra au Délégué/Président un rapport simplifié établi sur manifold (une page), reprenant les principales remarques et conseils.

5.2.2. Contrôles

En cas d'anomalie constatée dans la réalisation du Programme agricole, il revient au Chef de région de saisir le Corps de contrôle de la CNPC-Cameroun pour qu'il conduise les investigations nécessaires. Une copie du rapport de contrôle sera adressée à la Direction Exécutive (DE) de la CNPC-Cameroun.

La SODECOTON à travers le Chef de Zone (CDZ) est chargée d'effectuer trois (3) inventaires, en début de campagne, en fin de semis et en fin de campagne en vue de l'établissement des procès verbaux (PV) qui permettront de ressortir le montant de la facture par GP. Le CDZ peut également à la demande du GP participer à un inventaire pour contrôle des mises en place.

5.2.3. Recouvrement des crédits

La SODECOTON assurera pour le compte de la CNPC-Cameroun, le recouvrement des montants dus au titre des crédits remboursables à la source pour le coton, le soja, les produits vétérinaires et le matériel agricole (crédit court terme). Quant aux crédits maïs, la structure mixte CNPC-Cameroun/SODECOTON assurera le recouvrement en espèces selon une procédure qui sera définie.

5.2.4. Rémunération du groupement

La SODECOTON rémunérera le Groupement sur la base du barème prévu et aux périodes de paiement prévues. Elle assurera mensuellement le suivi des opérations

comptables générées par l'application du Contrat de partenariat et communiquera chaque mois au Groupement une situation précise des opérations passées.

5.2.5. Commercialisation du coton et du soja

La SODECOTON formera les membres du Groupement candidats pour la constitution de l'équipe d'achat coton et soja. Elle notera leurs capacités. Ceux qui auront réussi au test deviendront membres de l'équipe d'achat du village. Un minimum de 5 (cinq) candidats admis au test final est indispensable pour que le Groupement obtienne l'agrément de commercialisation.

La SODECOTON, en concertation étroite avec l'Union des Gic du secteur, élaborera le calendrier précis d'évacuation du coton et du soja.

Deux semaines à l'avance, la SODECOTON informera par écrit les responsables du Groupement et le Président de l'Union des Gic du secteur de la date prévue pour le début des évacuations.

5.2.6. Suivi des crédits

La SODECOTON émettra les documents de « Crédits productivité » prenant en compte les montants globaux à payer par le Groupement et par culture. Un premier décompte sera émis en août et un deuxième en novembre. En décembre, la SODECOTON émettra l'« Engagement Groupement » qui précisera les montants des crédits productivité et des autres crédits dus par le GP (Crédits CT, CITAT, arriérés etc.).

6 – Information générale des membres du Groupement

La CNPC-Cameroun et la SODECOTON s'engagent à expliquer le contenu de ce contrat à l'ensemble des producteurs du Groupement lors d'une réunion en Assemblée générale qui se tiendra avant le 31 mai 2017.

7- Gestion de chaque campagne agricole

Chaque campagne agricole sera gérée à travers les documents ci-après en annexe à ce présent contrat :

- L'engagement du GP pour la campagne agricole ;
- L'engagement individuel des producteurs ;
- La liste bleue des producteurs ;
- Plans de campagne ;
- Fiches de constitution des cercles de cautions ;

8- Résiliation du contrat.

- Si l'une des parties décide de résilier la présente convention, elle devra le notifier aux autres parties, par écrit deux (05) mois d'avance.
- Toutefois la CNPC-C et la SODECOTON se garde le droit de résilier la présente convention sans délai en cas de mauvaise gestion ou de malversations financières dûment constatées au sein du groupement.

9- Gestion des litiges

En cas de litiges du au non respect de ce contrat, le Groupement, la CNPC-Cameroun et la SODECOTON s'engagent à résoudre leurs différends à travers les tribunaux camerounais territorialement compétents.

10- Valeur juridique du présent contrat

Le présent contrat après signature des différentes parties sera authentifié par un juriste et sera valable pour la période conclue.

Fait à, le/...../.....

Pour le groupement
Le Président/Délégué
du Groupement

Pour la CNPC-C
Le Président de l'UGPCV

Pour le SODECOTON
Le Chef de secteur

M..... M. M.

Ventilation : GP/CDS/P, Union/RRP

8.9 Annexes au contrat tripartite Groupement/CNPC-C/SDCC, campagne 2008_09

Région :

Secteur :

Annexes au contrat tripartite GROUPEMENT/OPCC-GIE/SODECOTON Campagne de commercialisation 2008/2009

La SODECOTON, l'OPCC-GIE et le GP de, s'engagent à respecter ce qui est écrit dans ce complément au contrat tripartite 2008/2009 pour réussir une bonne campagne de commercialisation.

1. PRÉPARATION DE LA COMMERCIALISATION

La commercialisation commence bien avant l'arrivée des caisses au village, par plusieurs opérations qui engagent les trois acteurs : Groupement, OPCC-GIE, Sodécoton

1.1 Obligations du Groupement :

Qualité du coton graine : Les producteurs sont totalement responsables de la qualité du coton graine récolté dans leurs parcelles. Ils doivent s'assurer de la qualité du travail de leur main d'œuvre, qu'elle soit familiale ou salariée. L'utilisation des sacs en polypropylène pour la récolte du coton graine doit être strictement interdite. Ils doivent par conséquent bien appliquer les techniques de la récolte soignée.

Présélection, formation et sélection de l'équipe d'achat : les responsables du GP proposeront des candidats (hommes ou femmes) honnêtes et pouvant bien faire le travail. Ceux qui auront réussi au test seront présentés à l'Assemblée Générale pour sélectionner les membres de l'équipe d'achat du village. La liste des membres de l'équipe d'achat retenus par l'AG figure au *tableau 1 des dispositions spécifiques*. Les groupements qui n'auront pu constituer une équipe d'achat devront soit demander le concours d'une équipe d'achat OPCC-GIE soit négocier avec un groupement voisin le concours de son équipe d'achat. Il reviendra au groupement demandeur de rémunérer cette équipe d'achat.

Afin d'éviter tout risque de contestation sans fondement, le Gestionnaire du crédit du groupement fera partie intégrante de l'équipe d'achat.

L'équipe d'achat qui a été retenue doit être prête et avoir le matériel nécessaire 3 jours avant le début des opérations : 2 caleulottes, 10 bics, 10 cahiers de 32 pages et 2 règles

Définition des points d'achat : Les responsables du GP proposeront un ou plusieurs points d'achat de taille suffisante et accessibles, selon les critères établis par la Sodécoton. Les emplacements retenus, après acceptation par le CDS/CDZ, seront indiqués au *tableau 2 des dispositions spécifiques*.

Les points d'achat seront préparés avec les agents DPA de façon à faciliter le travail et éviter les incendies : danki couvert et fermé sur 3 côtés, couloir d'amenée des bâches bien délimité par des sekos, séparation des caisses et des tas de coton ...

1.2 Obligations de l'OPCC-GIE :

Qualité du coton graine : L'OPCC-GIE s'engage à assurer le travail d'information et communication au niveau des techniques de récolte soignée et du classement du coton graine en trois qualités distinctes. Elle fournira des sacs de récolte en coton pour cession aux groupements de coton selon le modèle retenu par les producteurs.

1.3 Obligations de la SODECOTON :

Qualité du coton graine : La SODECOTON s'engage également à assurer le travail d'information et communication au niveau des techniques de récolte soignée et du classement du coton graine en trois qualités distinctes.

Présélection, formation et sélection de l'équipe d'achat : la Sodécoton formera les candidats proposés par les groupements au poste de membre d'équipe d'achat et notera leurs capacités.

Programme des évacuations : La Sodécoton s'engage à établir le calendrier des évacuations en concertation avec les responsables des groupements et de l'OPCC-GIE. Deux semaines à l'avance, la Sodécoton informera par écrit les responsables du GP et le représentant secteur OPCC-GIE, de la date prévue pour le début des évacuations.

Matériel de commercialisation :

- La SDCC prêterait gratuitement les bâches et tapis de sol avant le début des achats
- La bascule pourrait être louée (250 f/tonne); une fiche de suivi « gestion bascule » sera établie à la fin de chaque tour d'achat. Elle sera remplie par l'équipe d'achat et transmise à la région par le CDS.
- La SDCC fournira les imprimés nécessaires qu'elle fera payer au GP selon les tarifs en vigueur.

2. DÉROULEMENT DES ACHATS

Ces opérations sont sous la responsabilité du GP. La Sodécoton fournit l'appui technique nécessaire et assure un contrôle régulier pour que tout se passe au mieux. Les responsables du GP, aidés par le CDZ et l'ASO, **organiseront une AG avant le début de la commercialisation** pour bien se préparer. C'est là qu'ils décideront de tous les points qui figurent dans les tableaux annexés à ce contrat et notamment du gardiennage (*tableau 9 des dispositions spécifiques*) et de la possibilité d'avoir un chef de point d'achat (*voir tableau 6 des dispositions spécifiques*).

2.1 Obligations du groupement :

Pesées : Lorsque les responsables du GP sont prévenus de la date du marché, ils en informent les producteurs pour qu'ils sortent les tas de coton sur la place en vue de la pesée. Les bâches seront confectionnées sur le point d'achat et feront moins de 70 kg.

Le marché commencera chaque matin à 7h et aura lieu tous les jours de la semaine (même le dimanche) sauf pour les fêtes de : Noël, 1^{er} janvier, 11 février, Ramadan, Tabaski et Pâques. Ces jours là ne seront pas travaillés.

L'équipe d'achat suivra les procédures de pesée et d'achat prévues par la SDCC et en particulier :

- peser uniquement les bâches qui ont une fiche de pesée
- retenir une tare de 2 kg par bâche dont la pesée est inférieure ou égale à 70 kg (une seule tare cette année). Un maximum de 75 kg par pesée sera toléré.
- remplir correctement les documents et faire vérifier le bordereau d'achat par un responsable du GP.
- la présence du chef de cercle de caution est obligatoire lors de la pesée du coton graine issu de son cercle.

Caisses planteurs : Une caisse planteur est remplie par le coton d'un seul producteur : pour cela il doit faire au moins 7,5t de coton-graine et avoir cultivé au moins 3 ha de coton en 2008. La liste indicative des producteurs qui peuvent avoir une caisse est définie par la SDCC et le GP à partir du cahier de culture. Cette liste figure sur le *tableau 5 des dispositions spécifiques*.

Une tare de 2% du poids net sera prélevée sur chaque caisse.

Chargement : il se fera rapidement et si possible à raison de 2 caisses par jour. Cette disposition sera obligatoire à partir du 1^{er} janvier 2008 pour les GP qui évacuent plus de 100 tonnes.

La présence de corps étrangers dans les caisses est de la responsabilité du chef de point d'achat et du responsable de l'équipe de manœuvres.

Chaque cercle de caution fournira 2 manœuvres pour le chargement.

Evacuations : le GP contrôlera le poids pont bascule de ses attelages. Pour cela un membre du GP accompagnera le convoi et aura accès à la cabine du camion. Les frais d'hébergement de l'accompagnateur sont à la charge du GP. A la livraison du coton graine au pont bascule de l'usine d'égrenage, l'accompagnateur doit vérifier la présence des roues de secours et que le remplissage des réservoirs est bien effectué avant la pesée.

Classement du coton graine : Le groupement veillera à charger les caisses avec du coton homogène. Pour aider les producteurs à présenter un coton graine de bonne qualité sur les marchés, la Sodecoton et l'OPCC-GIE encouragent le GP à choisir une commission de chargement des caisses. Elle aura pour rôle de regrouper le coton ayant le même aspect pour être chargé dans la même caisse. Cette commission du GP pourra bénéficier des conseils techniques du CDZ/CDS. La liste des membres de cette commission figure au *tableau 7 des dispositions spécifiques*.

2.2 Obligations de l'OPCC-GIE :

Pesées : lorsque le coton graine arrive à l'usine d'égrenage la pesée au pont bascule est réalisée en présence d'un représentant OPCC-GIE afin de s'assurer de l'exactitude de la pesée.

2.3 Obligations de la SODECOTON :

Pesées : Le chef de zone doit remettre au groupement les fiches de pesées dûment remplies et signées.

Chargement du coton graine : la Sodecoton prend en charge les frais de chargement. Le calcul du montant dû se fait en fonction du barème prévu en 4.2 sur les obligations de la Sodecoton. Le règlement est réalisé au choix du GP : par préfinancement GP ou par le CDZ et indiqué *au tableau 4 des dispositions spécifiques*.

Classement du coton graine : Il se fera caisse par caisse à l'usine d'égrenage par le classeur Sodecoton. L'accompagnateur du groupement assiste et doit avoir connaissance dans un délai de 24 heures après livraison du coton graine en usine du résultat du classement du coton graine et du prix d'achat du coton graine contenu dans la caisse classée. Une fiche de classement est remise avec la copie du bordereau d'évacuation rempli.

3. PAIEMENT DU COTON

Pour la campagne 2008/2009, le prix du coton a été fixé selon des catégories identifiées à :

1. Coton graine 1^{er} choix, blanc, trié, exempt de tout corps étranger et de coton tâché, souillé ou parasité (quartiers d'orange) : **185 f.CFA**
2. Coton graine 2^{ème} choix, blanc ou légèrement teinté, **non trié** mais sans corps étrangers : **175 f.CFA**
3. Coton graine 3^{ème} choix correspondant aux écarts de triage (coton momifié, jaune, coloré, mais sans corps étrangers) : **160 f. CFA**

3.1 Obligations du Groupement :

- dès la fin des opérations d'achat :

Les membres de l'équipe d'achat établiront les situations et remettront les documents au CDZ aussi vite que possible. Les documents de pesée, remboursement... seront gardés pendant au moins un an en vue d'éventuels contrôles. La transmission des documents d'achats du groupement vers le chef de zone se fera à l'aide de bordereau de transmission avec dates et décharges.

Les responsables du GP organiseront une AG pour faire un bilan et trouver les moyens de régler les problèmes des cercles défaillants dans le respect des procédures établies et notamment en ce qui concerne la caution solidaire.

La caution solidaire d'un cercle de caution ne s'appliquera qu'aux seuls membres du cercle de caution. Les impayés provenant d'un autre cercle de caution devront être résorbés par la caution de 2^{ème} niveau que doit assurer le groupement. L'application de cette règle est obligatoire.

- au moment du paiement :

Le règlement des montants dus à chacun devra se faire de manière claire et honnête ;

La distribution de l'argent par les responsables du GP aux CCC et ensuite des CCC à chaque producteur se fera le jour même de l'arrivée de l'argent au village. L'argent sera remis aux CCC en présence d'un membre du cercle et contre signature ;

Les responsables du GP assureront le recouvrement des crédits intrants, CT et GP/membres ainsi que le règlement des produits tels que pesticides, alibet/nutribet ... mais ne feront aucun autre prélèvement (sauf retenues pour la coupe des vieux cotonniers).

Les équipes d'achat et les délégués des groupements n'ont aucune compétence pour assurer la collecte des impôts.

3.2 Obligations de la SODECOTON

- Au fur et à mesure du déroulement des achats, le chef de zone appuiera les groupements pour l'établissement des documents de recouvrement du crédit et de paiement du coton graine.

- les paysans seront payés dans un délai de deux semaines à partir du moment où l'équipe d'achat aura remis les documents de commercialisation, correctement remplis, au CDZ ;

- le paiement se fera généralement à la fin du tour d'achat mais les GP peuvent demander à être payés toutes les semaines ou même chaque 3 jours avec les décomptes correspondants.

4. REMUNERATION

4.1 Obligations du Groupement :

Le groupement rémunère les services rendus par les équipes d'achat sur la base de :

- 1 200 f/tonne de coton commercialisé pour les équipes d'achat qui ne redistribuent pas l'excédent pont bascule aux producteurs.

- 1 400 f/tonne de coton commercialisé pour les équipes d'achat qui redistribuent les excédents pont bascule aux producteurs.

4.2 Obligations de la SODECOTON :

La SDCC paye les services rendus par le GP pendant la commercialisation de la façon suivante :

- 1,75 f/kg de coton commercialisé pour les GP agréés qui n'ont pas de chef de point d'achat
- 1,75 à 2 f/kg de coton commercialisé pour les GP agréés avec un chef de point d'achat

Avec cet argent le GP payera l'équipe d'achat et le chef de point d'achat.

A cela peut s'ajouter une prime variable de :

- 0 à 0,5 f/kg en fonction du poids moyen de coton chargé par caisse (calculé par ordinateur)
- 0 à 0,5 f/kg en fonction de l'efficacité du GP pendant la commercialisation. Le niveau de cette prime est lié aux lettres d'avertissement reçus par le GP en cas de négligence ou manque d'organisation.
- Les frais de chargement sont payés à raison de : 1800 f/tonne pour les caisses de 9 t et plus, 1400 f/tonne pour les caisses de 8 à 9t, 700 f/tonne pour les caisses de moins de 8t.
- Le GP touchera aussi 100 f par sac d'engrais et d'urée consommé en campagne agricole sur coton et vivriers. Pour obtenir cette prime de gestion des engrais, les crédits intrants (coton et vivriers) doivent être remboursés à 100%.
- Si tout s'est bien passé pendant les achats, il y aura des excédents pont bascule (tares prises sur les bâches et les caisses planteurs). Leur valeur est calculée sur la base du prix moyen d'achat de coton graine et versés dans les comptes GP en fin de campagne. En cas de manquant global, il sera déduit des comptes GP.

5. RÈGLEMENT DES PROBLEMES

■ Organisation du travail

Si les conditions définies pour la préparation du marché (papeterie, sortie d'au moins 200 bâches) ne sont pas remplies, la SDCC peut reporter la date prévue pour le début du marché.

Les défauts d'organisation dans le travail entraînant des pertes de temps donneront lieu à des avertissements. Ils entraîneront une diminution de la rémunération versée au GP. En cas d'avertissements répétés la SDCC peut suspendre les évacuations.

Le matériel prêté par la SDCC devra être remis en bon état ; les dégradations et manquants seront à la charge du GP.

■ Qualité du coton

Le coton chargé dans les caisses doit être sec et ne contenir aucun élément étranger : cailloux, pièces métalliques, plastic et fibres PP ...

La SDCC peut refuser d'acheter du coton mouillé ou encore transporté dans des sacs plastiques ou PP (parce que dans ce cas elle ne pourra pas vendre la fibre).

En cas de dégâts à l'usine ou arrêt pour cause de coton non conforme, la SDCC pourra facturer des dommages au GP.

■ Malversations

En cas de faux bordereaux en cours d'évacuation, l'équipe sera immédiatement remplacée par une équipe OPCC-GIE dont le coût sera facturé au GP. Si la malversation est prouvée et que les producteurs ne déposent pas plainte contre les personnes responsables, la SDCC se propose de suspendre l'agrément et le crédit intrants pour la campagne agricole suivante.

Les manquants sur les deux derniers attelages ou un manquant global sur le tour d'achat annuleront la rémunération de l'équipe d'achat et provoqueront une suspension du crédit engrais vivriers en 2009/2010.

6. PREPARATION DE LA CAMPAGNE AGRICOLE

Les responsables du GP s'engagent à organiser le déchargement des intrants lorsqu'ils arrivent au village, sachant que la SDCC payera ce service (15 f/sac). De même ils réceptionneront et organiseront la répartition de la commande aliment du bétail.

Formation des cercles de caution : les producteurs s'engagent à former les cercles avant le 30/01/2009 afin de produire les plans de campagne et les bons de commande à temps.

Plan de campagne provisoire: Le GP s'engage à fournir un projet de plan de campagne avant le 31/12/2008 sur lequel se basera la Sodécoton pour les mises en place.

Noms, Signatures et Dates

Le Président ou le Délégué du GP

Le Chef de Secteur SDCC

Le Représentant Secteur

Le Chef de Point d'Achat

Document à faire en 3 exemplaires : 1 pour le G.P - 1 pour le CDS et 1 pour l'A.R.

Annexes au contrat tripartite GROUPEMENT/OPCC-GIE/SODECOTON
Campagne de commercialisation 2008/2009
DISPOSITIONS SPECIFIQUES

GP DE : _____ **SECTEUR DE :** _____

Lors de notre AG préparatoire de la campagne de commercialisation nous avons pris les décisions suivantes :

1 - MEMBRES DE L'EQUIPE D'ACHAT DE : _____

	Nom et prénom	Date et lieu de naissance	N° CNI	Signature du membre (1)
Peseur				
				
Secrétaire				
				
Gestionnaire de crédit				
				
Chef manœuvre				
				

(1) Par cette signature le membre s'engage sur l'honneur à être intègre dans sa fonction sous peine de poursuites judiciaires.

2 - POINTS D'ACHAT RETENUS PAR LE GP EN ACCORD AVEC SODECOTON

Conformément aux annexes du contrat, concernant la mise en place des points d'achat, nous retenons :

	1	2	3
1. Localisation précise du point d'achat			
			
2. Tonnage approximatif à évacuer			
			

3 - LE GROUPEMENT :

Deux options peuvent être envisagées par le groupement :

1. Utilisation de sa propre bascule
2. Location d'une bascule

Notre groupement opte pour l'option n° :

4 - REGLEMENT DES FRAIS DE CHARGEMENT DES CAISSES

Deux options peuvent être envisagées par le groupement :

1. Le Groupement préfinance les frais de chargement
2. Le Chef de zone règle les frais de chargement au fur et à mesure

Notre groupement opte pour l'option n° :

5 - LISTE INDICATIVE DES BENEFICIAIRES CAISSES PLANTEUR

Nom et Prénom	Cercle de Cauton	Surf. Cahier planteur	Production estimée en tonnes	Nbre de caisses attendues

L'attribution définitive d'une caisse se fera en fonction de l'évaluation du tonnage du tas de coton par le CDZ.

6 - CHEF DE POINT D'ACHAT

Nom et Prénom	N°CNI	Fonction dans le GP	Signature

7 – COMMISSION DE CHARGEMENT DU GP POUR REGROUPEMENT DE LOTS HOMOGENES

Nom et Prénom	N°CNI	Signature

8 - DISPOSITIONS PREVUES PAR LE GP EN CAS DE MALVERSATIONS :

L'Assemblée générale a décidé :

.....

.....

.....

.....

.....

9 - DISPOSITIONS PRISES POUR LE GARDIENNAGE

Nom et Prénom des gardiens	N°CNI	Fonction *	Salaire	Signature

* Gardien de nuit, Gardien de jour.

10 - TYPES DE CONTRAT DE COMMERCIALISATION 2008-2009:

1. propre équipe d'achat (agrément total)	2. Equipe d'achat OPCC- GIE (agrément partiel)	3. Equipe d'achat du Groupement de : (agrément partiel)

Cocher en dessous de l'option choisie (En cas d'agrément total, le CDS rayera les mentions inutiles (options 2 et 3). En cas d'agrément partiel, l'AG du groupement choisira l'option 2 ou 3).

Nous les membres du GP de, secteur,
nous nous engageons à respecter le contenu de l'annexe au contrat tripartite concernant la
commercialisation 2008/2009.

Noms, Signatures et Dates

Le Président ou le Délégué du GP

Le Chef de Secteur SDCC

Le Représentant Secteur

Le Chef de Point d'Achat

Document à faire en 3 exemplaires : 1 pour le G.P - 1 pour le CDS et 1 pour l'A.R.

8.10 Engagements respectifs dans l'accord tripartite et triennal

En matière de gestion, les règles s'imposant aux GP sont :

- La taille minimale de constitution : il faut au minimum 50 ha de coton pour l'ensemble des membres ;
- Tout producteur, pour bénéficier du crédit intrant, doit être membre d'un CC, de 5 à 10 membres hors cas particuliers ;
- Un producteur peut, sous condition, prétendre à remplir une caisse de camion pour pesée directe à l'usine d'égrenage (sans passer par la commercialisation au niveau du village) ;
- Tout producteur s'engage à respecter les itinéraires techniques recommandés ;
- Le GP est responsable des stocks d'intrants déposés dans son magasin et nomme un magasinier, un gestionnaire de crédit et un ou des gardiens pour appliquer les règles explicitées dans la livraison et la distribution des intrants et équipements aux producteurs ;
- Les GP sont responsables des reports de stocks d'une campagne à une autre, car les producteurs remboursent seulement les intrants effectivement pris ;

En matière d'encadrement technique, les GP doivent recruter un ou des agents de suivi des cultures, à former par la SDCC pour amener tous les producteurs à respecter les recommandations techniques de cette dernière. Ces recommandations touchent au piquetage des parcelles, aux périodes de distribution des semences et des engrais et au respect des consignes de traitement insecticide et de récolte soignée. Un élément notable est la préservation et la protection des bandes anti-érosives aménagées.

En matière de commercialisation, les modalités pratiques font l'objet d'une annexe à l'accord tripartite et triennal mentionné précédemment, mais pouvant être actualisées annuellement (annexe 8.9). Les GP ont été concernés par le CG, le soja et le maïs, même si la commercialisation de ces deux dernières espèces tend à se résorber. Les producteurs sont tenus de vendre la totalité du CG produit à la SDCC, de dénoncer et de lutter contre les fuites de ces produits hors de leurs GP mais aussi contre la pratique de "coxage"³². Pour le maïs, il est commercialisé pour permettre de rembourser en espèce, avant le 31 mars, les intrants acquis pour cette culture.

Les engagements de la CNPC-C concernent :

- L'appui à la professionnalisation des GP de concert avec la SDCC à travers le conseil et la formation ;
- La mise à disposition des intrants et des équipements à fournir à crédit par l'intermédiaire de la SDCC ;
- L'appui dans la gestion des stocks et des crédits.

Dans le fonctionnement de la CV coton, le Cameroun présente la particularité que les intrants et équipements sont propriétés de la CNPC-C et accordés à crédit aux GP par l'intermédiaire de la SDCC. Cela diffère du cas fréquent où ce sont les sociétés cotonnières qui en sont propriétaires.

Pour ce qui concerne la SDCC, en dehors de l'obligation d'appui technique à la production selon des modalités précisées de formation et de contrôle, il convient de noter qu'elle doit :

- mettre en place les intrants dans les villages selon les commandes du plan de campagne, y compris en mettant en œuvre des transports spéciaux quand l'état des pistes rend possible la mise en place ;
- recouvrer les montants des crédits pour le compte de la CNPC-C, touchant aux intrants sur le coton et soja, aux produits vétérinaires et au matériel agricole, mais aussi au recouvrement en nature des crédits alloués pour le maïs.

³² c'est-à-dire confier à d'autres producteurs la commercialisation d'une partie de sa production ou accepter de commercialiser le CG issu des productions d'autres producteurs.

8.11 Proportions des GP intégrant des femmes ou des jeunes dans leurs comités

Région	Part des GP intégrant dans leurs bureaux	
	Femmes	Jeunes*
Garoua	8.6%	61.6%
Guider	8.7%	76.3%
Kaele	13.5%	37.9%
Maroua_1	38.2%	77.9%
Maroua_2	14.0%	72.6%
Mayo_G	10.6%	33.1%
Ngong	4.2%	100.0%
Tchili	10.5%	100.0%
Toubo	2.9%	98.8%
Total général	11.9%	73.0%

* âgés de 35 ans au plus

8.12 Liste des documents tenus dans les GP

Documents à caractère institutionnels

- Certificat d'inscription officielle du GP
- Statut déposé du GP

Documents relatifs au plan de campagne

- Fiche annuelle de constitution d'un CC avec indication des superficies en coton, en maïs et en soja pour bénéficier des crédits intrants
- Liste bleue des producteurs éligibles aux crédits intrants
- Fiche de synthèse du plan de campagne du GP avec détail par CC

Documents de distribution et de gestion des intrants

- Quitus de contrôle des surfaces semées en coton pour donner droit à prendre livraison des intrants au magasin
- Quitus de contrôle global des surfaces semées en maïs pour donner droit à livraison d'engrais
- Registre des producteurs avec inscription des crédits pris et des remboursements par type de crédit
- Cahier de caisse
- Fiche de synthèse des crédits intrants garantis par chaque CC
- Fiche de synthèse des crédits intrants garantis par le GP avec détail pour tous les CC constituants
- Cahier de mouvements des stocks du magasin des intrants

Documents relatifs à la commercialisation du CG

- Cahier d'inscription des pesées du CG du point d'achat du CG
- Bordereau d'achat par producteur accompagné d'une fiche de pesée
- Fiche de suivi des pesées du CG à l'usine au fur et à mesure des évacuations, avec indication des différences de poids avec les pesées au village
- Cahier d'engagement et de remboursement individuel des crédits intrants
- Fiche individuelle de paiement des producteurs après déduction du remboursement des crédits intrants
- Fiche de paiement par CC
- Fiche de décompte des coûts de traitements insecticides établie par les agents de suivi
- Fiche de suivi des réalisations des traitements insecticides chez les producteurs

Documents de suivi du compte à la SDCC

- Relevé chronologique du compte du GP logé à la SDCC avec indication des frais de gestion et des produits financiers
- Relevé annuel du compte du GP logé à la SDCC avec indication de tous les mouvements

Documents relatifs aux décisions par AG

- Procès-verbal d'Assemblée générale (AG) du GP, ici relatif à la décision de mobiliser la caution de deuxième niveau pour suppléer à l'incapacité des certains CC de rembourser tous leurs crédits
- Budget prévisionnel du GP avec équilibre des emplois et ressources

8.13 Situation des comptes des GP logés à la SDCC en février 2019

Région	Nombre de GP			GP ayant comptes logés à la SDCC					GP à bilan lu en AG
	reconnus	à compte à SDCC	à compte extérieur	GP créditeurs	Montant créditeur	GP débiteurs	% GP dédébiteur	Montant débit	
Maroua 1	253	253	0	188	472 330 167	65	25.7	38 410 786	152
Maroua 2	251	251	0	203	322 243 746	48	19.1	26 178 678	187
Kaélé	208	208	0	164	151 642 896	44	21.2	118 298 030	101
Tchatibali	189	189	0	139	177 946 522	50	26.5	23 072 417	92
Guider	274	274	0	222	166 333 660	52	19.0	30 935 380	274
Garoua	310	310	0	166	151 949 740	144	46.5	65 014 592	282
Ngong	255	255	12	134	133 352 506	121	47.5	48 548 822	166
Mayo Galké	155	155	0	109	66 907 810	46	29.7	24 850 742	155
Toubo	172	172	0	100	222 056 676	72	41.9	111 953 185	89
Total	2 067	2 067	12	1 425	1 864 763 723	642	31.1	487 262 632	1 498

8.14 Evolution du nombre de producteurs selon la taille de leur sole cotonnière

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Nombre de producteurs de coton	206 123	165 719	208 776	226 491	204 302	194 249	170 416	152 612	158 211
dont nombre de productrices			17 810	27 856	28 618	30 143	24 309	19 466	22 905
Nombre d'exploitations concernées	206 123	165 719	208 776	226 491	204 302	194 249	170 416	152 612	158 211
dont nombre d'exploitations avec productrices			17 810	27 856	28 618	30 143	24 309	19 466	22 905
Nombre de producteurs à au moins 5 ha de coton	1 247	2 587	4 632	5 605	4 363	5 984	6 837	7 800	9 588
% du total	0.6	1.6	2.2	2.5	2.1	3.1	4.0	5.1	6.1
Nombre de producteurs ayant au plus 5 ha de coton	6 654	8 469	15 107	18 155	15 461	16 129	12 116	12 293	16 244
% du total	3.2	5.1	7.2	8.0	7.6	8.3	7.1	8.1	10.3
Nombre de producteurs ayant au plus 2,5 ha de coton	24 149	25 821	36 138	37 130	33 980	32 626	29 139	25 444	30 659
% du total	11.7	15.6	17.3	16.4	16.6	16.8	17.1	16.7	19.4
Nombre de producteurs ayant au plus 1,0 ha de coton	58 220	48 184	61 878	66 857	59 391	55 853	50 206	43 262	48 471
% du total	28.2	29.1	29.6	29.5	29.1	28.8	29.5	28.3	30.6
Nombre de producteurs ayant au plus 0,5 ha de coton	115 853	80 658	91 021	98 744	91 107	83 657	72 118	63 813	53 249
% du total	56.2	48.7	43.6	43.6	44.6	43.1	42.3	41.8	33.7

8.15 Différenciation des producteurs de coton selon l'enquête 2017 de la Division de suivi-évaluation de la SDCC

La reprise de l'enquête que conduit la Division³³ de Suivi-évaluation (DSE) à la SDCC peut apporter des éléments pour mieux connaître les producteurs, les caractéristiques de leurs familles et de leurs systèmes de culture, ainsi que les pratiques culturelles plus particulièrement dans la production de coton, du moins pour ceux qui produisent du coton. Cette enquête, interrompue à partir de 2010, a cependant été reprise depuis 2017 auprès de 1700 producteurs de coton dont les données sont saisies seulement pour environ 1250 d'entre eux et dont le traitement n'a pas encore débuté. Avant son interruption, le traitement de l'enquête donnait lieu à l'édition d'un annuaire statistique. Le support informatique des données accumulées aurait été perdu en grande partie et il reste à vérifier si les annuaires édités permettraient de reconstituer les données pour servir de référence aux mutations en cours dans le bassin cotonnier.

Un traitement partiel et provisoire des données communiquées par la DSE apporte des informations sur l'état actuel de la différenciation des producteurs, même si le mode d'échantillonnage conduit à la surreprésentation des "gros producteurs" dans le sens admis à la SDCC (ayant cultivé au moins 5 ha de coton). La surreprésentation des "gros producteurs" est confirmée par les données de la répartition des producteurs selon la taille de leur sole cotonnière fournies par la DPA (annexe 8.14).

En suivant le critère de la taille de la sole coton que privilégie jusqu'à maintenant la SDCC, bien que ce critère ne soit pas forcément optimal, le Tableau 8-11 donne un aperçu des différences entre les quatre types de producteurs distingués. De manière statistiquement significative, les "gros producteurs" sont un peu plus âgés, ils ont plus d'épouses dans un contexte de polygamie, une famille plus grande, une plus grande main-d'œuvre familiale, plus d'animaux de trait, un plus grand troupeau bovin de thésaurisation, un meilleur équipement dans les différents types de matériel attelé et en appareils de traitement herbicide et insecticide, une part plus grande du coton dans l'assolement et une plus grande surface de maïs. Seuls les producteurs cultivant moins d'un hectare de coton manifestent une fréquence moindre à recourir à la main-d'œuvre extra-familiale, mais quand ils y recourent, ils doivent en faire appel davantage que les "gros producteurs" de coton. Par contre, en dépit des différences arithmétiques, il n'y a pas de différence de rendement entre les quatre types de producteurs, témoignant d'une très grande variabilité au sein de chaque type.

³³ Cette Division était dénommée cellule mais elle était déjà rattachée à Direction Générale. Elle travaillait surtout avec la Direction de la Production agricole alors les prérogatives de la nouvelle Division ont été élargies.

Cas exclusif des producteurs hommes	Typologie selon la taille de la sole cotonnière				Total
	< 1 ha	1-5 ha	5-10 ha	> 10 ha	
Nombre d'exploitations	389	588	200	31	1208
% exploitations	32.2%	48.7%	16.6%	2.6%	100.0%
Age	41.4 b	43.0 b	44.6 ab	47.9 a	42.9
Nombre d'épouses	1.2 d	1.6 c	2.5 b	3.9 a	1.7
Nombre d'enfants	5.1 d	7.2 c	11.2 b	16.7 a	7.4
Nombre d'actifs (> 12 ans)	3.8 d	5.2 c	7.9 b	12.1	5.3
Nombre de personnes/famille	7.4 d	10.0 c	15.2 b	22.5 a	10.4
Nombre de bœufs de trait	0.7 d	1.5 c	2.8 b	3.9 a	1.5
Nombre de bovins (non pour traction)	0.6 d	2.0 c	4.3 b	11.7 a	2.2
Surface cultivée, ha	2.8 d	5.2 c	11.6 b	24.2 a	6.0
% à disposer de charrue	32.9 a	56.9 b	86.0 c	90.3 c	54.9
% à disposer de charrette	3.6 c	13.6 c	35.0 b	48.4 a	15.1
% à disposer de corps butteur	5.3 c	20.7 b	59.0 a	67.7 a	23.8
% à disposer de corps sarcler	6.5 d	19.4 c	43.5 b	74.2 a	21.0
% à disposer d'app. Handy (herbicide)	30.9 c	57.0 b	82.5 a	83.9 a	54.1
% à disposer d'app. à cache (herbicide)	1.1 c	7.1 bc	20.0 b	35.5 a	8.3
% à disposer d'app. ULVA (insecticide)	23.0 c	53.6 b	83.0 a	90.3 a	50.3
% à recourir à la main-d'œuvre externe	44.7 c	65.5 b	84.0 ab	71.0 b	62.5%
Nbre de MO temporaire, pers.-jours/ha	23.5 b	12.7 ab	5.2 a	2.8 a	13.0
Surface en coton, ha	0.5 d	1.9 c	6.1 b	12.9 a	2.5
Part du coton, %	25.5%	39.9%	58.3%	57.9%	38.6%
Rendement en coton, kg/ha	1273 a	1256 a	1565 a	1416 a	1 318
Surface maïs, ha	0.4 d	1.0 c	2.5 b	7.0 a	1.2

TABLERAU 8-1: POPULATIONS TOTALES ET DES ENFANTS CONCERNÉES

8.16 Répartition des GP selon la présence de productrices de coton

	GP avec femmes productrices		Total
	Non	Oui	
Extrême Nord	2.0%	98.0%	100.0%
Guider	0.8%	99.2%	100.0%
Kaélé	1.2%	98.8%	100.0%
Maroua1	4.4%	95.6%	100.0%
Maroua2	0.5%	99.5%	100.0%
Tchili	4.9%	95.1%	100.0%
Nord	10.7%	89.3%	100.0%
Garoua	16.2%	83.8%	100.0%
Mayo G	4.5%	95.5%	100.0%
Ngong	7.2%	92.8%	100.0%
Touboro	10.5%	89.5%	100.0%
Total	5.7%	94.3%	100.0%

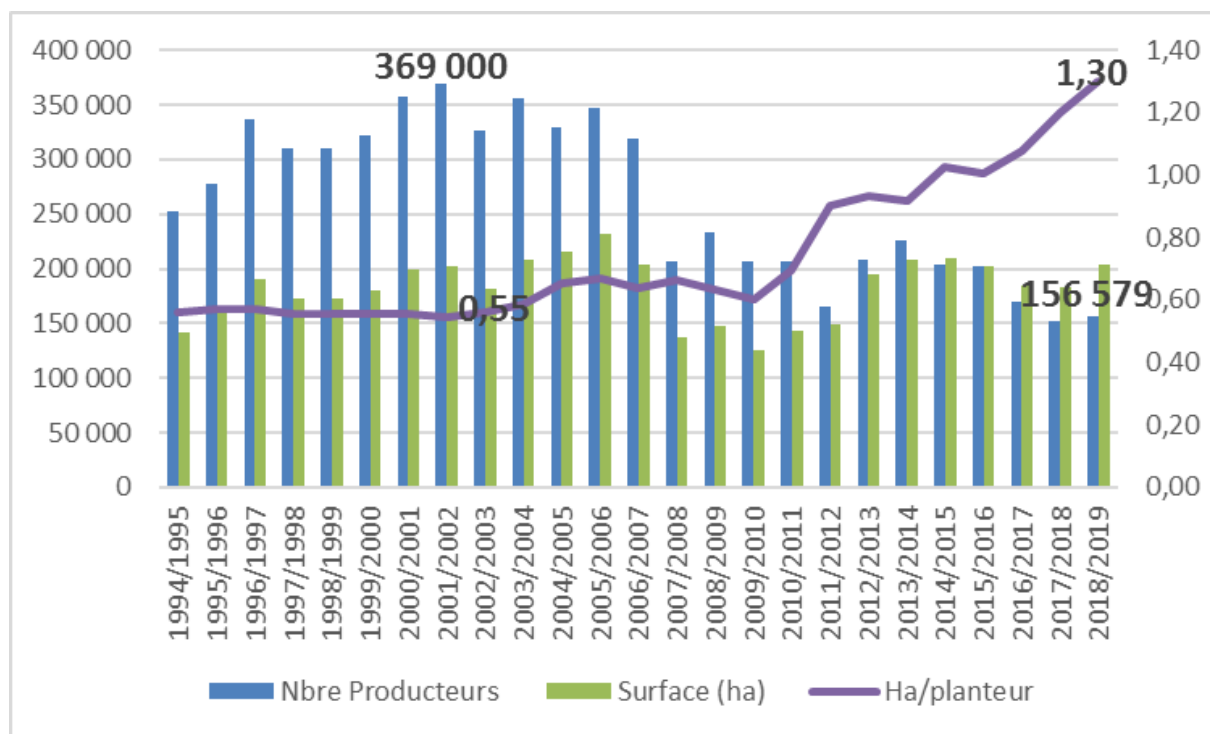
8.17 Taille comparée des soles cotonnières des hommes et des femmes

Région	Nb Productrices	Surface coton, ha	
		Hommes	Femmes
Garoua	2 297	2.3	0.4
Guider	5 719	1.2	0.5
Kaele	3 435	0.9	0.5
Mayo_G	1 399	2.5	0.8
Ngong	1 453	2.3	0.4
Tchili	2 692	1.4	0.3
Touboro	844	2.2	2.1
Total général	24 747	1.8	0.6

8.18 Evolution de la part de l'Extrême Nord dans la production



8.19 Evolution de la surface moyenne par producteur



8.20 Producteurs différenciés selon le critère de taille du troupeau bovin (hors animaux de trait)

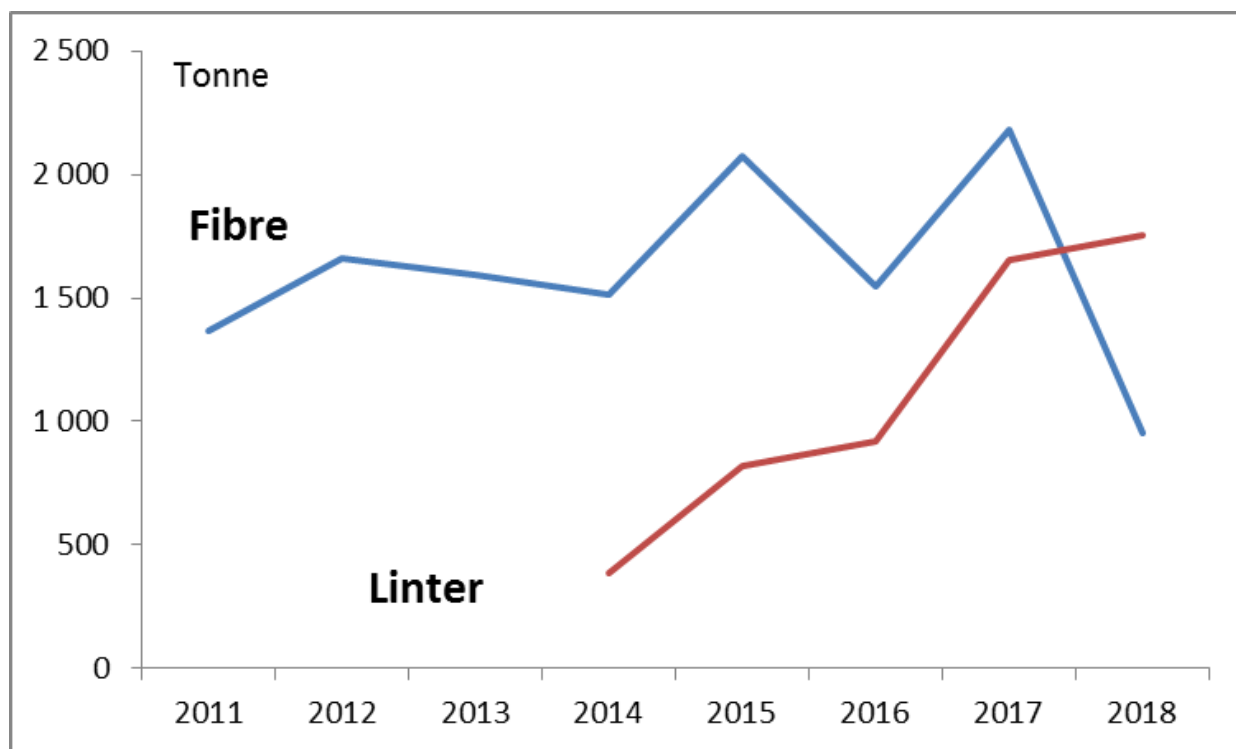
Cas exclusif des producteurs hommes	Typologie selon le nombre de bovins hors traction				Total
	<1	1 à 9	10 à 19	>= 20	
Nombre d'exploitations	854	241	47	33	1175
% exploitations	72.7%	20.5%	4.0%	2.8%	100.0%
Age	42.1 b	44.1 b	45.6 b	51.6 a	43.0
Nombre d'épouses	1.5 c	1.9 c	2.7 b	3.5 a	1.7
Nombre d'enfants	6.5 d	8.8 c	13.1 b	15.2 a	7.5
Nombre d'actifs (> 12 ans)	4.7 d	6.1 c	8.4 b	11.1 a	5.3
Nombre de personnes/famille	9.1 d	12.1 c	17.2 b	20.4 a	10.4
Nombre de bœufs de trait	1.1 d	2.3 c	4.3 a	3.6 b	1.5
Nombre de bovins (non pour traction)	0.0 d	3.8 c	13.6 b	32.3 a	2.2
Surface cultivée, ha	5.0 c	7.5 b	10.8 a	12.6 a	5.9
% à disposer de charrue	43.7 b	82.6 a	89.4 a	93.9 a	54.9
% à disposer de charrette	9.1 b	29.5 a	31.9 a	42.4 a	15.1
Surface en coton, ha	2.1 c	3.1 b	4.9 a	5.2 a	2.5
Part du coton, %	38.7%	42.2%	42.2%	43.5%	39.7%
Rendement en coton, kg/ha	1 320	1 290	1 459	1 271	1 318
Surface maïs, ha	1.1 b	1.2 b	2.3 a	2.0 ab	1.2

8.21 Les thématiques de recherche de l'accord tripartite SDCC-IRAD-CIRAD

Les actions pour atteindre les objectifs sont structurées autour de six thématiques :

- Thématique 1 : Matériel végétal (création variétale et production semencière)
- Thématique 2 : Protection des cultures contre les bio-agresseurs (maladies, ravageurs et adventices)
- Thématique 3 : Agronomie (fertilité des sols, itinéraires techniques, systèmes de culture et de production)
- Thématique 4 : Techniques innovantes (système Bembal)
- Thématique 5 : Diversification des cultures (soja et riz)
- Thématique 6 : Intégration de l'arbre dans les systèmes agraires cotonniers et diversification basée sur la promotion de la filière d'anacarde

8.22 Evolution des ventes locales du coton fibre



8.23 Usine CICAM de Garoua

L'usine de Garoua a comporté deux unités de production dont une seule est en fonctionnement, l'unité de 400 métiers à tisser ayant été arrêtée depuis quelques années par manque de capacité d'investissement. Les investissements ont été repris depuis peu, en 2018, avec des équipements réceptionnés et qui ne sont pas encore montés. Cette usine fonctionne avec un personnel de 403 employés, sur un total d'un millier au sein du groupe. Elle a la particularité, pour une usine textile, de n'avoir pas de personnel féminin en dehors du secrétariat.

L'usine fait cohabiter des machines très anciennes avec des machines récentes. Toutes les machines en amont de la filature, pour le nettoyage et le cardage du coton fibre sont très vieilles, parfois datant de la création de l'usine. Par contre, les machines de filature, selon la technique Open-end, sont récentes, les machines de filature à anneau ont été mises à la réforme. L'usine peut filer fin, jusqu'au numéro métrique 50, ou grossier, au numéro métrique 8 destiné pour la toile de bâche ou d'emballage. Le tissage de ce type de toile est réalisé dans des métiers datant de la création de l'usine, aux côtés de métiers modernes pour le tissu destiné aux pagnes. A titre indicatif, les tisserands artisanaux demanderaient du fil plutôt grossier, au Nm 16 à Nm 20.

L'usine produit seulement du tissu écru. La qualité du tissu est contrôlée pour détecter les défauts de tissage et qui sont bien manifestes pour certaines pièces en cours de contrôle lors de notre visite de l'usine. La fréquence de ces défauts ne serait pas négligeable.

La quantité de fibre traitée n'est pas totalement convertie en fil et tissu, un taux de déchet résulte des opérations de nettoyage puis du cardage. Le taux de déchet jusqu'à la phase de filature est estimé à 4-5%. Lors du tissage, un taux de perte se manifeste aussi par la casse du fil et l'opération de nouaison. Ce taux est estimé entre 1 et 2%. Les déchets sont valorisés, en partie à COFIL et en partie à des artisans qui en font des produits matelassés.

L'usine vise l'objectif de traiter 2200 tonnes de coton fibre à brève échéance. Elle a même l'ambition de parvenir à 6000 tonnes en 2021-22, mais un prêt de 5,6 Milliards négocié pour relancer les investissements n'aurait pas abouti dernièrement.

L'usine n'a pas de mal à s'approvisionner en coton fibre auprès de la SDCC qui lui applique le même prix qu'à l'exportation avec déduction des coûts non exposés. L'usine achète du coton de grade IRIS (voir infra, plutôt un grade moyen) avec une longueur de 1"5/32, ce qui est supérieure à ce dont l'usine a besoin.

L'usine ne bénéficie d'aucune tarification préférentielle pour l'acquisition de sa matière première, ni pour le prix de l'énergie (à 37 CFAF/KW contre 17 à un certain moment).

8.24 Plan global d'investissements de la CICAM

INVESTISSEMENT AUGMENTATION DE CAPACITE				
				PROGRAMME 2021 (Investissmt pour passage à 20 000T)
En millions de FCFA				
Axe	Localisation	Activité	Détail	Priorité 4
	INVESTISSEMENT POUR AUGMENTATION DE LA CAPACITE A 20 000 Tonnes	02 Blendomates	Investissement pour passage à 20 000T	3 690
		10 Cardes/Etirage		
		20 Open End		6 074
		02 Ourdissoires		343
		02 Encolleuses		881
		270 Metiers A tisser		12 577
		10 Tables Visite		100
		02 Tondeuses		140
		02 Metreuses		60
		02 Climatisation (Divers)		641
		Batiments et Agencement (Divers)		500
		02 Forages (Divers)		200
		Station de traitement des eaux (Divers)		100
		Divers frais d'approche et Installation (Divers)		471
		S/TOTAL GAROUA		
	INVESTISSEMENT POUR AUGMENTATION DE LA CAPACITE A 20 000 Tonnes	02 Laveuses	investissement pour passage à 20000T	2 150
		02 Flash Ager		430
		01 Vaporiseuse		1 096
		02 Rames et Installation		2 400
		01 Ligne Blanchiment		1 250
		01 Calandre		700
		05 Jigger		547
		Divers installations		500
S/TOTAL USINE DOUALA I				9 073
		Acquisition d'une machine à teindre le fil avec son séchoire de capacité 50 kg		133
		Acquisition d'un bobinoir		184
		Acquisition d'une brodeuse		33
		Acquisition d'un dispositif climatisation (gaine + enregistreur)		139
	INVESTISSEMENT POUR AUGMENTATION DE LA CAPACITE A 20 000 Tonnes	Acquisition de 06 Métiers à tisser	Investissement pour passage à 20000T	279
		Confection et Implantation		500
		Annexes		300
CONFECTION	Refendeuse (06 têtes)	Investissement 2018	70	
TEINTURE FIL	Autoclave	Investissement 2018	150	
TOTAL USINE DOUALA 2				1 789
	Divers Groupe	Acquisition d'un ERP	Investissement nouveau	300
TOTAL INFORMATIQUE				300
TOTAL INVESTISSEMENTS 2018				36 939

Jean Paul ELOUNDOU
Directeur des Finances
et de l'Administration

8.25 Sous-ensemble d'investissements les plus urgents à la CICAM

ETAT DES ACTIVITES NOUVELLES ET NON COUVERTES PAR UN AVENANT - DEMANDE BUDGETAIRE 2019												
USINE	N°	INTITULE	Objets	QUANTITE	FOURNISSEUR	Devise	Valeur Machine en devise	Transport	Valeur CIF	TFR	Valeur TTC en devise	VALEUR EN FCFA TTC
GAROUA	1	Machines de battage (ensemble Blendomat, 10 cardes auto réglées, mélangeuse à 10 allos)	Augmenter la capacité et la productivité des machines de battage et de tissage par une meilleure préparation flature.	1	TRUTZSCHLER	EUR			2 140 758,00	118 931,00	2 259 689,00	1 482 258 817
	2	Système d'aspiration et de nettoyage des machines de flature	Accessoire de flature pour suivre la modernisation des nouvelles machines de préparation flature	1	AESA				245 000,00	12 895,00	257 895,00	169 168 031
	3	Acquisition des matériels de laboratoire : HVI 1000 MT00 et Total testing Center UTE-8800-SA / UN-CV% / Finesse, Longueur, Grade, Maturité, Déchets, Force)	Améliorer la qualité des crus et se mettre au niveau des crus concurrents (benin, wax, cote d'ivoire)	1	USTER	EUR			435 780,00	22 834,20	458 614,20	300 896 790
	4	Acquisition des matériels de laboratoire - Tensorapid 5 à 1500N/Autoporter 5 - (AK, Rkm, Elongation, Ténacité)		1	USTER	EUR			181 500,00	9 552,63	191 052,63	125 322 310
	5	Ondroir	Améliorer la qualité du fil et assurer l'approvisionnement MAT	1	Karl Mayer	DOLLAR			270 940,00	14 260,00	285 200,00	172 541 292
	6	Encoluseuse		1	Karl Mayer	EUR			637 697,00	33 563,00	671 260,00	440 317 696
	7	Pots de flature	Accessoire de flature pour suivre l'accroissement en volume	75	DANTE BERTONI	EUR			16 616,00	885,16	17 501,16	11 612 510
	8	Acquisition d'un compresseur neuf ATLAS COPCO et installation		1	ATLAS COPCO				33 932,70	1 785,93	35 718,63	41 500 000
	9	Acquisition de machines à filer à rotor Open-End et installation	Gagner la guerre des crus en quantité (exit import) et développer les nouveaux marchés (FMO et Confection)	6	DERLON / Schaffhorst		2 878 340,66	150 210,22	3 028 550,88	151 427,54	3 179 978,43	2 085 929 108
	10	Méters à tisser 3800, Ligne pas de gaz coupées, 2 laines (24 verges et 24 chevrons)		48	ITEMA	EUR			3 236 320,10	170 437,90	3 406 758,00	2 235 989 671
	11	Banc de Nouage	Accessoire des MAT qui viendra compléter la chaîne de fabrication suite à l'augmentation des volumes fixés	1	TITAN / GROZ BECKERT	EUR			26 615,77	1 400,83	28 016,60	18 377 685
	12	Pieuse-Mitreuse		1	LAZZATI-Real Time	EUR	189 970,00	18 997,00	208 967,00	10 448,35	219 415,35	143 927 035
												7 327 849 945
CICAM 2	13	Acquisition d'une brodeuse pour éponge (10 litres, 8 couleurs)	Complète de nouveaux marchés par la diversification de l'offre	1	ZSK JAFI/SIMAC	EUR	76 581	7 658,10	84 239,11	4 211,96	88 451,07	58 020 095
	14	Logiciel hédigraphique		1	NEODIGRAPHICS	EUR			25 478	1 340,95	26 818,95	17 562 076
	15	Acquisition d'un bobinoir autoporteur B avec 5 sections bariol et 2 sections broches	Remplacer la machine existante arrivée en fin de vie	1	SAURER-Schaffhorst	EUR	338 210	7777	336 210	17 695,26	353 905,26	232 146 635
	16	Acquisition de métiers à tisser 2800 Jacquard 1346 x 2	Dev. nouveaux marchés (éponges à theme et tout en fil)	6	ITEMA	EUR			421 215	22 169	443 384,00	290 840 630
												588 989 646
CICAM1	17	Acquisition de 2 Jiggers + accessoires	Dev. nouveaux marchés (tous types de tissus)	2	HENRICKSEN							262 216 840
	18	Acquisition d'une leuseuse (Beninger)	Absorber la production de la ligne FMO	2	BENINGER	CHF	3 522 980	89 800	3 612 780	190 148,32	3 802 928,32	2 114 801 966
	19	Four à polymériser	Augmenter la capacité de production des cylindres et ainsi répondre au marché avec l'accroissement de petites mises	1	SPOPRINTS	EUR			44 450	2 339,47	46 789,47	30 691 883
	20	Construction nouveau forage d'eau		1		CFA						74 000 000
	21	Achat d'un compresseur GATS		1	ATLAS COPCO							41 500 000
	22	Relative Numérique Jet d'encre	Augmenter la capacité de production des imprimés et ainsi répondre au marché avec l'accroissement de petites mises	1	EFI-REGGIANI	EUR	594 000	59 400,00	653 400	34 389,47	687 789,47	588 508 416
	23	Relative aux cylindres	Augmenter la capacité de production des imprimés et ainsi répondre au marché avec l'accroissement de petites mises	1	EFI-REGGIANI	EUR	654 000	65 400,00	719 400,00	35 970,00	755 370,00	495 480 239
	24	Ligne de finissage et de préparation, système OSTHOFF-SENIGE	Améliorer la qualité de la préparation du tissu pour une meilleure qualité d'impression ou de teinture	1	OSTHOFF-SENIGE	EUR	664 995	8 500	673 494,84	33 874,74	707 369,58	463 872 837
	25	Remise Marlini Thermo-Rule et installation avec logiciel mat		2	MONFORT		1 200 420	120 042,00	1 320 462,00	66 023,10	1 386 485,10	909 474 607
	26	Acquisition d'une vaporiseuse Steamer 2015 pour fixation	Absorber la production de la ligne FMO	1	ARIOLI	EUR	410 578	42 365	452 943,00	22 647,15	475 590,15	311 968 688
												5 330 323 476
												13 146 773 067

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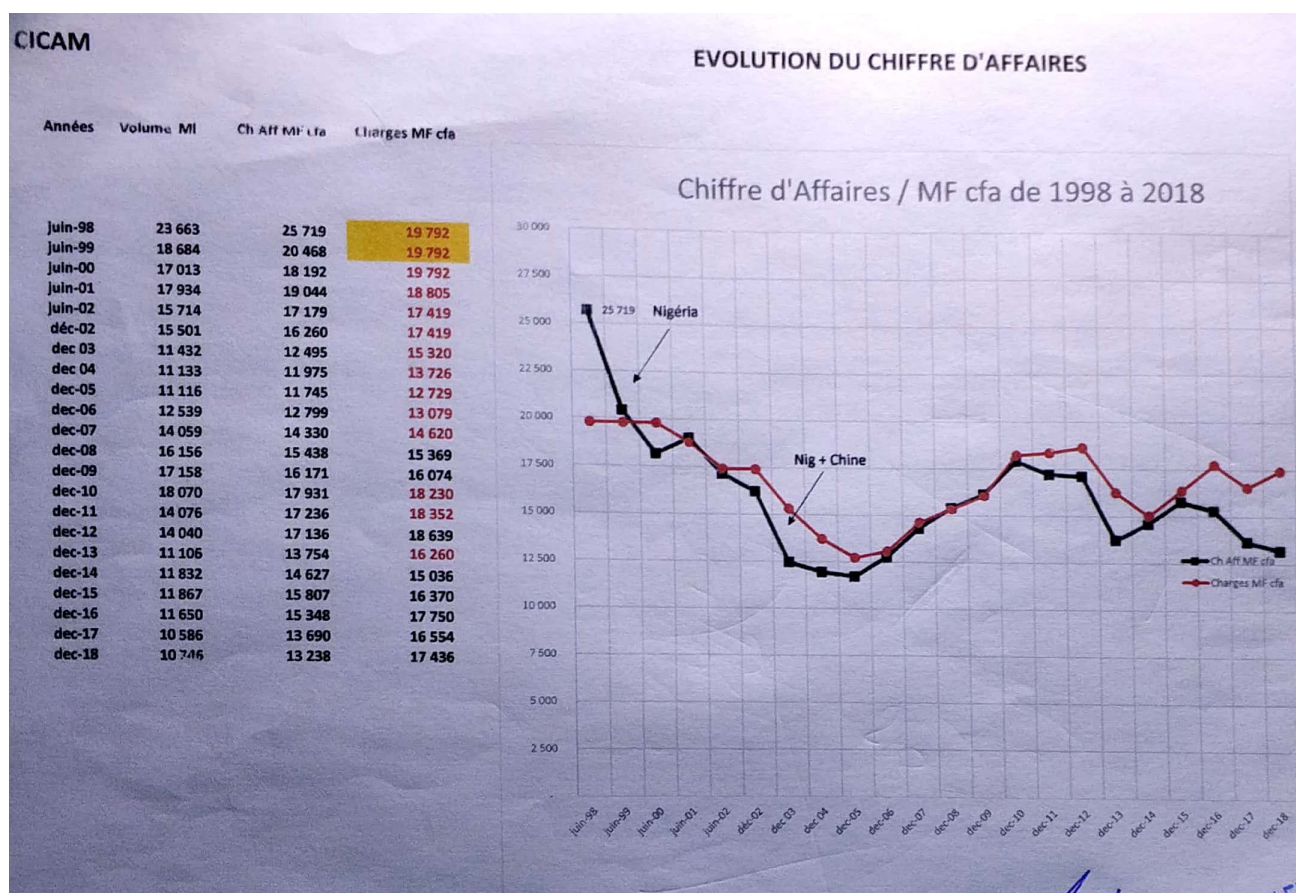
18/12/2018

ETAT DES ACTIVITES NON COUVERTES PAR UN AVENANT AINSI QUE LEUR NIVEAU DE MISE EN ŒUVRE

1 - ACTIVITES DU GUICHET PRÊT SYNDIQUÉ NON REALISEES DU FAIT DE LA FORCLUSION DE CE PRET - DEMANDE D'AFFECTATION DE CES ACTIVITES AU GUICHET ETAT POUR LE COMPTE DU BUDGET 2019

USINE	N°	MARCHANDISES	QUANTITE	FOURNISSEUR	OBJECTIF	MONTANT		DATE L/C	DELAI PSEUSE (Semaine)	PROVENANCE	ELEMENTS DE MATURATION			
						DEVISES	FCFA TTC				Rapport d'achat tech.	Factures Proforma	Dévis estimatif	D.O
GAROUA	1	Machines de battage (ensemble Blendomat, 10 cardes auto réglées, mélangeuse à 10 allos)	1	TRUTZSCHLER	augmenter la capacité et la productivité des machines de battage et de tissage par une meilleure préparation flature.	2 259 689,00 €	1 482 258 817		24	DEU	Réalisé	Dispo	En cours	En cours
	2	Système d'aspiration et de nettoyage des machines de flature	1	AESA	Accessoire de flature pour suivre la modernisation des nouvelles machines de préparation flature	257 895,00 €	169 168 031		24	FRA	Réalisé	Dispo	En cours	En cours
	3	Acquisition des matériels de laboratoire : HVI 1000 MT00 et Total testing Center UTE-8800-SA / UN-CV% / Finesse, Longueur, Grade, Maturité, Déchets, Force)	1	USTER	Améliorer la qualité des crus et se mettre au niveau des crus concurrents (benin, wax, cote d'ivoire)	458 714,20 €	300 896 790		16	CHE	Réalisé	Dispo	En cours	En cours
	4	Matériels de laboratoire - Tensorapid 5 à 1500N/Autoporter 5 - (AK, Rkm, Elongation, Ténacité)	1	USTER		191 052,63 €	125 322 310		16	CHE	Réalisé	Dispo	En cours	En cours
	5	Pots de flature	75	DANTE BERTONI	Accessoire de flature pour suivre l'accroissement en volume	17 501,16 €	11 612 510		8	ITA	Réalisé	Dispo	En cours	En cours
	6	Compresseur neuf ATLAS COPCO et installation	1	ATLAS COPCO	Soutenir la fourniture en air comprise suite à l'installation des nouvelles machines	35 718,63 €	41 500 000				Réalisé	Dispo	En cours	En cours
	7	Machines à filer à rotor Open-End et installation	3	DERLON / Schaffhorst	Gagner la guerre des crus en quantité (exit import) et développer les nouveaux marchés (FMO et Confection)	1 589 989,21 €	1 042 964 554				Réalisé	Dispo	En cours	En cours
	8	Méters à tisser 3800, Ligne pas de gaz coupées, 2 laines (13 verges et 12 chevrons)	24	ITEMA		1 789 597,95 €	1 173 899 302		16	ITA	Réalisé	Dispo	En cours	En cours
	9	Banc de Nouage	1	TITAN / GROZ BECKERT	Accessoire des MAT qui viendra augmenter la productivité.	28 016,60 €	18 377 685		16	ESP	Réalisé	Dispo	En cours	En cours
C/GAROUA						4 366 000 000								
						4 366 000 000								

8.26 Evolution de la production de pagne et du bilan financier de la CICAM



8.27 Production de semences sous supervision de l'IRAD

La production de semences G2 est réalisée par la SDCC à partir de 700 kg de semences délintées G1 fournies par l'IRAD et pour emblaver 50 à 53 ha, dans un GP choisi pour la bonne technicité des producteurs et proche de l'usine d'égrenage de Guider. L'IRAD a la charge de procéder à l'épuration par élimination des plantes hors-types, de former les producteurs au contrôle contre les ravageurs. Dès la fin de la récolte, la production est évacuée à l'usine d'égrenage dans une aire spécialement aménagée, isolée des aires affectées à la production tout-venant. L'égrenage est réalisé après nettoyage des machines et en présence des chercheurs. Les semences G2 ainsi obtenues sont ensuite délintées et mises en sac de 15 kg.

Les semences G2 servent au semis des parcelles de production de semences G3, sur une superficie d'environ 2500 ha, sous l'entière responsabilité de la SDCC. La production est égrenée en début de saison d'égrenage, sur une à deux semaines. Les semences sont utilisées ensuite pour la production de semences certifiées qui seront distribuées à tous les producteurs.

8.28 Evolution de la production semencière

Intitulés	Unité	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Nombre de villages semenciers	Nombre	218	588	260	311	263	348	167	266	217
Nombre de producteurs semenciers	Nombre	23 025	56 802	29 179	37 161	28 928	37 861	21 897	26 283	20 482
Nombre de variétés multipliées	Nombre	4	2	3	3	3	3	3	3	3
Nom de la principale variété multipliée		Irma L484	Irma L457	Irma L457	Irma L484	Irma L484	Irma Q302	Irma Q302	Irma Q302	Irma Q302
Nom de la deuxième variété multipliée		Irma L457	Irma L484	Irma L484	Irma L457	Irma L457	Irma L457	Irma L457	Irma L457	Irma L457
Surface semée pour la production semencière	ha	13 379	48 477	26 033	31 258	28 992	39 502	20 532	31 879	20 550
Surface retenue pour la production semencière	ha	13 379	48 477	26 033	31 258	28 992	39 502	20 532	31 879	20 550
Production commercialisée de coton-graine destinée aux semences	kg	15 189 000	63 562 000	30 903 000	40 303 000	40 096 000	48 368 000	25 942 000	43 890 000	<i>39 369 000</i>
Rendement coton-graine des surfaces semencières	kg/ha	1 135	1 311	1 187	1 289	1 383	1 224	1 263	1 377	<i>1 916</i>
Production égrenée de coton-graine destinée aux semences	kg	15 189 000	63 562 000	30 903 000	40 303 000	40 096 000	48 368 000	25 942 000	43 890 000	<i>39 369 000</i>
Production de semences obtenues	kg	8 050 000	33 688 000	16 379 000	21 361 000	21 251 000	25 635 000	13 749 000	23 261 700	<i>20 865 000</i>
Production de semences délintées	kg	1 958 000	1 932 000	2 321 000	2 634 000	1 978 000	1 566 000	1 409 000	986 520	<i>2 400 000</i>
Production de semences vêtues (non-délintées)	kg	4 988 000	30 716 000	12 808 000	17 309 000	18 208 000	23 226 000	11 581 000	21 744 000	<i>17 173 000</i>
Quantité de semences distribuées sur la production de la campagne*	kg	4 045 000	4 128 000	6 886 000	7 106 000	5 816 000	5 963 000	6 416 000	6 725 000	8 216 520

* Distribution des semences décalée d'une campagne. Par exemple, distribution des semences lors de la campagne 2013-14 à partir de la production de la campagne 2012-13

Les chiffres en italique sont des prévisions

8.29 Modalités de distribution des semences

Les semences sont fournies gratuitement aux producteurs, le coût de production des semences est ainsi supporté par la SDCC. Il revient cependant aux producteurs d'acquiescer, à crédit, les produits pour traiter les semences avant de semer. La livraison des produits de traitement de semences fait partie du forfait intrant fourni pour la culture du coton.

Les semences sont distribuées à des doses différenciées selon les types de semences, dans un pays où le semis est réalisé manuellement de manière quasi générale. Les semences vêtues sont fournies à la dose de 40 kg par hectare, soit une quantité largement supérieure à ce qui est nécessaire, même en considérant les besoins pour procéder à un resemis en cas de mauvaise levée. Les semences délintées sont distribuées à une dose de 20 kg par hectare.

Il convient de noter que le recours aux semences vêtues est adapté à la pratique actuelle de semis manuel, mais il n'en serait pas autant en passant à l'utilisation généralisée des semences délintées. Le délintage industriel est le plus souvent associé au traitement chimique des semences, avec des produits particuliers et plus coûteux, et dont l'utilisation serait moins adaptée au semis manuel car les produits de traitement resteraient collés aux mains des semeurs (ce qui doit être aussi le cas actuellement avec les semences vêtues).

Le passage à l'utilisation de semences modernes que sont les semences délintées constitue une opportunité pour réaliser le passage d'un semis manuel à un semis mécanique, source de gain de temps et de productivité. Il existe de très nombreux modèles de semoirs avec des prix très différenciés, proposés par exemple en Chine, mais dont la précision de semis est corrélée au prix d'acquisition. Un compromis devra être accepté entre précision de semis et accès au plus grand nombre des semoirs.

8.30 Modalités d'importation des intrants par la CNPC-C

Pour les intrants à utiliser lors de la campagne de l'année N, le processus d'acquisition débute dès la campagne de l'année N-1. Le recensement des besoins des producteurs est réalisé à partir des plans de la campagne N après les semis effectués en campagne N-1. Les surfaces arrêtées pour le coton et pour le maïs et soja ainsi que les besoins associés en intrants sont consolidés pour l'ensemble du GP. Ces plans de campagne sont validés par les AG des GP avec l'appui des chefs de Zone de la SDCC. Ils sont ensuite consolidés au niveau des secteurs, des régions et de l'ensemble de la SDCC.

Les quantités à commander effectivement peuvent résulter d'un réajustement des besoins recensés et consolidés. Ce réajustement est de la responsabilité de la DPA de la SDCC. C'est cette dernière qui arrête les quantités à commander et les communique à la CNPC-C en charge de lancer les appels d'offres puis de passer commande. Pour les engrais et les herbicides ainsi que les produits de traitement de semences, les appels d'offres sont lancés en septembre de l'année N-1, alors qu'ils le sont en janvier de l'année N pour les insecticides. Les périodes de livraison demandées sont telles que les produits peuvent être mis en place dans les villages par les camions chargés d'évacuer le CG après la commercialisation.

Les appels d'offres sont rédigés par la CNPC-C avec l'appui technique de la SDCC. Les appels d'offres internationales sont lancés pour les engrais, avec position de livraison CIF au port de Douala. Pour les pesticides, il s'agit d'appels d'offres nationales pour les pesticides, avec position de livraison sur camion à Pitoa, près de Garoua.

Par le processus d'acquisition suivi, la CNPC-C est l'acteur qui acquiert les intrants et qui les rétrocède ensuite aux producteurs. C'est un trait singulier du fonctionnement de la CV de coton en Afrique francophone.

8.31 Valeurs des importations d'intrants de trois campagnes

Campagne		2015-2016					
	Unité	NPK	UREE	Herbicides + Ttmt semences	Insecticides	Matériels agricoles*	Total
Quantité	Tonne	15 000	4 200				
Valeur FOB**	10 ⁶ CFA	3 060	815	2 895	7 810		
Valeur CAF	10 ⁶ CFA	3 631	975	3 109	8 405	529	16 648
Valeur APEMS	10 ⁶ CFA	5 192	1 419				
Valeur au prix de revient	10 ⁶ CFA	6 324	1 732	3 388	9 527	529	21 498

Campagne		2016-2017					
	Unité	NPK	UREE	Herbicides + Ttmt semences	Insecticides	Matériels agricoles*	Total
Quantité	Tonne	38 000	11 000				
Valeur FOB**	10 ⁶ CFA	7 877	1 869	2 731	6 562		
Valeur CAF	10 ⁶ CFA	9 322	2 287	2 955	7 057	543	22 166
Valeur APEMS	10 ⁶ CFA	13 294	3 405				
Valeur au prix de revient	10 ⁶ CFA	15 680	4 056	3 222	8 000	543	31 501

Campagne		2017-2018					
	Unité	NPK	UREE	Herbicides + Ttmt semences	Insecticides	Matériels agricoles*	Total
Quantité	Tonne	45 000	12 000				
Valeur FOB**	10 ⁶ CFA	6 789	1 464	3 125	4 940		
Valeur CAF	10 ⁶ CFA	8 501	1 921	3 360	5 316		19 098
Valeur APEMS	10 ⁶ CFA	12 329	2 915				
Valeur au prix de revient	10 ⁶ CFA	14 859	3 560	3 648	6 025	457	28 550

* Principaux matériels agricoles (charrette, charrue, pousse-pousse, appareils de traitement)

** Position FOB, ou avant dédouanement

APEMS = Avant prise en main par la Sodecoton, donc à N'Gaoundéré ou Pitoa

8.32 Valeurs des crédits intrants pour la campagne 2017-18

	Unité	Valeur	Remarques
Tous crédits confondus			
Valeur de l'exigible de la campagne	10 ⁶ CFA	24 630	
Valeur du report de la campagne précédente	10 ⁶ CFA	2 031	Arrières campagnes antérieures
Valeur du total à rembourser	10 ⁶ CFA	26 661	
Valeur du remboursement total	10 ⁶ CFA	24 508	
Valeur du remboursement de l'exigible de l'année	10 ⁶ CFA	24 446	
Valeur du remboursement du crédit reporté	10 ⁶ CFA	62	
Crédit sur les intrants, selon les consommations effectives		24 630	Les quantités consommées peuvent être inférieures aux quantités mises en place
Valeur du crédit pour le traitement des semences	10 ⁶ CFA	379	
Valeur du crédit pour les herbicides	10 ⁶ CFA	3 152	
dont crédit pour les herbicides totaux	10 ⁶ CFA	1 759	
crédit pour les herbicides sélectifs	10 ⁶ CFA	1 394	
Valeur du crédit pour les insecticides	10 ⁶ CFA	7 123	
dont insecticides de type 1	10 ⁶ CFA	4 994	Groupe rynaxypyr
dont insecticides de type 2	10 ⁶ CFA	1 213	Groupe indoxacarb
dont insecticides de type 3	10 ⁶ CFA	916	Groupe emmamect. et pyrè.
Valeur du crédit sur l'engrais NPK	10 ⁶ CFA	10 886	
Valeur du crédit sur l'engrais urée	10 ⁶ CFA	1 742	
Valeur du crédit sur le régulateur de croissance	10 ⁶ CFA	49	
Achat (à crédit ou pas) de produits pour l'alimentation des animaux de trait voire du bétail			
Valeur des achats de graines de coton	10 ⁶ CFA		
Valeur des achats de tourteaux	10 ⁶ CFA	2979	Alibet + Nutribet
Valeur des achats d'Alibet	10 ⁶ CFA	1787	
Valeur des achats de Nutribet	10 ⁶ CFA	1192	
Valeur des achats de blocs de sel de supplémentation	10 ⁶ CFA	1	
Achat de produits de soins prophylactiques ou vétérinaires des animaux de trait voire du bétail	10 ⁶ CFA	30	

8.33 Distribution des GP selon les classes de rendement de CG, campagne 2017-18

	< seuil*	Seuil - 1200	1200 - 1400	1400 - 1700	> 1700	Total
Extrême Nord	7.9%	20.6%	20.0%	36.8%	14.6%	100.0%
Guider	2.0%	25.3%	21.3%	39.1%	12.3%	100.0%
Kaélé	28.2%	17.6%	6.5%	43.5%	4.1%	100.0%
Maroua1	3.7%	19.1%	26.5%	34.6%	16.2%	100.0%
Maroua2	0.0%	19.4%	30.1%	13.4%	37.1%	100.0%
Tchili	8.4%	18.9%	14.7%	57.3%	0.7%	100.0%
Nord	3.0%	20.7%	30.5%	24.4%	21.3%	100.0%
Garoua	5.5%	17.8%	21.3%	28.5%	26.9%	100.0%
Mayo G	0.8%	21.2%	37.1%	16.7%	24.2%	100.0%
Ngong	0.6%	21.7%	40.4%	16.9%	20.5%	100.0%
Touboro	3.8%	25.7%	28.6%	36.2%	5.7%	100.0%
Total	5.8%	20.7%	24.5%	31.5%	17.5%	100.0%

* Le rendement seuil pour l'éligibilité au crédit intrants est de 700 et de 800 kg/ha respectivement pour les régions de l'Extrême Nord et du Nord

8.34 Statistiques sur les producteurs, CC, GP et la mobilisation de la caution solidaire

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Nombre de GP	1 800	1 687	1 792	1 877	1 853	1 799	1 748	1 693
Nombre total de CC	26 088	26 085	32 034	35 741	33 734	34 279	31 401	29 490
Nombre de CC avec femmes	2 168	1 910	4 187	3 806	3 623	3 869	3 777	4 132
Nombre de producteurs	208 273	168 482	208 373	223 215	202 917	194 972	172 375	151 336
Nombre de productrices	9 172	7 825	20 266	34 645	27 160	28 708	24 822	24 396
Nombre de nouveaux CC en début de campagne	3 770	4 535	5 692	6 381	4 240	4 593	4 055	3 660
Nombre de producteurs nouveaux ou réintégrés en début de campagne	22 186	31 462	53 232	44 782	18 092	30 608	25 305	28 493
Nombre de CC exclus en fin de campagne	2 463	1 146	952	1 104	1 355	1 685	1 840	1 841
Nombre de CC avec des productrices et exclus en fin de campagne	74	184	198	184	172	196	190	317
Nombre de producteurs exclus en fin de campagne	26 405	38 565	36 293	41 895	34 668	39 245	44 638	41 994
Nombre de productrices exclues en fin de campagne	234	618	882	674	519	438	458	573
Nombre de CC concernés par la mobilisation de la caution solidaire	688	1 125	1 819	1 917	1 136	849	4 822	874
Nombre de CC avec femmes et concernés par la mobilisation de la	131	505	869	934	526	553	2 609	359
Nombre de GP mobilisés pour caution 2 ^e niveau	171	173	182	171	157	107	86	114

8.35 Les sources du "fonds intrants"

La source première du "fonds intrants" a d'abord été l'épargne constituée par les producteurs de coton au cours de la période 1996 à 1998, dans la perspective de la privatisation de la SDCC et de l'entrée des producteurs dans le capital. Après une tentative avortée en 1998, la privatisation n'a plus été remise sur la sellette.

La deuxième source découle de diverses actions menées par l'Etat camerounais pour soutenir la CV lors des périodes difficiles traversées. Sur l'ensemble des 16 actions répertoriées et financées essentiellement par le Ministère de l'agriculture et du développement rural (MINADER), neuf ont concerné une contribution au fonds intrants le plus souvent en parallèle à d'autres actions de soutien, comme la subvention à la cession des engrais ou des charrettes aux producteurs. La subvention aux engrais a cessé depuis 2013. Celle en faveur des charrettes a aussi cessé depuis 2016.

La troisième source provient de la Islamic Trade Funding Corporation (ITFC, relevant de la Banque islamique de développement) à travers un prêt souverain alloué à l'Etat camerounais pour la CV. A la suite de la doléance des producteurs de coton de voir allégé le handicap de l'enclavement sur le coût de transport des engrais, l'Etat a accepté qu'une partie du prêt soit affecté à la CV pour l'acquisition des engrais. En pratique, la CV rembourse en partie le prêt obtenu, garde le restant que l'Etat a accepté de prendre à sa charge. C'est la contribution financière la plus élevée au "fonds intrants". Le mécanisme suivi a été adopté aussi dans l'utilisation d'un reliquat de financement d'un projet PPP (Public Private Partnership) par la GIZ, pour cependant un montant nettement plus faible et pour une seule année.

Enfin, le Programme Spécial d'Importation des engrais (PSIE) a été une action engagée par le Cameroun qui a pris fin en 2001.

8.36 Fonctionnement du fonds intrants

L'ensemble du "fonds intrants" est logé à la SDCC contre une rémunération de 4% pour les sommes non engagées dans l'acquisition des intrants et du matériel agricole (c'est-à-dire utilisées à d'autres fins). Il est ré-abondé à partir du remboursement par les producteurs des intrants et équipements acquis. Le remboursement quasi-total des crédits, ainsi que la rémunération du fonds par la SDCC, a prémunis contre l'érosion du fonds. Le montant atteint aujourd'hui dépasse les sommes nécessaires à l'importation des intrants et du matériel agricole.

Pour autant, les prêts bancaires sont mobilisés pour l'importation des intrants, probablement parce que le "fonds intrants" est mobilisé pour d'autres fins comme le paiement du CG lors de la commercialisation. La direction financière de la SDCC indique bénéficier à cette fin d'une ligne de crédit de la BADEA (Banque Arabe de développement en Afrique, basé à Khartoum) pour 25 millions de dollars (13,75 Milliards CFA), et d'une ligne de l'ITFC pour 20 millions d'euro (13 milliards CFA), les deux au taux de 3,75%.

Le fonds intrants ne paraît pas servir seulement pour acquérir les intrants, et peut-être sert-il peu directement à l'importation des intrants car les frais financiers sont systématiquement intégrés dans le calcul du coût de revient des intrants. Une telle situation peut être due à des facteurs conjoncturels de trésorerie au sein de la SDCC pour acquérir à temps le crédit de campagne destiné à acheter le CG et à assurer le fonctionnement des usines d'égrenage et de trituration. Un assainissement de la situation pour acquérir à temps le crédit de campagne permettrait de concentrer l'utilisation du "fonds intrants" à l'importation des intrants, ce qui est souhaitable pour éviter les incompréhensions et suspicions infondées. La correction du retard fréquent de l'Etat à rembourser la TVA due à la SDCC réduirait aussi les problèmes de trésorerie et éviterait de se servir du fonds intrants comme variable d'ajustement.

Il ne semble cependant pas y avoir de préjudice dans l'importation des intrants du fait que le fonds intrants soit utilisé au moins partiellement pour autre chose. Dans la mesure où le fonds intrants est rémunéré par la SDCC quand il n'est pas mobilisé pour acquérir les intrants, et si par ailleurs le taux de rémunération est identique au taux de crédit bancaire pour réaliser les importations (et c'est quasiment le cas), il n'y a pas de différence entre mobiliser directement le fonds intrants ou recourir à un crédit bancaire spécifique pour acquérir les intrants. Dans le premier cas, on perd un produit financier. Dans le deuxième cas, on garde un produit financier mais qu'on doit utiliser pour payer l'emprunt du crédit.

Le fonctionnement du "fonds intrants" paraît cependant soutenable car les intrants et les équipements sont cédés aux prix de revient en intégrant les charges exposées. C'est le cas des coûts de transport des intrants jusqu'aux villages ainsi que des frais de gestion alloués à la SDCC pour gérer les crédits octroyés aux producteurs. C'est aussi le cas des frais de fonctionnement de la CNPC-C. Il en découle que ce sont les producteurs qui paient les services nécessaires à l'accès aux intrants et équipements en quantité, en qualité et à temps, comme ce serait le cas si ces services étaient fournis de manière privatisée.

Enfin, du fait que le fonds intrants peut être mobilisé pour d'autres usages que l'importation des intrants, la dénomination de "fonds intrants" peut prêter à confusion ou sembler inapproprié. Néanmoins, la dénomination retenue n'est pas totalement dénuée de pertinence. Le fonds est ré-abondé lors du remboursement des crédits intrants par les producteurs, et même avec intérêt, il en découle que le fonds se développe (tant que les taux de remboursements sont proches de 100%, cf. infra). On peut même dire que le fonds se développe par la contribution des producteurs. La restitution du montant du fonds à chaque fin de campagne permettrait de s'en rendre compte, mais nous n'avons pas eu accès à cette information. Aussi, il s'agit bien d'un fonds intrants, mais des producteurs devrait-on préciser.

8.37 Distribution des composantes du prix de revient des intrants importés

Pour le cas des engrais NPK (le cas est semblable pour l'urée), le Tableau 8-2 donne la répartition en pourcentage des diverses composantes du coût de revient au cours des campagnes 2015/16 à 2017/18. Le coût des engrais arrivés au port de Douala représente moins de 60% du coût de revient final. Les transports jusqu'au niveau des producteurs représentent plus de la moitié du restant. Les frais de gestion sont alloués à la SDCC et à la CNPC-C. Pour la première, ces frais sont calculés de manière forfaitaire à 3% de la valeur des engrais rendus à N'Gaoundéré. Pour la seconde, c'est également le taux de 3% mais appliquée à une assiette qui s'est réduite. En 2015, les frais s'appliquaient à la valeur des engrais rendus dans les villages après l'intervention de la SDCC. En 2016 et 2017, ces frais ont été appliqués seulement au coût de mise en place des engrais de N'Gaoundéré jusqu'aux villages.

	2 015	2 016	2 017
Coût Import FOB	48.4	50.2	45.7
Coût FOB à CAF	9.0	9.2	11.5
Transport	19.7	20.2	25.3
Gestion	5.4	3.0	3.1
Autres services	3.0	3.0	3.8
Frais financiers	4.8	4.8	3.8
Taxes	9.7	9.6	6.8
Total	100.0	100.0	100.0

TABLEAU 8-2: DECOMPOSITION DU COUT DE REVIENT DE L'ENGRAIS NPK DE TROIS CAMPAGNES AGRICOLES

Pour les autres intrants correspondant essentiellement aux pesticides, le calcul du prix de revient est réalisé de la même manière, avec prise en compte des postes de dépense évoqués précédemment (avec des coûts de reconditionnement pour certains produits). Par contre, pour ce qui concerne les frais de gestion alloués à la CNPC-C, les 3% s'appliquent à la valeur des produits depuis l'importation jusqu'aux villages, intégrant tous les coûts impliqués, y compris les 3% de frais de gestion alloués à la SDCC. Néanmoins, les frais financiers n'ont plus été appliqués sur les stocks reportés³⁴ au cours des deux dernières campagnes.

³⁴ En toute rigueur, si l'application de frais financiers n'est pas justifiée quand le fonds intrants a servi à l'importation, elle l'est pour le stock reporté qui constitue une immobilisation, un manque à gagner en trésorerie qui peut nécessiter de recourir à un prêt bancaire.

8.38 Prix de revient et de cession des pesticides, campagne 2015-16

Produits	Prix de revient	Prix de cession	Ventes anticipées	Bilan anticipé
	FCFA/unité	FCFA/unité	CFA	CFA
Herbicides + produits traitement de semences				
AGRAZINE 90 DF_Sch. 225g	785	1 100	586 666 667	198 057 661
ACTION 80 DF_Sch. 225g	884	1 200	613 333 333	226 332 765
ACTION 80 DF_Sch. 170 g	727	950	335 294 118	132 674 707
GLYCOT ULTRA_757 g Acide	986	1 350	1 755 000 000	649 850 810
NICOMAS_	5 153	6 000	102 000 000	17 824 100
CODAL GOLD_412,5DC	7 861	3 500	133 000 000	-173 400 133
MIYIDIMA_	7 162	6 500	442 000 000	-46 155 993
GLYCOT LIQUIDE_	1 990	2 200	96 096 000	9 153 015
THIORAL_Scht 60 g		400		0
Calthio C_Scht 50g		500		0
MOMTAZ 45 TS_Scht 50g	464	800	648 000 000	309 521 343
IMIDALM 45 WS_Scht 50g	544	800	148 174 000	148 174 000
Total			4 859 564 118	1 472 032 274
Insecticides				
EMACOT FORT 100 WG	1 291	4 175	2 965 381 425	2 048 465 052
CORAGEN 20 SC	97 082	55 700	2 675 939 400	-1 988 082 387
TIHAN 175	39 251	33 400	2 468 293 400	-432 411 311
COBRA 120 EC	34 657	41 750	1 413 070 500	240 086 475
OPTIMAL	148	250	385 229 750	157 733 488
Total			9 907 914 475	25 791 317
Divers				
CYPALM 360 CE	7 178	10 600	8 119 600	2 621 329
ALPHACYGA 180 EC	4 734	10 600	6 890 000	3 812 637
STEWART 150 EC	39 849	50 100	226 652 400	46 374 088
TROFORT 400	6 589	9 710	73 689 190	23 687 180
RIMON 10 EC	13 209	12 487	14 672 225	-848 685
PIX 5% SL	5 160	2 750	103 202 000	-90 456 506
KRISS	4 450	4 500	6 160 500	67 868
BENJI	10 930	11 000	65 450 000	416 310
Sulfate de zinc	901	1 100	356 922 500.00	106 757 000
Total			861 758 415	92 431 221
Total global			15 629 237 008	1 590 254 812
en % du chiffre d'affaires				10.2

8.39 Prix d'achat et de cession des principaux matériels agricoles

Désignation	2015/2016				2016/2017				2017-2018				2018-2019			
	PA		PC		PA		PC		PA		PC		PA		PC	
	QTE	CFA	CFA	BILAN 10 ⁶ CFA	QTE	CFA	CFA	BILAN 10 ⁶ CFA	QTE	CFA	CFA	BILAN 10 ⁶ CFA	QTE	CFA	CFA	BILAN 10 ⁶ CFA
Charrettes bovines + 2 ridelles	750	241 570	249 000	5.57	1 250	241 570	249 000	9.29	1 500	241 570	249 000	11.15	1 000	241 570	249 000	7.43
Corps bûteur	1 500	27 500	28 500	1.50	1 500	27 500	28 500	1.50	1 100	27 500	28 500	1.10	1 000	27 500	28 500	1.00
Charrue bovine complète T34					500	50 688	52 500	0.91								
Charrue asine complète T20	500	25 000	34 000	4.50	100	25 000	34 000	0.90	200	25 000	34 000	1.80	200	25 000	34 000	1.80
Pousse pousse PM					650	60 514	68 000	4.87	850	60 514	68 000	6.36	700	60 514	68 000	5.24
Pousse pousse GM					600	64 608	75 000	6.24	120	64 608	75 000	1.25	500	64 608	75 000	5.20
Appareils Handy	7 500	27 008	35 000	59.94	2 000	33 680	35 000	2.64					4 300	33 800	35 000	5.16
Appareils Ulva+ / Pulmic	3 000	30 532	31 500	2.90	1 000	26 764	31 500	4.74					5 500	25 524	31 500	32.87
Total				74.42				31.07				21.66				58.69

QTE = Quantité ; PA = Prix d'acquisition ; PC = Prix de cession ; Bilan = écart entre vente au prix de cession et achat au prix d'acquisition

8.40 Les subventions de l'Etat à la CV coton

CNPC-Cameroun
B.P. 1371
GAROUA

SITUATION DES SUBVENTIONS RECUS DE L'ETAT

ORIGINE SUB	ANNEE	MONTANT	FONDS ROULENGRAIS	FONCT	SUB ENGRAIS	JBV CHARETTE	STOCKAGE FONDS ROUL	INVESTISSEMENT
MINADER (IADM)	2008	420 000 000	360 000 000	60 000 000				
MINADER	2008	540 194 000			540 194 000			
MINEPAT	2009	1 000 000 000			1 000 000 000			
MINFI	2009	2 000 000 000			2 000 000 000			
MINADER (IADM)	2009	700 000 000	630 000 000	70 000 000				
MINADER	2009	550 000 000			550 000 000			
GOUVERNEMENT	2009	2 500 000 000	850 000 000		1 650 000 000			
MINADER	2010	800 000 000	800 000 000					
MINADER (IADM)	2010	375 000 000	354 000 000	21 000 000				
MINADER (BIP 2011)	2011	1 300 000 000	300 000 000	150 000 000	800 000 000	50 000 000		
MINADER (BIP 2012)	2012	1 000 000 000		70 000 000	800 000 000	50 000 000	80 000 000	
MINADER (BIP 2013)	2013	900 000 000		55 000 000	700 000 000	50 000 000	20 000 000	75 000 000
MINADER (BIP 2014)	2014	350 000 000	315 000 000	10 000 000		25 000 000		
MINADER (BIP 2015)	2015	500 000 000	300 000 000	90 000 000		50 000 000		60 000 000
MINADRE (BIP 2016)	2016	300 000 000	215 000 000	40 000 000		25 000 000		20 000 000
MINADER (BIP 2018)	2018	90 000 000						90 000 000
TOTAL		13 330 194 000	4 124 000 000	566 000 000	8 040 194 000	250 000 000	100 000 000	245 000 000

Représente les 6,750 milliards au lieu de 6,8 milliards attendus

Représente les subventions sur les engrais

Représente les subventions sur les charrettes

Représente les fonds destinés au stockage du céréale.

Représente les fonds de roulement engrais

8.41 Utilisation des intrants sans soutien financier

Dans le détail, on peut penser que les producteurs paient les engrais à un prix un peu majoré. L'application systématique de la TVA (au taux de 19,25% tout de même) aux frais financiers interpelle en effet, surtout si le fonds intrants est mobilisé sans le service de prêts bancaires spécifiques.

Les taux des frais de gestion et/ou l'assiette d'application interrogent également, pour les engrais comme pour les autres intrants. L'assiette d'application a varié dans le temps et varie entre les engrais et les pesticides pour ce qui concerne les frais de gestion alloués à la CNPC-C. Les bons taux de remboursement des intrants indiquent que leur octroi à crédit est associé à un faible coefficient de risque. Cela peut justifier de se questionner sur la justesse du niveau retenu des frais forfaitaires pour la gestion.

Pour les pesticides, la situation est plus diverse. Les producteurs apparaissent taxés de manière assez substantielle dans l'utilisation des herbicides, sans distinction des types de produits utilisés. Pour les insecticides, ils bénéficient d'une péréquation pour inciter au recours à des produits plus récents, plus efficaces (comme le Coragen) mais bien plus chers. Globalement, pour l'ensemble des pesticides, le bilan financier est excédentaire, de l'ordre de 10% du chiffre d'affaires selon les calculs que nous avons pu faire pour la campagne 2015-16 (annexe 8.38), dépassant largement le taux de d'impayé au remboursement des crédits intrants.

Quant au matériel agricole, les producteurs paient les matériels agricoles aux prix réels, hormis le cas des charrettes comme l'indique le Tableau 8-3. Ce matériel a bénéficié d'un soutien fourni par l'Etat camerounais pour subventionner l'acquisition entre 2011 et 2016 (annexe 8.40). Ce soutien est maintenu par la CNPC-C qui prodigue une subvention de 50 000 CFAF pour alléger le coût total de 267 000 CFAF pour une charrette. Le restant à payer semble être trop important encore pour beaucoup de producteurs.

Désignation	2015/2016				2016/2017				2017-2018				2018-2019			
	PA		PC		PA		PC		PA		PC		PA		PC	
	QTE	CFA	CFA	BILAN 10 ⁶ CFA	QTE	CFA	CFA	BILAN 10 ⁶ CFA	QTE	CFA	CFA	BILAN 10 ⁶ CFA	QTE	CFA	CFA	BILAN 10 ⁶ CFA
Charrettes bovines + 2 ridelles	750	241 570	249 000	5,57	1 250	241 570	249 000	9,29	1 500	241 570	249 000	11,15	1 000	241 570	249 000	7,43
Corps bûcheur	1 500	27 500	28 500	1,50	1 500	27 500	28 500	1,50	1 100	27 500	28 500	1,10	1 000	27 500	28 500	1,00
Charrue bovine complète T34					500	50 688	52 500	0,91								
Charrue asine complète T20	500	25 000	34 000	4,50	100	25 000	34 000	0,90	200	25 000	34 000	1,80	200	25 000	34 000	1,80
Pousse pousse PM					650	60 514	68 000	4,87	850	60 514	68 000	6,36	700	60 514	68 000	5,24
Pousse pousse GM					600	64 608	75 000	6,24	120	64 608	75 000	1,25	500	64 608	75 000	5,20
Appareils Handy	7 500	27 008	35 000	59,94	2 000	33 680	35 000	2,64					4 300	33 800	35 000	5,16
Appareils Ulva+ / Pulmic	3 000	30 532	31 500	2,90	1 000	26 764	31 500	4,74					5 500	25 524	31 500	32,87
Total				74,42				31,07				21,66				58,69

QTE = Quantité ; PA = Prix d'acquisition ; PC = Prix de cession ; Bilan = écart entre vente au prix de cession et achat au prix d'acquisition

TABLEAU 8-3: QUANTITES, PRIX D'ACQUISITION ET DE CESSION DU MATERIEL AGRICOLE

8.42 Exemple de bilan du remboursement des crédits

SODECOTON BP 302 GAROUA

**SITUATION CONSOLIDÉE DE REMBOURSEMENTS
DE LA REGION**

Période Du: 01/11/2011 Au: 31/10/2012



CNPC-CAMEROUN BP 1371 GAROUA

Imprimé le: 04-MAR-19 05:05 PM

Editeur: SALI

Campagne: 2011-2012

Code Région : 2 Libelle Region : MAROUA

Camp	Code dus	Nature Dus	Montant Dus	Remboursements	Solde	%
1	TOT_IOT	INTRANTS OOTON	2.133.355.410	2.100.517.745	32.837.665	98,46
1	TOT_IS	INTRANTS SOJA	10.781.500	6.481.550	4.299.950	60,12
1	TOT_MAIS	INTRANTS MAIS/SORGHO	148.121.670	140.743.920	7.377.750	95,02
1	TOT_CT	EQUIPEMENT CT	24.611.935	21.906.625	2.705.310	89,01
1	AUT_GPM	AUTRES CREDITS GP MEMBRE	7.776.680	7.053.250	723.430	90,70
1	APP_ULVA	APPAREILS ULVA + USAGES	24.378.000	22.074.545	2.303.455	90,55
1	TOT_SCV	NPK/UREE SCV	2.461.860	2.337.285	124.575	94,94
1	TOT_URGP	NPK/GP COTISE	11.148.450	10.498.815	649.635	94,17
1	ARR_OOT	ARRIERES OOTON	221.613.675	12.375.275	209.238.400	5,58
1	ARR_SOJA	ARRIERES SOJA	8.756.530	429.315	8.327.215	4,90
1	ARR_VIV	ARRIERES VIVRIERS	62.413.974	3.267.810	59.146.164	5,24
1	ARR_BRAC	ARRIERES BRACHARRIA	173.800	0	173.800	0
1	ARR_IMPUT	ARRIERES MONTANT IMPUTE AU GP	7.213.165	67.515	7.145.650	0,94
1	ARR_CT	ARRIERES EQUIPEMENT CT	6.611.695	412.730	6.198.965	6,24
1	ARR_GPMER	ARRIERES GP MEMBRES	54.380.225	1.417.040	52.963.185	2,61
1	ARR_ALIB	ARRIERES ALIBET/NUTRIBET	2.177.825	14.100	2.163.725	0,65
1	ARR_SCV	ARRIERES NPK/UREE SCV	367.175	24.225	342.950	6,60
1	TOT_BRAC	INTRANTS BRACHARRIA	311.400	311.400	0	100
1	ARR_GP_OOT	ARRIERES NPK/GP COTISE	7.570.945	811.520	6.759.425	10,72
TOTAUX :			2.734.225.914	2.330.744.665	403.481.249	

8.43 Taux de remboursement des divers crédits par les producteurs

Les séries de données sur la période 2011-2017 sur le crédit ont été fournies par la DPA à notre demande; pour des problèmes informatiques, les données de certaines années manquent pour certaines régions SDCC. Le tableau suivant indique les nombres de régions pour lesquelles les données ont été traitées. Dans ce tableau, le crédit octroyé pour l'acquisition des appareils de traitement n'est pas intégré.

	Crédits intrants			Equipement	Crédits aux membres	Total général
	Soja	Maïs/sorgho	Coton			
2011						
Nombre de Région	7	7	7	7	7	35
Montant Dus	191 051 024	746 015 280	12 879 528 225	242 310 600	52 166 810	14 111 071 939
Montants remboursés	61 708 885	612 577 585	10 563 429 169	164 454 250	29 895 637	11 432 065 526
% remboursement	32.3	82.1	82.0	67.9	57.3	81.0
2012						
Nombre de Région	8	8	8	8	8	40
Montant Dus	178 250 950	1 262 621 260	23 833 320 015	853 254 955	82 953 910	26 210 401 090
Montants remboursés	167 149 679	1 195 936 220	23 087 798 942	819 459 618	81 348 665	25 351 693 124
% remboursement	93.8	94.7	96.9	96.0	98.1	96.7
2013						
Nombre de Région	9	9	9	9	9	45
Montant Dus	203 451 100	1 697 397 280	28 286 558 834	315 578 340	105 491 381	30 608 476 935
Montants remboursés	202 492 382	1 683 584 011	28 100 673 627	315 966 100	82 070 905	30 384 787 025
% remboursement	99.5	99.2	99.3	100.1	77.8	99.3
2014						
Nombre de Région	8	8	8	8	8	40
Montant Dus	248 509 300	1 246 352 750	23 465 723 940	197 656 460	82 790 761	25 241 033 211
Montants remboursés	248 509 300	1 217 094 637	23 208 638 104	197 307 720	63 666 112	24 935 215 873
% remboursement	100.0	97.7	98.9	99.8	76.9	98.8
2015						
Nombre de Région	9	9	9	9	9	45
Montant Dus	128 988 842	1 366 016 550	22 968 128 060	176 087 210	43 425 895	24 682 646 557
Montants remboursés	128 988 842	1 360 548 740	22 870 531 932	176 087 210	43 217 580	24 579 374 304
% remboursement	100.0	99.6	99.6	100.0	99.5	99.6
2016						
Nombre de Région	8	8	8	8	8	40
Montant Dus	24 020 065	975 179 900	17 882 776 909	176 274 685	51 778 740	19 110 030 299
Montants remboursés	23 966 825	971 496 554	17 757 710 559	175 363 105	51 390 170	18 979 927 213
% remboursement	99.8	99.6	99.3	99.5	99.2	99.3
2017						
Nombre de Région	8	8	8	8	8	40
Montant Dus		892 004 600	17 690 797 962	108 188 695	87 719 001	18 778 710 258
Montants remboursés		891 229 145	17 658 101 991	107 560 715	84 003 838	18 740 895 689
% remboursement		99.9	99.8	99.4	95.8	99.8

TABLEAU 8-4 MONTANTS ET REMBOURSEMENTS DES DIVERS CREDITS AUX PRODUCTEURS DANS LES GP

Pour le crédit coton dont le montant peut atteindre plus de 28 milliards de CFAF, le taux de remboursement dépasse les 96% depuis 2012 et même 99.5% depuis les dernières campagnes. C'est un indicateur de la réussite du processus d'assainissement déjà évoqué.

Le crédit intrants pour la culture du maïs vient en seconde position en termes de montant engagé. Le taux de remboursement est très proche de 100%.

Le crédit intrants pour la culture du soja n'est plus octroyé depuis la campagne 2016-17, lorsque les usines d'huilerie ont eu assez de graines de coton à triturer. Tant qu'il était octroyé, le taux de remboursement était aussi proche de 100%.

Le crédit équipement, ou le crédit court terme pour l'acquisition de matériel de culture attelé, est aussi remboursé quasiment à 100%. Il convient de noter cependant que le montant de ce crédit a connu une baisse constante, passant de 850 millions CFA en 2012 à environ 110 millions en 2017. Cette baisse témoigne sans doute d'une moindre demande, parce que les besoins à satisfaire ont été de plus en plus couverts pour l'ensemble des producteurs ou pour le sous-ensemble des producteurs en situation financière d'acquérir le matériel. L'absence de soutien réel pour cette acquisition, hormis le soutien relativement modeste pour les charrettes, peut avoir réduit la demande.

Enfin, le crédit sous forme d'avance aux membres des GP a connu des taux de remboursement plus fluctuants pour des montants engagés également fort fluctuants. Au cours des trois dernières campagnes, ce taux a aussi approché les 100%, avec un léger fléchissement observé pour la campagne 2017-18.

Par contre, la capacité des paysans pour apurer les arriérés de crédit reste à étudier. Les données sur les montants des arriérés et de leur remboursement (telles qu'elles apparaissent dans l'annexe 8.42) sont plus délicates à exploiter pour savoir dans quelle mesure des paysans parviennent à apurer leurs arriérés et récupérer ainsi l'éligibilité au crédit intrant pour la culture du coton.

8.44 Statistiques de production en 2017-18 selon les régions

	Région Extrême Nord						Région Nord				Total général	
	Guider	Kaélé	Maroua1	Maroua2	Tchili	Total	Garoua	Mayo G	Ngong	Touboro		Total
Nombre de GP	253	170	136	186	143	888	253	132	166	105	656	1544
% du total	16.4%	11.0%	8.8%	12.0%	9.3%	57.5%	16.4%	8.5%	10.8%	6.8%	42.5%	100.0%
Nbre total producteurs	31 495	22 577	19 202	24 550	13 528	111 352	15 973	9 438	11 545	5 619	42 575	153 927
% du total	20.5%	14.7%	12.5%	15.9%	8.8%	72.3%	10.4%	6.1%	7.5%	3.7%	27.7%	100.0%
Nbre moyen/GP	124	133	141	132	95	125	64	72	70	54	65	100
Nbre total productrices	5 719	3 435	2 326	4 582	2 692	18 754	2 281	1 399	1 453	844	5 977	24 731
% du total	23.1%	13.9%	9.4%	18.5%	10.9%	75.8%	9.2%	5.7%	5.9%	3.4%	24.2%	100.0%
% GP sans productrices	0.8%	1.2%	4.4%	0.5%	4.9%	2.0%	16.2%	4.5%	7.2%	10.5%	10.7%	5.7%
Nbre moyen/GP	22.6	20.2	17.1	24.6	18.8	21.1	9.1	10.6	8.8	8.0	9.1	16.0
Surface totale en coton, ha	29 125	19 124	17 866	19 349	14 036	99 500	32 095	20 679	23 064	11 908	87 746	187 246
% du total	15.6%	10.2%	9.5%	10.3%	7.5%	53.1%	17.1%	11.0%	12.3%	6.4%	46.9%	100.0%
Surface/GP	115	112	131	104	98	112	127	157	139	113	134	121
Surface/membre de GP	1.0	0.9	1.2	0.9	1.3	1.0	2.5	2.4	2.1	2.3	2.3	1.6
Production, tonne	38 642	18 767	24 136	31 164	15 488	128 197	43 389	31 381	34 930	15 932	125 632	253 828
% du total	15.2%	7.4%	9.5%	12.3%	6.1%	50.5%	17.1%	12.4%	13.8%	6.3%	49.5%	100.0%
Production/ha, rendement	1 304	972	1 322	1 602	1 079	1 269	1 405	1 493	1 468	1 284	1 419	1 333
Production/GP	152.7	110.4	177.5	167.5	108.3	144.4	171.5	237.7	210.4	151.7	191.5	164.4
Production/membre de GP	1.34	0.87	1.64	1.37	1.39	1.31	3.39	3.55	3.19	3.00	3.31	2.16
Différence de pesée, %	2.8	2.9	2.4	2.9	3.1	2.8	2.3	2.4	2.4	1.9	2.3	2.6

8.45 Fonctionnement et évolution du mécanisme de gestion du risque prix

Le mécanisme actuel, appelé Fonds de gestion de risque prix s'inspire de celui mis en œuvre au Burkina Faso avec constitution d'un fonds dit de lissage. Ce fonds est abondé lorsque l'exportation du coton fibre a été réalisé au-dessus du prix anticipé, alors qu'un tirage du fonds est envisageable dans le cas inverse. Le mécanisme a été conçu en considérant une production de 150 000 tonnes de CG, avec un fonds à constituer jusqu'à 12 milliards de CFAF pour permettre de faire face à trois ans de chute du prix mondial. La production a doublé depuis, le montant maximal du fonds actuellement retenu ne permettrait pas de résister à trois années successives de chute du prix mondial, même pour une chute d'ampleur limitée. Le fonds est logé à la Caisse Autonome d'Amortissement et n'est pas rémunéré, alors qu'une banque privée serait prête à le faire avec un taux de 2,9%.

Le mécanisme, basé sur une formule d'anticipation du prix, permet de disposer d'un prix plancher et d'une proposition d'abondement ou de tirage du fonds. La formule tient compte de l'évolution du prix mondial lors des trois années précédentes et de l'anticipation de ce prix dans l'année qui suit pour cerner le prix anticipé au moment de l'exportation. Le prix plancher à proposer pour l'achat du CG aux producteurs est déterminé à partir de l'option de conférer à ces derniers 66% du prix à l'exportation. Le tirage du fonds (pour soutenir le prix à payer aux producteurs) peut être décidé si la chute du prix mondial dépasse un intervalle retenu.

Le mécanisme est en application depuis 2011, à partir d'un abondement de 4,150 milliards venant de l'AFD dans le cadre du processus d'effacement de dettes, selon un processus de gestion multipartite avec réunion du comité de pilotage deux fois par an. La SDCC et la CNPC-C assurent la co-présidence du comité auxquels participent les représentants de quatre ministères dont le MINADER et le Ministère du commerce. La réunion en avril permet de décider du prix d'achat issu de la négociation du prix plancher calculé par la formule. La réunion de novembre, au plus tard le 15 décembre, permet de faire le bilan financier de l'exportation du coton fibre et de décider d'abonder ou de tirer le fonds de lissage. Dans l'hypothèse où un excédent de l'exportation demeure après l'abondement du fonds, une prime de prix³⁵ peut être décidée pour s'ajouter au prix d'achat décidé en avril. Le mécanisme en est au 15^{ème} comité de pilotage.

Dans la mise en œuvre du mécanisme, celui-ci s'est révélé être dynamique, dans la mesure où la référence de prix mondial a évolué. Il a été au départ l'Indice A de Cotlook, journalier, en position CAF Extrême Orient. Il a été remplacé ensuite par le prix du marché à terme de New York. Un nouveau changement est en gestation pour se référer aux prix effectivement obtenus par le Cameroun à l'exportation.

Le mécanisme est perçu aussi comme un lien pour la manifestation de la solidarité et du partenariat entre la SDCC et la CNPC-C. Le prix d'achat effectivement décidé a été supérieur ou inférieur au prix de plancher proposé par la formule selon les années. De même, la prise en compte de la situation financière fragile de la SDCC a conduit à ne pas abonder le fonds contrairement à la proposition issue de la formule.

Le mécanisme a été aussi appliqué avec une certaine flexibilité par la CNPC-C. Au cours des dernières années, la CNPC-C s'est écarté de l'option initiale de redistribuer aux producteurs l'excédent à l'exportation après abondement du fonds. Elle a préféré s'en servir pour réduire le prix de cession des intrants aux producteurs. Il s'agit d'une démarche d'auto-soutien à l'intensification (comme suggéré déjà dans un article ancien³⁶), mais qu'il ne convient pas d'appeler subvention car l'Etat n'intervient pas.

³⁵ Pour la campagne 2017-18, une prime de prix de 1,75 CFAF/kg de CG a été octroyée, en plus de 0,55 CFAF/kg au titre de participation au bénéfice à l'exportation du coton fibre de la campagne 2016-17.

³⁶ Fok, M., & Raymond, G. (1995). Organisation locale d'adaptation au marché mondial du coton : le cas du Mali. In S. Calabre (Ed.), *Matières premières, marchés mondiaux, déséquilibres, organisation* (pp. 203–214). Paris: Ministère de la Coopération, Economica.

8.46 Tâches et modalités de réalisation de la commercialisation par les GP

La commercialisation du CG au niveau des villages correspond à un ensemble de tâches. Elle comporte les opérations de classement du coton-graine selon trois choix de qualité, de pesée, d'enregistrement des productions de tous les membres, de stockage, de gardiennage, de chargement des camions lors de l'évacuation vers les usines d'égrenage puis de paiement des producteurs avec prélèvement des crédits dus.

Pour exécuter les tâches attendues, les GP doit disposer d'une équipe d'achat et de personnel pour garder le CG commercialisé jusqu'à son évacuation vers l'usine d'égrenage et pour réaliser le chargement dans les camions lors de cette évacuation. Il s'agit de personnes recrutées à titre saisonnier et rémunérées sous forme de tâcheronnat. Pour celles impliquées dans l'équipe d'achat d'un GP, elles doivent être présélectionnées par les responsables du GP, formées pour bien exécuter les tâches de pesée et de transcription et finalement sélectionnées lors d'une AG. Le gestionnaire des crédits du GP fait partie intégrante de l'équipe d'achat, pour éviter les risques de contestation infondée sur les crédits dus par les producteurs.

Les modalités d'exécution des tâches sont précisées. Les prescriptions à suivre rigoureusement sont indiquées pour le choix des points d'achat, pour la confection des ballots à peser, pour la pesée, pour le stockage et le gardiennage, ainsi que pour le chargement des camions à l'évacuation.

Des mesures sont indiquées pour sanctionner le manque de qualité dans l'exécution des tâches ou pour récompenser la bonne qualité. Le constat de tâches incorrectement exécutées donne lieu à des avertissements, ce qui peut enlever le droit à bénéficier du versement de certaines primes.

L'opération de pesée est réalisée en remplissant de coton-graine les toiles pour constituer des ballots ou "bâches" qui sont ensuite posées sur les balances-bascules (mises à disposition ou louées par la SDCC). Les ballots doivent être d'un poids de 70 ou de 100 kg. Une tare de 2 ou 4 kg par pesée est considérée (selon le poids des ballots), supérieur au poids des toiles afin que le poids sur pont bascule des usines d'égrenage soit toujours supérieur au poids enregistré dans les villages. Il en découle un différentiel de pesée qui revient en recette aux GP et que les GP peuvent décider de redistribuer ou pas aux producteurs. Bien que les instructions sur la tare soient très précises, leur application en pratique est très diverse, comme l'indique l'importance des différences de pesée en pourcentage de la pesée au pont bascule (dernière ligne de l'annexe 8.44). On peut considérer que les pourcentages élevés, générant des ressources financières plus élevées aux GP, témoignent d'une volonté plus forte d'action collective.

Les pesées au village ne concernent pas les producteurs dont la production peut suffire pour remplir au moins une caisse de camion d'évacuation. Une tare de 2% du poids net d'une caisse est tout de même prélevée au profit du GP. Il en découle que les gros producteurs contribuent aussi aux recettes des GP en liaison avec l'exécution de la commercialisation.

Les emplois, saisonniers, créés par la commercialisation sont liés aux équipes d'achat constituées. En général, il s'agit d'une équipe d'achat par GP, mais il arrive que plus d'une équipe soit mise en place dans les plus gros GP à forte production. Chaque équipe d'achat est constituée de six personnes avec quatre membres aux côtés d'un chef d'équipe et d'un gardien à affecter au marché de commercialisation. Neuf mille personnes sont ainsi mobilisées sur la base de 1500 équipes d'achat.

L'exécution de la tâche de commercialisation donne lieu à rémunération des équipes d'achat par les GP mais prise en charge par la SDCC. D'autres personnes peuvent tirer ressource financière lors de la commercialisation. C'est le cas des manœuvres proposant leurs services pour attacher les ballots avant la pesée du CG. Le paiement est forfaitaire par ballot, cette démarche pousse les producteurs à constituer les ballots aussi gros qu'ils le peuvent, amenant la SDCC à limiter aussi le poids maximal des ballots. Par ailleurs, le chargement des camions peut être aussi source de compensation financière.

8.47 Statistiques sur le fonctionnement des GP

Fédérations	Nombre d'union	Montant de la cotisation des membres (FCFA)	Nbre de GP reconnus en activité	Nbre de réunions tenues	Nbre d'AG ordinaires tenues	Nbre d'AG extra-ordinaires tenues	Nbre de réunion/AG de bilan annuel
Maroua 1	6	2 730 500	168	11	3	4	3
Maroua 2	5	3 593 000	207	46	8	10	5
Kaélé	6	20 306 000	182	21	5	2	3
Tchatibali	5	10 845 000	158	21	14	5	8
Guider	5	9 249 000	264	26	16	0	5
Garoua	6	22 379 000	266	6	3	12	0
Ngong	6	6 608 000	166	7	1	2	6
Mayo Galké	4	13 149 100	140	21	11	7	4
Touboro	4	22 389 100	134	7	6	1	3
Zonne cotonnière	47	111 248 700	1 685	166	67	43	37

8.48 Indicateurs de performance du transport d'évacuation du CG

REGION	CG, t	INTRANT, t	NB ROTATIONS	TONN.MOY	NB DE JOURS	ROT/J/CAM	DISTANCE_MOY
AROUA	47 975	582	2729	17,58	190	0,60	77,93
AROUA	48 381	4 141	2888	16,75	192	0,88	76,14
UIDER	39 047	6 296	2819	13,85	191	1,48	41,59
AELE	21 394	1 767	1480	14,46	152	1,39	68,69
CHATIBALI	17 142	2 411	1246	13,76	158	1,13	88,43
GONG	32 889	2 331	2166	15,18	181	1,00	62,48
AYO G	18 909	5 225	1497	12,63	161	0,62	110,21
DUBORO	16 324	1 062	1213	13,46	146	0,59	100,92
OME	12 120	167	817	14,83	141	0,72	117,18
DTAL	254 181	23 981	16 855	15,08	168	0,88	75,95

8.49 Expérience d'octroi d'avance sur récolte dans la région SDCC de Garoua

La Région de Garoua de la SDCC a fourni une illustration de ces initiatives pour allouer des prêts sans intérêt afin de faire face aux frais scolaires ou aux frais de récolte. Selon le tableau suivant, les taux de remboursement sont élevés. Cela est conforme au bon niveau de remboursement obtenu dans les prêts aux membres de GP des différentes régions SDCC sur une période de sept ans (annexe 0).

Type de prêt	Nombre GP	Montant	Remboursement au 06/03/2019 *	
		CFA	CFA	%
scolaire	2	1 350 000	1 350 000	100.0
Prêt récolte	22	25 781 350	22 105 000	85.7
TOTAL		27 131 350	23 455 000	86.4

*A cette date, certains groupements n'ont pas encore commencé la vente du coton et n'ont pu procéder au remboursement

8.50 Revenus des GP liés à la commercialisation du CG

Les GP sont spécifiquement rémunérés par la SDCC pour le service rendu dans le suivi de la campagne agricole et selon la production commercialisée au taux de 5500 CFAF/tonne. Cette rémunération sert à payer le personnel des GP (gestionnaire, magasinier, agent de suivi et gardien). Ce sont les GP, par leurs AG, qui décident des salaires à verser à leur personnel. Il arrive assez fréquemment que toute la rémunération reçue de la SDCC ne soit pas transférée en totalité au personnel pour disposer d'un reliquat pour d'autres usages.

Spécifiquement pour la commercialisation, la SDCC donne les moyens financiers pour faire face aux frais engagés. Il s'agit notamment des frais pour payer les équipes d'achat, pour louer la balance, pour défrayer le chef d'équipe d'achat. Pour la campagne 2017-18, la SDCC a payé 1750 CFA/tonne de CG commercialisé, calculé pour couvrir le montant de 1200 CFA/tonne que les GP doivent rémunérer les équipes d'achat et les frais connexes. Ces frais laissent peu de reliquat dans les caisses des GP.

Ce qui revient réellement comme recette collective des GP sont les primes versées par la SDCC pour inciter à la bonne exécution des tâches confiées. Une prime est octroyée pour récompenser le chargement des camions comme il convient, à plus de 8 tonnes par caisse. Une autre prime dite d'efficacité, implicitement dans la gestion des crédits, est allouée lorsque tous les crédits dus ont été recouverts. Il y a une prime dite d'engrais lorsque les GP ont réussi à distribuer les engrais selon les doses recommandées et si les crédits intrants ont été remboursés à 100%. La prime "engrais" vise à inciter l'utilisation engrais, ce qui a une incidence positive sur la fertilité des sols en plus de booster le rendement. Il n'y a pas de prime similaire pour la distribution des pesticides. Enfin, la prime dite de précocité est instaurée pour inciter à la récolte précoce mais qui se confond avec la précocité de l'évacuation et dont la décision échappe cependant au contrôle des GP. Cette dernière prime est en conséquence beaucoup plus inégalement attribuée.

En pratique, l'on peut dire que les GP sont aussi voire surtout rémunérés par les producteurs pour le service de commercialisation. Lors de la campagne 2017-18, les AG de tous les GP ont décidé de ne pas redistribuer aux producteurs la valeur du différentiel de pesée (entre la pesée au pont bascule et la pesée au village). Il en découle que cette valeur vient en ressource des GP et constitue même la ressource principale du résultat économique des GP leur permettant de s'engager dans des réalisations sociales.

La rémunération totale reçue par les GP est légèrement influencée par le bénéfice des trois primes allouées par la SDCC, mais les contributions de la SDCC et des producteurs sont très proches que l'ensemble de ces primes soient touchées ou pas. En moyenne, pour l'ensemble des 1544 GP actifs lors de la campagne 2017-18, le revenu total est d'un peu plus de deux millions de CFAF.

	GP touchant les 3 primes		Total
	Non	Oui	
Nombre de GP	346	1198	1544
Total revenu	1 539 742	2 222 169	2 069 241
Rémunération de personnel/SDCC	716 280	958 449	904 181
Primes variables SDCC	95 232	135 924	126 805
Valeur de différence de pesée	728 230	1 127 795	1 038 255

TABLEAU 8-5 SOURCES DE REVENU DES GP SELON DEUX CATEGORIES

Le revenu total perçu par les GP pour leur prestation de commercialisation est cependant très variable. Plus de 60% des GP obtiennent un revenu inférieur à la moyenne, mais près de 30% ont obtenu plus de 2,5 millions de CFA.

	GP touchant les 3 primes		Total
	Non	Oui	
< 0,5	15.6%	1.4%	4.6%
0,5 - 1,0	30.9%	12.1%	16.3%
1,0 à 1,5	20.2%	23.1%	22.5%
1,5 à 2,0	11.8%	19.0%	17.4%
2,0 à 2,5	6.4%	12.7%	11.3%
> 2,5	15.0%	31.6%	27.9%
Total	100.0%	100.0%	100.0%

TABLEAU 8-6 DISTRIBUTION SELON LES CLASSES DE REVENU ET DEUX CATEGORIES DE GP

8.51 Réalisations sociales des GP par secteurs SDCC

SECTEUR/ REGION	NBRE DE GP				NBRE DE PRODUCTEURS			RÉALISATIONS (NOMBRE)												
	PILOTE S	SATELLI TES	SUSPEND US	TOTA L	INSCRITS SUR LA LISTE	HOMME S	FEMME S	TOTAL	CASE DE SANTÉ	SALLE DE CLASSE	TABLE BANC	PUITS	FORAGE	MAGASI N	MAITRE DE L'ÉCOLE	MOULIN A ÉCRASE	ELECTRIFI CA TION RURALE	BUREAU GIC	BIEF	ATELIER COUTURE
Mora	48	4	34	86	3 824	595	4 419	3	11	0	7	16	23	32	0	0	0	17	22	0
Kozia	24	0	22	46	3 825	705	4 230	1	0	0	3	0	14	1	0	0	0	17	9	0
Dooiba	41	7	11	59	5 737	803	6 540	1	0	0	14	8	10	11	0	0	0	6	21	0
Bopo	23	21	18	62	3 790	223	4 013	0	0	0	0	0	0	7	0	0	0	14	0	1
MAROUA 1	136	32	85	253	16 876	2 326	19 202	5	11	20	24	24	24	85	51	0	0	54	52	1
Mokong	43	7	1	51	4 106	1 205	5 311	0	4	0	5	5	0	17	0	0	0	10	72	0
Hina	56	6	18	80	4 939	815	5 754	0	19	27	12	8	10	12	0	0	0	4	62	0
Zompoza	43	7	9	59	3 652	1 455	4 807	0	2	20	2	0	0	16	0	0	0	16	68	1
Mokolo	44	1	16	61	7 271	1 407	8 678	0	1	1	0	0	0	6	3	0	0	3	2	0
MAROUA 2	186	21	44	251	19 968	4 582	24 550	0	26	48	19	8	49	15	0	0	0	33	204	1
Mindif	27	1	7	35	4 282	413	4 695	4	23	0	2	10	7	45	0	0	0	5	19	0
Moutouwa	48	3	1	52	4 483	517	5 000	1	8	1	2	18	15	70	0	0	0	9	37	0
Kadé	42	6	9	57	4 177	1 201	5 378	1	10	16	1	11	20	5	1	0	0	19	25	0
Dzouila	53	2	9	64	5 983	1 521	7 504	7	128	343	26	4	25	65	1	0	0	23	13	0
KAELE	170	12	26	208	18 925	3 652	22 577	13	169	442	31	43	67	185	2	0	0	56	94	0
Dana	46	4	19	69	4 008	848	4 856	0	28	0	0	12	47	4	38	0	0	0	0	0
Gobo	47	2	3	52	2 889	1 202	4 101	0	5	0	0	32	29	5	42	0	0	0	0	0
Taala	50	9	9	68	4 013	657	4 670	0	11	0	0	10	6	0	23	0	0	0	0	0
TCHATIBALI	143	15	31	189	10 920	2 707	13 627	0	44	0	0	54	82	9	103	0	0	0	0	0
Bidzar	55	5	1	61	4 230	639	4 869	1	23	0	0	9	0	32	23	0	0	65	18	0
Guider	81	2	0	83	8 906	1 663	10 569	2	18	0	0	11	0	44	19	1	0	54	25	0
Mayo-Oulo	51	2	3	56	6 447	2 520	8 967	1	17	0	0	2	0	21	16	0	0	38	4	0
Scrawel	66	2	6	74	6 006	1 027	7 033	1	13	20	5	0	0	27	13	0	0	21	6	0
GUIDER	263	11	10	274	25 589	5 849	31 438	5	71	20	27	0	0	124	71	1	0	178	53	0
Hamakoussou	33	3	7	43	1 576	205	1 781	1	7	0	0	0	0	8	0	0	0	7	33	1
Garachiga	28	3	18	49	1 537	143	1 680	4	18	145	7	0	0	8	0	0	0	4	49	2
Pleia	60	1	0	61	3 868	615	4 483	1	13	25	1	0	0	9	0	0	0	5	49	0
Paderme	41	1	10	52	2 096	209	2 305	2	12	40	0	0	0	4	0	0	0	5	0	1
Bibemi	49	2	1	52	2 097	235	2 332	2	23	85	4	0	0	7	0	0	0	2	14	0
Bilémi	43	2	8	53	2 863	307	2 870	0	28	0	0	10	0	4	0	0	0	9	0	0
GAROUA	264	12	44	310	13 737	1 714	15 451	10	101	295	22	0	40	0	0	4	0	32	145	4
Ngona	60	0	41	101	2 980	480	3 440	9	43	486	32	9	41	20	1	0	0	33	8	2
Touroua	37	0	2	39	3 001	356	3 357	2	9	51	6	0	0	27	23	0	0	11	8	0
Gouroua	51	0	35	86	2 855	235	3 100	0	20	35	21	0	0	36	10	0	0	15	10	0
Pou	16	0	11	27	1 208	140	1 648	0	12	68	0	0	3	23	8	1	0	7	14	0
NGONG	166	0	89	255	10 054	1 491	11 545	13	84	640	66	12	127	61	2	0	0	66	40	2
Madagrin	39	0	0	39	2 232	365	2 597	0	12	0	0	0	0	0	0	0	0	0	0	0
Tchollire	26	5	4	35	1 313	378	1 691	0	4	0	0	0	3	0	0	0	0	0	0	0
Béré	34	0	9	43	2 305	366	2 671	0	21	0	0	5	3	0	0	0	0	0	0	0
Baikwa	33	3	2	38	2 191	288	2 479	3	25	0	0	0	0	0	0	0	0	0	0	0
MAYO	132	8	15	155	8 041	1 397	9 438	3	62	0	0	6	6	0	0	0	0	0	0	0
Soromoko	32	3	3	38	2 045	414	2 460	5	50	406	6	21	0	0	0	0	0	3	12	0
Ndok	20	10	9	49	903	143	1 046	0	13	15	0	0	3	2	15	2	0	1	7	0
Touboro	33	9	3	45	1 463	160	1 625	0	10	212	0	0	0	0	0	0	0	7	5	0
TOTAL	1 545	240	382	2 067	129 223	24 589	153 812	54	74	722	264	201	475	486	12	0	0	431	613	8

8.52 Valeurs monétaires des réalisations sociales des GP lors de la campagne 2018-19

Activités réalisées	Nombre	Montant
Construction salle de classe à l'école primaire et au collège	16*	18.500.000 f
Achat tables bancs pour les écoles	450	2.250.000 f
Creusage puits forages et leur entretiens	04	2.100.000 f
Construction magasins de stockage des intrants	12*	4.500.000 f
Construction bureau GIC et salle de réunion	08*	7.500.000 f
Construction des points d'achat	07*	2.450.000 f
Achat de terrain pour les locaux du GIC	03	2.520.000 f
Paie maitre des parents d'élèves	Tous les GP	6.000.000 f
TOTAL		27.280.000 f

8.53 Equipement d'égrenage

Au Cameroun, comme dans toute l'Afrique francophone, l'égrenage - à savoir l'opération consistant à séparer la fibre de la surface du CG - est réalisé selon la technologie des égreneuses à scies. Dans le monde, c'est la technologie la plus courante face à la technologie alternative de l'égrenage à rouleau qui est peu compatible avec une forte production à égrener. La vitesse d'égrenage est beaucoup plus rapide mais l'égrenage est plus "violent" et peut provoquer plus fréquemment la casse des fibres.

A la SDCC, l'égrenage est réalisé au niveau de 9 usines de la SDCC dont deux ne sont pas alimentées totalement par l'électricité publique de l'ENEO. Ces usines sont réparties dans les régions Nord et Extrême-Nord du pays (Kaele, Tchatibali, Maroua, Guider, Garoua, Ngong, Mayo Galké, Touboro et Home). Avant la mise en œuvre du plan de relance de la SDCC qui a été identifié en 2017, chaque usine était équipée de deux à quatre "stand" d'égreneuse à 170 scies. On dénombre ainsi un total de 26 stands d'égreneuse, actionnant un total de 4420 scies.

Les usines d'égrenage de la SDCC disposent des équipements complémentaires aux égreneuses mentionnées ci-dessus. Il s'agit du système d'aspiration du CG à partir des camions, du système de convoyage vers les nettoyeurs avant de parvenir aux égreneuses et des humidificateurs. Dans les contextes d'air sec, comme c'est le cas dans la zone cotonnière du Cameroun, ces derniers sont installés pour injecter de la vapeur d'eau sur du coton-graine avant son égreinage mais aussi sur la fibre avant le passage à la presse pour obtenir des balles de coton fibre avec une humidité jusqu'à la limite de 8,5% d'eau autorisée par le commerce international. L'avantage d'adjoindre de l'eau lors de l'égrenage, du moins jusqu'à la limite admise, est de réduire le risque de casse de la fibre lors de l'égrenage et de pouvoir vendre de l'eau au prix du coton fibre. Il y a donc un manque à gagner lorsque les balles vendues sont au-dessous du seuil admis.

Toutes les usines de la SDCC sont équipées de presses et de "lint cleaner". Les presses permettent de constituer les balles de coton fibre au poids standard de 220 kg. Les "lint cleaner" permettent de récupérer des fibres courtes dans les déchets d'égrenage. Ces fibres courtes sont appelées "linter" et peuvent servir de matériaux à la fabrication de produits aussi divers que les serpillières et ...les billets de banque.

En amont de l'unité d'égrenage proprement dite, les usines disposent de silos de stockage temporaire du CG pour faire face aux arrêts de l'usine. Les capacités de stockage peuvent cependant être vite dépassées si les usines s'arrêtent trop longtemps alors que les camions continuent à ramener du CG des villages. Dans un tel cas, c'est l'évacuation du CG qui doit être suspendue avec incidence négative sur l'occupation du matériel roulant et du personnel associé, mais aussi sur le délai de paiement des GP.

8.54 Période et capacités d'égrenage

La SDCC retient une période d'égrenage effectif de 150 jours, débutant de manière idéale en début novembre et finissant avant fin avril, en tenant compte des arrêts volontaires pour l'entretien et la maintenance des machines. Cependant les arrêts involontaires peuvent être nombreux pour diverses raisons déjà évoquées. La rupture dans l'alimentation électrique a particulièrement pénalisé le fonctionnement des usines ces dernières années. Pour la campagne en cours, la combinaison de tous les facteurs défavorables conduit à envisager une fin de l'égrenage vers mi-juillet dans certaines usines.

La capacité d'égrenage est fonction de l'équipement installé et de l'intensité de leur utilisation, celle-ci dépendant d'une part du nombre de jours de fonctionnement, d'autre part de la vitesse de rotation des scies et enfin du pourcentage de fibre portée par le CG. Pour la campagne en cours, les égreneuses fonctionnent 22 heures sur 24 et sept jours sur sept. La vitesse de rotation des scies, libellée en nombre de kg de fibre par scie-heure, est variable selon l'âge des égreneuses. A la SDCC, la vitesse tend à être poussée au maximum possible, variant de 10 à 14 kg/scie-heure, en évitant un égrenage trop "violent" qui serait préjudiciable à la longueur de la fibre. Avec un pourcentage de fibre de 42%, supérieure à celui de 39% retenu pour le fabricant des égreneuses, la capacité d'égrenage est inférieure à la capacité nominale, toutes choses égales par ailleurs.

A la SDCC, le rythme de l'égrenage a été affecté négativement par divers facteurs :

- Manque de pièces détachées pour les égreneuses, soit par manque de ressources financières soit par les retards d'acquisition induits par les règles de passation de marché public³⁷;
- Manque de pièces détachées pour le parc de camion d'évacuation du CG des villages ;
- Mauvaise qualité des pistes ralentissant ou compliquant le passage des camions d'évacuation du CG
- Fourniture d'énergie avec des ruptures par le réseau public de l'ENEO

Le tableau suivant donne la capacité d'égrenage selon les équipements recensés lors de l'établissement du plan de relance et selon diverses hypothèses de fonctionnement de ces équipements (nombre de jours d'égrenage effectif, vitesse de rotation des scies) pour des journées de 20 heures (au lieu du rythme effréné de 22 heures retenu actuellement). Dans l'hypothèse d'une durée d'égrenage effectif de 120 jours pour traiter du CG qui n'a pas été mouillé, il est possible d'égrener 303 000 tonnes avec une vitesse de 12 kg/scie-heure, soit la production prévue pour la campagne en cours. La condition de ces 120 jours n'a cependant pas été remplie au cours des deux dernières campagnes. Il serait possible d'égrener une production plus grande si le nombre de jours d'égrenage effectif peut être augmenté. En passant à 150 jours, l'égrenage de près de 380 000 tonnes de CG serait possible.

Nombre de jours d'égrenage effectif	150				120			
Vitesse, kg/scie-heure	11	12	13	14	11	12	13	14
Capacité, tonne fibre	145 860	159 120	172 380	185 640	116 688	127 296	137 904	148 512
Capacité, tonne CG	347 286	378 857	410 429	442 000	277 829	303 086	328 343	353 600

TABLEAU 8-7 CAPACITES DES USINES SELON LE NOMBRE DE JOURS EFFECTIFS ET DE VITESSE D'EGRENAME

³⁷ L'incidence de ces règles devrait être moindre à partir de la prochaine campagne, à la suite de l'assouplissement des règles pour entériner les commandes.

8.55 Classement du coton fibre à la SDCC

A la SDCC, comme dans toutes les sociétés cotonnières en Afrique francophone, un échantillon est prélevé sur chaque balle de coton après sa sortie de la presse, pour fin de classement. Ce dernier permet de déterminer le grade du coton fibre (une dénomination de qualité fondée sur l'éclat de blanc et le degré de charge en débris végétaux) par appréciation visuelle, et la longueur de la fibre par appréciation manuelle (selon la technique de "pulling"). Le micronaire, un indice composite pour indiquer la finesse et la maturité de la fibre, est mesurée par des machines appropriées mais non automatiques. La mesure du micronaire a été engagée après que les négociants se sont plaints de valeur trop basse de cet indice, comme par hasard immédiatement après que leur critique de coton collant³⁸ ait perdu de son fondement à la fin des années 1990.

La mesure du taux d'humidité des balles de fibre n'est pas mesurée. C'est le cas général dans les sociétés cotonnières en Afrique francophone. Une telle mesure nécessite un changement dans l'organisation du travail et un équipement, quoique simple, relevant davantage de laboratoire d'analyse chimique comme celui fonctionnant pour l'huilerie.

Dans le plan de relance qu'elle a proposé en 2017, la SDCC avait prévu de passer au classement par des machines automatiques pour la mesure des paramètres mentionnés précédemment et d'autres. Cela requiert l'installation d'une salle aux conditions de température, de lumière et d'hygrométrie contrôlées et l'acquisition de trois machines HVI. Le financement négocié avec la BID n'a finalement pas été concrétisé. La SDCC aurait pris la décision de concrétiser, sur financement propre, le passage au classement automatique avec construction d'un bâtiment et l'achat d'une machine.

En attendant, le classement est réalisé dans une seule salle sise à Garoua vers laquelle convergent les échantillons prélevés dans toutes les usines. Il est réalisé sous la responsabilité du seul classeur expérimenté (après le départ à la retraite du précédent responsable), entouré de quatre jeunes recrues (dont deux femmes) n'ayant qu'une année de pratique³⁹ et de sept assistants. La mesure de la longueur par la méthode de pulling prend du temps, aussi est-il fait seulement une fois par caisse,⁴⁰ ou 14-15 balles.

Pour le grade, le Cameroun, comme les autres pays de l'Afrique francophone, applique de longue date des types commerciaux portant des noms spécifiques. Dans le cadre d'une prestation commanditée en 2005 par l'ONUDI, les types commerciaux des divers pays ont été mis en correspondance avec les grades d'un standard africain que l'Association Française Cotonnière (AFCOT) avait établi. Ce standard est composé de cinq classes⁴¹, chacune étant déclinée en quatre sous-classes. Pour autant, les dénominations du Standard africain ne sont toujours pas utilisées dans les transactions à l'exportation. Dans le cas du Cameroun, les types Plebe S et Plebe correspondent respectivement aux sous-classes 1 et 2 de la classe 1. Il est tentant pour un négociant d'ajouter un S pour vendre plus cher une balle de coton Plèbe, tentation à laquelle on aurait effectivement succombé.

³⁸ Lié au dépôt de miellat par des insectes. Le phénomène de coton collant est très handicapant lors de la filature en provoquant l'arrêt des machines.

³⁹ Il faudrait trois ans de pratique pour être suffisamment expérimenté.

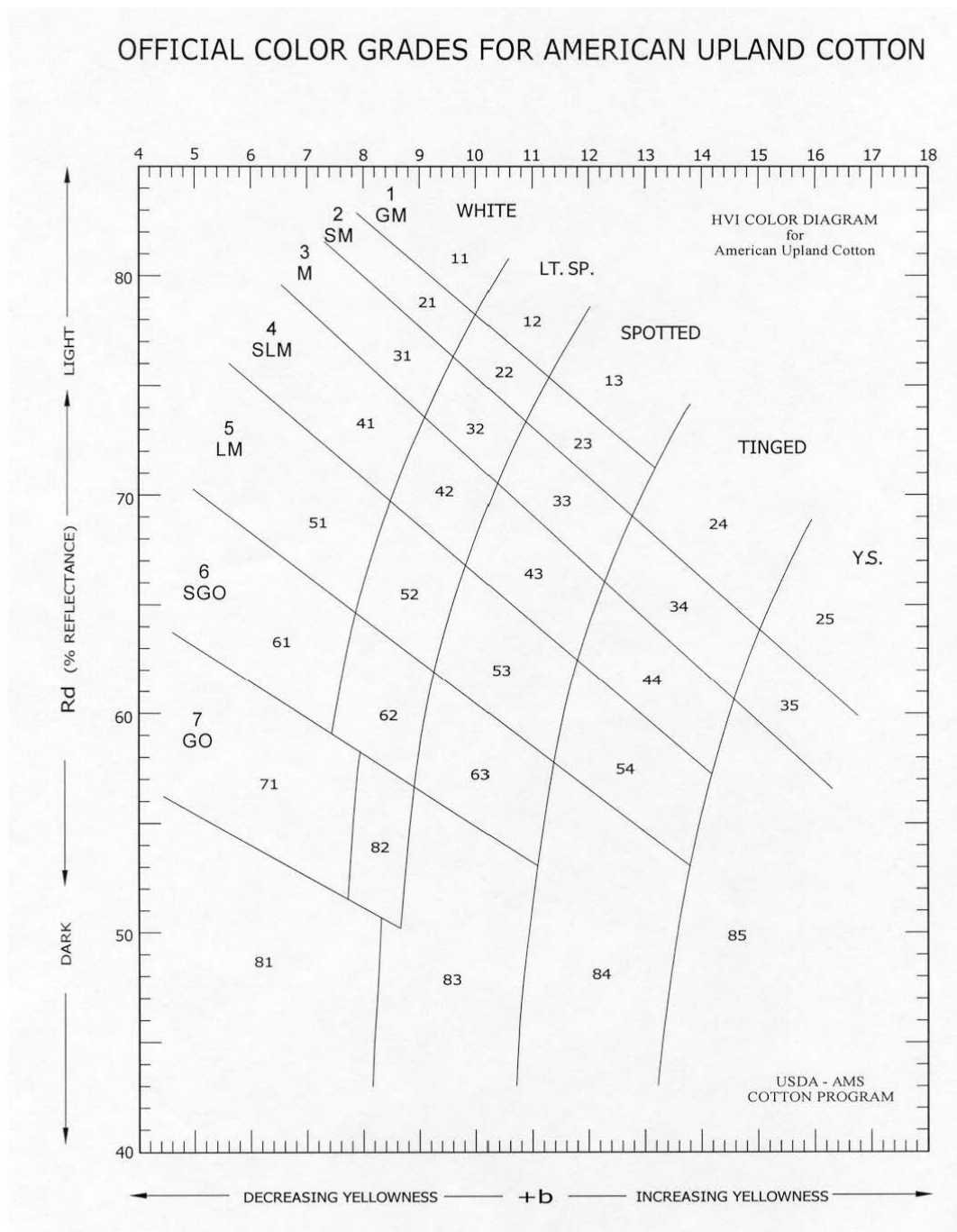
⁴⁰ En pratique, on fait le pulling sur la balle N° 7 issue du CG d'une caisse. C'est seulement si la longueur est différente de l'attente que l'on refait d'autres mesures pour les balles de numéros intermédiaires.

⁴¹ L'AFCOT parle maintenant de standard au lieu de classe, alors qu'elle parle par ailleurs du Standard Afrique. Il y a une confusion assez malheureuse de termes. Il est préféré ici de parler de classes et de sous-classes.

8.56 Standard Afrique et correspondance avec les types commerciaux de coton fibre en Afrique francophone

Standards	Bénin	Burkina	Côte d'Ivoire	Mali	Soudan	Sénégal	Tanzanie	Togo	Cameroun	Tchad
STANDARD 0	01 KABA/S	BOBY/S	MIKO			SIGAL/S	TANG	OTI	PLEBE/S- SUPRA	KERO
	02			SARAMA				ALTO/S	PLEBE- IRMA/S	ZERO EXTRA
	03 KABA	BOLA/S	MANBO/S	JULI/S			GANY+1/2			ROKE
	04			NERE	ACALA-1 /ACALA-Bt					
STANDARD 1	01 BELA	BOBY	MANBO/N	JULI		SIGAL			PLINE	KARA- BAJA
	02			KATI			GANY	ALTO	IRMA-IRFO	
	03 BELA/C	BOLA	MANBO/C		ACALA-2				IRIS	RAKA
	04			KATI/C						
STANDARD 2	01	TOMA				TAMA	GANY-1/4		IGOR	BAPO-KAPO
	02 BELA/T	VOTA	BEMA/N			SAVAL		TANGO	IROL	
	03	RUDY	BEMA/C		ACALA-3		GANY-1/2	OGOU	IRVI	POBA-POKA
	04	VIVA						GOTO		
STANDARD 3	01	RADA		LIBA		SEVE			SULI	BOKE-POKE
	02	BUFA	BILO	KOLA	ACALA-4		GANY-3/4	TOLE		
	03 ZANA									KEBO-KEKO
	04 ZANA/C	BABU	CORE	LIBA/C		MAKO		BUTO	GARU	
STANDARD 4	01 ZANA/T	BOBO/3		BATA			YIKA			
	02 KENE							LAGO	KAMI	
	03									
	04 BATI	BOBO/4	BUKA						KOKA	

8.57 Abaque de l'USDA pour les grades de coton fibre



8.58 Correspondance entre types de vente du coton camerounais et les numéros de grade aux USA

Cameroun	Std. USA			Std Afrique
types de vente	grade	couleur	Numéro de Grade synthétique	Numéro classe et sous-classe
PLEBE/S	GM	W	11	01
SUPRA	GM	LS	12	01
PLEBE	GM	LS	12	02
IRMA/S	GM	W	11	02
PLINE	SM	LS	22	11
IRMA	SM	LS	22	11
PLAME	M	LS	32	13
IRFO	SLM	W	41	13
IRIS	GM	S	13	14
IGOR	SLM	W	41	21
IRVI	SM	S	23	23
IROL	SLM	W	41	22
SULI	LM	W	51	31
GARU	M	TI	34	34
KOKA	SLM	S	43	44
KAMI	SLM	S	43	42
KOLA	SLM	TI	44	
ROCI	GO	Y	85	

8.59 Qualité et rendements industriels à l'égrenage

Sur le plan quantitatif, le principal indicateur du rendement industriel à l'égrenage est le rendement fibre (ratio du poids de la fibre obtenue sur le poids de CG à l'entrée). Au Cameroun, ce rendement fibre dépasse 42%, contre un rendement en graines de 53 à 54%, et un rendement en linter de 0,5 à 1% pour un taux de déchet de 3,0 à 3,5%.

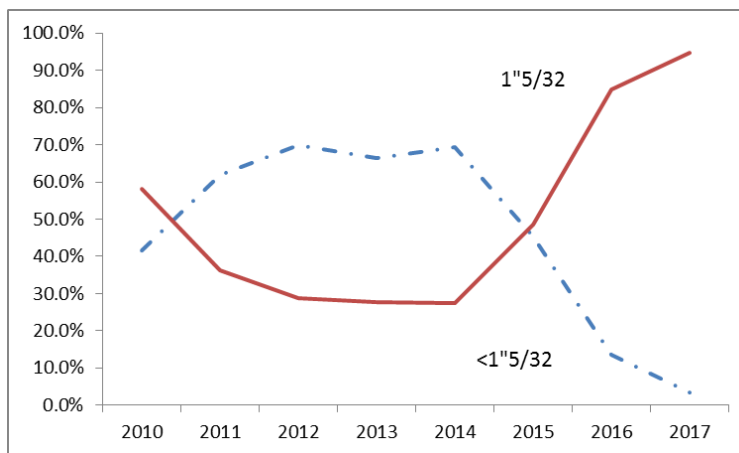
La diffusion à grande échelle de la variété Q302 depuis la campagne 2015-16 a eu un impact positif sur le rendement fibre à l'égrenage. Ce qui a été observé par les chercheurs est confirmé au niveau industriel. Le gain de rendement fibre a cependant pour incidence de ralentir le rythme d'égrenage, une même quantité de CG nécessitant plus de temps pour être égrenée.

Le taux d'humidité des balles de coton est un autre indicateur quantitatif de la performance industrielle qui retient moins d'attention, mais à tort. En dépit du fonctionnement des humidificateurs, le taux atteint dans les usines de la SDCC serait seulement, au mieux, d'environ 5%, contre un taux admis de 8,5%. Pour une production de 100 000 tonnes de fibre au taux de 5%, l'augmentation de ce taux à 7% induirait un gain de production de 2000 tonnes de fibre, soit une valeur de deux milliards de CFAF pour un prix moyen d'un million par tonne. Un tel manque à gagner commande d'optimiser le fonctionnement ou le processus d'humidification du CG avant égrenage et surtout de la fibre avant le pressage, mais cela requiert des changements dans la conduite de l'égrenage. Il est aussi possible que le climat très sec ne rende pas la tâche facile.

Un indicateur quantitatif d'importance moindre est le poids des balles pour lequel le standard international est de 500 livres de poids brut (226,8 kg) ou 478 livres de poids net (216,8 kg). Les balles sorties d'usine de la SDCC n'atteignent pas toujours le standard mentionné, mais de manière variable entre les usines. Des cas de balles pesant moins de 190 kg ont été observés mais de manière rare. Le manque d'humidité de la fibre est un facteur de la difficulté de pressage pour atteindre le poids souhaité. L'incidence de l'insuffisance du poids moyen des balles sur les coûts de transport est cependant marginale. Le problème de cette insuffisance doit être en partie lié à celui d'une humidification non optimale lors du procès de l'égrenage.

Les indicateurs qualitatifs de la production de coton fibre sont les caractéristiques de la fibre, essentiellement le grade et la longueur, et pour lesquels la performance obtenue est bonne. En matière de longueur, et surtout depuis la diffusion à grande échelle de la variété Q302, quasiment toute la production est classée avec une longueur de 1"5/32. L'effet de la variété Q302 est visible avec la forte augmentation observée depuis 2015 comme on le voit dans la Figure 8.1.

Figure 8.1: Evolution de la production de fibre selon la longueur



Pour ce qui concerne le grade, 90% de la production de fibre est en classe 0 ou 1 du Standard africain. L'effet de la variété Q302 est également perceptible. La part de la fibre en classe 2 n'a été que de 7,5% lors de la campagne 2017-18 alors que celle de la fibre de grade inférieur a été réduite à moins de 2% (Figure 8.2).

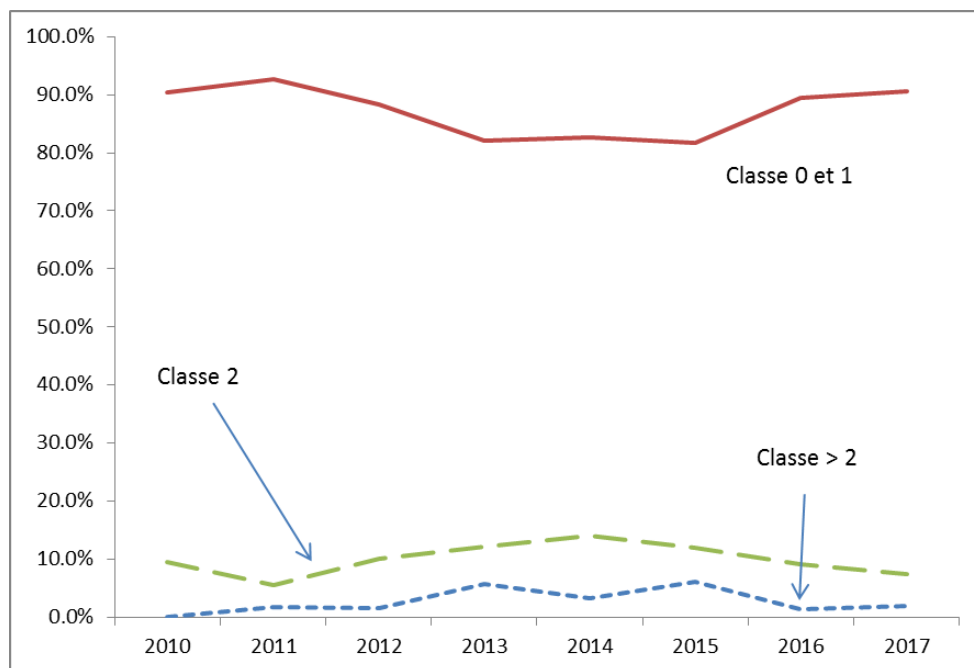


Figure 8.2: Evolution de la production de fibre selon le grade

8.60 Modalités des ventes à l'exportation

Les ventes à l'exportation du coton fibre sont faites en position FOB, essentiellement au port de Douala, et selon le règlement général européen porté par l'AFCOT. Depuis la mise en service du port de Kribi, à une cinquantaine de km de Douala, l'embarquement dans ce dernier port devrait devenir de plus en plus fréquent. L'armateur CMA-CGM, par ailleurs actionnaire de Geocoton, a investi avec le Groupe Bolloré dans la mise en opération du port de Kribi afin de s'abstraire de l'engorgement du port de Douala. La SDCC envisage qu'à court terme 40 à 60% de l'exportation du coton fibre transitera par ce port.

Les ventes sont effectuées de manière systématique sur appels d'offres auxquels répond un pool d'un peu moins de vingt négociants. Il semble que tous les éléments de ce pool répondent à tous les appels, chacun des appels pouvant cependant comporter plusieurs lots, jusqu'à plus de dix. Le plus souvent, la SDCC propose des lots de 500 tonnes de fibre d'un même grade et d'une même longueur. Les négociants du pool sont des négociants internationaux multi-produits (Dreyfus, Cargill, Olam, Glencore, Ecom, RCMA, ECTP), des négociants spécialisés dans le coton et d'envergure internationale (Reinhard) ou d'envergure plus régionale (Otto Stadlander, CDI, COPACO, DEVCOT, Mambo), d'intervention récente (Violar, Faircot) auxquels s'est jointe une compagnie chinoise à ambition internationale et multi-produits (Cofco international). Les négociants d'envergure multinationale (Dreyfus, Olam, Cargill) ont tendance à soumettre pour tous les lots, à la différence des autres négociants, à l'exception semble-t-il de la firme Violar.

Les appels sont lancés pour des périodes d'embarquement déterminées, par exemple en juillet de l'année N pour des offres soumises en février de la même année. La période d'embarquement est contractuelle. Le non-respect de la date d'embarquement par le négociant est source de préjudice pour la SDCC et justifiable en théorie de pénalité. En pratique, un tel écart dans le respect des engagements contractuels confère au négociant concerné une tache dans sa réputation, que cet écart soit observé dans le pays ou ailleurs, car les directeurs commerciaux des sociétés cotonnières peuvent se passer mutuellement les informations sur l'honorabilité de leurs clients. Au Cameroun, à la signature du contrat, les négociants nouveaux ou peu connus, ou dont la réputation a subi une quelconque anicroche, est assujéti au versement d'une caution de 15% de la valeur du contrat.

8.61 Evolution du pool de clients à l'achat du coton fibre pour exportation

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Nombre d'appels d'offres pour vente FOB	48	74	84	93	73	71	74	62
Quantité totale concernée, tonnes	56 401	76 449	92 343	95 575	121 351	99 005	97 336	106 250
Quantité moyenne par appel, tonnes	1 175	1 033	1 099	1 028	1 662	1 394	1 315	1 714
Nombre de négociants différents ayant soumissionné dans l'année	9	9	10	10	9	14	14	14
Nombre de négociants couvrant 75% des ventes	5	5	5	5	4	4	5	3
Nom du premier négociant en quantité achetée	CARGILL	DREYFUS	DREYFUS	CARGILL	CARGILL	CARGILL	RCMA	OLAM
Nom du deuxième négociant en quantité achetée	REINHART	REINHART	REINHART	REINHART	DREYFUS	DREYFUS	CARGILL	CARGILL

8.62 Référence de prix et prime/décote pour la qualité

En matière de prix, la SDCC s'établit une référence de prix visé selon le prix du marché à terme de la bourse de New York, le seul endroit où le coton est coté à terme, mais seulement pour le coton d'origine étatsunienne et qui est d'un grade et longueur inférieur à ce qui est retenu pour l'indice A de Cotlook, et de surcroît à ce que le Cameroun produit. Le choix de cette référence est à considérer en relation avec le mécanisme de gestion de risque prix explicité précédemment. Cette référence est cependant corrigée par l'écart de qualité du coton proposé avec la qualité prise en compte dans les indices de prix international comme celui évoqué pour la Bourse de New York.

La vente selon le règlement général européen porté par l'AFCOT amène à se référer au tableau des écarts publié par cette association. Ce tableau indique les primes ou les décotes pour des écarts par rapport à une base de longueur et à une base de grade. Jusqu'à la date du 27 février 2019, la base de longueur est 1"1/8 et celle du grade est le standard 1 pour le coton originaire de l'Afrique francophone.

COMMISSION DES ECARTS

RGE AFCOT

Publié le 20 septembre 2018

- 1- Les différences entrent en application le lendemain de leur publication
- 2- Toutes les différences à l'exception des cotons d'Afrique de l'Ouest et du Centre sont exprimées en Us\$/Lb
- 3- Les différences pour les cotons d'Afrique de l'Ouest et du Centre sont exprimées en centimes d'euro par kilo
- 4- Taux de change euro/U.S dollar **1,17**
- 5- Les modifications apportées apparaissent en rouge

AFRIQUE DE L'OUEST

[BENIN, BURKINA-FASO, CAMEROUN, CENTRE-AFRIQUE, COTE D'IVOIRE, GUINEE, MALI, NIGER, SENEGAL, TCHAD, TOGO et provenances assimilées]

Standards des Sociétés Cotonnières Africaines Exportatrices

Classe	ST 0	ST 1	ST 2	ST 3	St 4	Soie	1.5/32"	1.1/8"	1.3/32"	1.1/16"	1.1/32"	1"
	2,50	Base	-2,50	-6,00	-12,00	Euro ct/kg	2,25	Base	-2,25	-6,00	-9,00	-14,00
Couleur	White	Spotted	Tinged	Stained	Light Gray							
	Base	-4,00	-8,00	-12,00	-4,00							

ARGENTINE

Classe	GRADO B	GRADO C	C - 1/2	GRADO D	D - 1/2	GRADO E	GRADO F	1.1/8"	1.3/32"	1.1/16"	1.1/32"	1"	31/32"
	2,5	1,50	BASE	-2,50	-5,00	-8	-12	1,00	Base	-1,00	-2,00	-3,00	

BRESIL

Sur la base des derniers Standards Universels des Cotons des Etats-Unis

Classe	SM21 (1 à 4)	M31 (1 à 4)	SLM41 (1 à 4)	LM51 (1 à 4)	Soie	1.5/32"	1.1/8"	1.3/32"	1.1/16"	1.1/32"
	1,25	Base	-1,00	-3,00		2,00	1,00	Base	-2,00	-2,75
Couleur	White	Light Spotted	Spotted							
	Base	-1,25	-2,50							

Le Cameroun, comme les autres pays cotonniers de l'Afrique francophone, établirait des primes et décotes pour ses types de vente en fonction d'un type de référence. C'est une liste de primes et décotes différentes de celles de l'AFCOT car elles devraient être plus détaillées du fait du nombre de types de vente considérés, mais elle y est liée en se référant aux valeurs des écarts de l'AFCOT.

Du fait de la relation au moins implicite avec le tableau des écarts de l'AFCOT, l'on peut dire que le Cameroun, comme les autres pays de l'Afrique francophone, a été longtemps abusé par la base de longueur choisie par l'AFCOT pour le coton de cette région (1"1/8 ou 1"4/32), plus élevée que celle retenue pour les Etats-Unis (1"3/32) et pour l'Argentine (1"1/16 ou 1"2/32). L'AFCOT vient seulement de corriger la base de longueur pour l'Afrique en l'alignant sur celle retenue pour les Etats-Unis (correction faite le 27/02/2019). Sur un volume exporté de 100 000 tonnes, un manque à gagner de 2,4 millions d'euro est ainsi récupéré. Mais ce manque a été effectivement perdu pendant des années.



COMMISSION DES ECARTS

RGE AFCOT

Publié le 27 février 2019

- 1- Les écarts s'appliquent le lendemain de leur publication
- 2- Tous les écarts à l'exception de ceux de l'Afrique de l'Ouest et du Centre sont exprimés en USC/LB
- 3- Les écarts pour les cotons d'Afrique de l'Ouest et du Centre sont exprimés en centimes d'euro/kilo
- 4- Taux de change euro/U.S dollar **1,14**
- 5- Les modifications apportées apparaissent en rouge

AFRIQUE DE L'OUEST

[BENIN, BURKINA-FASO, CAMEROUN, CENTRE-AFRIQUE, COTE D'IVOIRE, GUINEE, MALI, NIGER, SENEGAL, TCHAD, TOGO et provenances assimilées]

Standards des Sociétés Cotonnières Africaines Exportatrices

Classe	ST 0	ST 1	ST 2	ST 3	ST 4	Soie	1.5/32"	1.1/8"	1.3/32"	1.1/16"	1.1/32"	1"
	2,70	Base	-2,70	-6,55	-13,05	Euro ct/kg	4,80	2,40	Base	-4,35	-7,25	-13,05
Couleur	White	Spotted	Tinged	Stained	Light Gray							
	Base	-4,35	-8,70	-13,05	-4,35							

ARGENTINE

Classe	GRADO B	GRADO C	C - 1/2	GRADO D	D - 1/2	GRADO E	GRADO F	1.1/8"	1.3/32"	1.1/16"	1.1/32"	1"	31/32"
	2,5	1,50	BASE	-2,50	-5,00	-8	-12		1,00	Base	-1,00	-2,00	-3,00

BRESIL

Sur la base des derniers Standards Universels des Cotons des Etats-Unis

Classe	SM21 (1 à 4)	M31 (1 à 4)	SLM41 (1 à 4)	LM51 (1 à 4)	Soie	1.5/32"	1.1/8"	1.3/32"	1.1/16"	1.1/32"
	1,25	Base	-1,00	-3,00		2,00	1,00	Base	-2,00	-2,75
Couleur	White	Light Spotted	Spotted							
	Base	-1,25	-2,50							

Il est possible que les pays cotonniers de l'Afrique francophone restent abusés sur la base de grade, actuellement retenue pour la classe 1 du standard Afrique que porte aussi l'AFCOT. Au regard des types commerciaux de coton de l'Afrique francophone retenu par la firme Cotlook pour établir l'Indice A (annexe 8.63), mais dont la correspondance avec le Standard Afrique, selon une actualisation récente (annexe 8.56), renvoie à un étalement de grade allant de la sous-classe 3 de la classe 2 (Rudy du Burkina Faso) à la sous-classe 1 de la classe 1 (Bela du Bénin correspondant au Pline du Cameroun), soit un écart de sept sous-classes alors qu'une classe ne comporte que quatre sous-classes. L'AFCOT devrait être beaucoup plus précise sur la classe et la sous-classe de son standard pour la référence de grade. Cette référence devrait se situer davantage dans une sous-classe de la classe 2. Les écarts pour le grade devraient ainsi être définis pour les sous-classes pour sortir du paradoxe où l'AFCOT n'applique pas le standard qu'elle porte. Avec un réajustement dans le sens de l'équité, un manque à gagner de 2,4 cents d'euro par kilo pourrait être récupéré, ou 2,4 millions d'euro pour une exportation de 100 000 tonnes de fibre.

8.63 Les types de coton intégrés dans le panier servant à la cotation de l'Indice A par Cotlook

Australian	Greek	Mexican
Benin BELA*	Indian medium grade **	Paraguayan
Brazilian	Ivory Coast BEMA*	Syrian
Burkina Faso RUDY*	Mali KATY*	TanzanianType 1 SG
California/Arizona	Memphis/Eastern	Turkish S. Eastern Std 1 RG
Chinese 328	Memphis/Orleans/Texas	Uzbekistan

* Only two African Franc Zone origins are currently allowed to figure in the A Index calculation on any day

** Applicable ICS standard, as adopted by the ICA is ICS 105 Fine

8.64 Indices de prix mondial et prime à la qualité

Le principal indice pour juger du prix mondial de coton est l'indice A de Cotlook, entreprise établie à Liverpool de longue date, et libellé en US cents par livre (0,4536 kg). Cet indice se réfère à du coton d'un grade et d'une longueur déterminés, mais aussi à une position de vente. Cette dernière a longtemps été la position de livraison, en CAF Nord Europe. Elle est devenue depuis une quinzaine d'années coût et frêt dans un port principal d'Extrême Orient, Hong Kong, Shanghai et bien d'autres. Le grade se réfère au Middling depuis plus de trente ans, c'est-à-dire les types de vente PLAME ou GARU au Cameroun (cf. annexe 8.58). La longueur est passée à 1"1/8 (ou 1"4/32) depuis une dizaine d'années.

L'indice du contrat à terme proche de la bourse de New York se réfère aux contrats physiques, en position spot (ex-usine d'égrenage) dans un certain nombre de villes américaines, et seulement pour du coton américain de grade Strict Low Middling (c'est-à-dire les types IRFO, IGOR et IROL au Cameroun, cf. annexe 8.58) et d'une longueur de 1"1/16 (ou 1"2/32).

Comme l'indice de New York se réfère à une qualité de coton nettement moindre et à une position de livraison intégrant moins de coût pour le vendeur, ce sont des facteurs objectifs pour que son niveau soit inférieur à celui de l'Indice A de Cotlook (Figure 8.3).

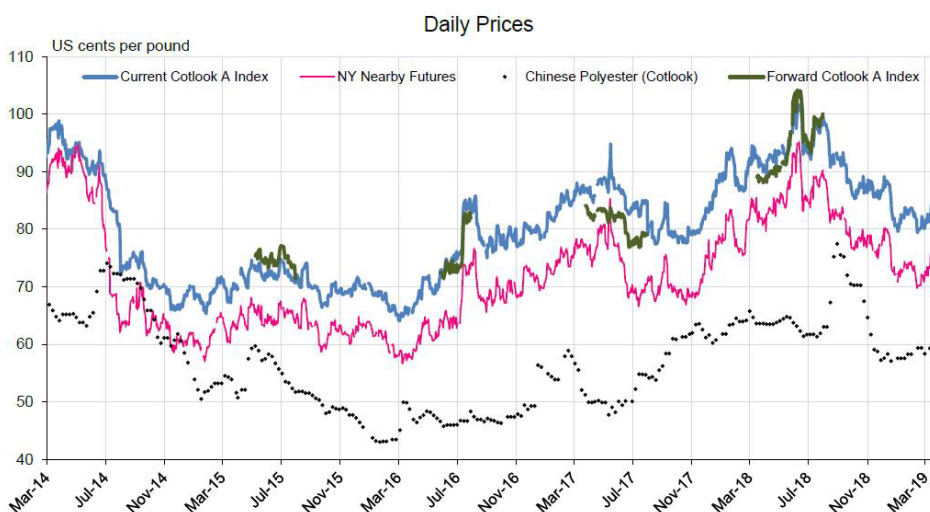


FIGURE 8.3: INDICE A DE COTLOOK ET INDICE DE VENTE A TERME PROCHE DE NEW YORK

Les données fournies sur les prix moyens de vente selon le grade (ou type de vente) et la longueur ne sont pas assez détaillées pour analyser correctement les différentiels de prix selon ces deux critères. Il est légitime d'attendre une prime de marché tant pour le grade que pour la longueur, mais ce résultat ne ressort pas de l'analyse du Tableau 8-8.

Le Tableau 8-8 prend en compte trois types de coton correspondant aux classes 0, 1 et 2 du Standard Afrique, et deux longueurs de fibre. Il présente les différences entre le coton en colonne et le coton en ligne pour les trois campagnes de 2015 à 2017 (mais prises dans le sens inverse dans le tableau). Le tableau est incomplet, soit parce que les deux longueurs considérées n'ont pas été obtenues pour les types de coton, soit parce que nous avons eu incomplètement les données. Si le grade et la longueur sont effectivement primés dans les ventes effectuées, on devrait obtenir des chiffres positifs et grandissants de haut en bas de chaque colonne. Il n'en est rien. C'est un résultat qui interpelle aussi pour une analyse plus complète et plus fine.

		Plèbe 1"5/32	Plèbe 1"1/8	Pline/Plobe 1"5/32	Pline/Plobe 1"1/8	Iris 1"5/32	Iris 1"1/8
Plèbe	1"5/32						
Plèbe	1"1/8	124/___/___					
Pline/Plobe	1"5/32	36/-99/ 9					
Pline/Plobe	1"1/8						
Iris	1"5/32	126/___/___		90/ 7/___			
Iris	1"1/8	___/-92/48		___/___/39			

Note : Les trois nombres séparés par / correspondent aux campagnes 2017, 2016 et 2015, dans cet ordre à partir de la gauche. Plèbe, Pline/plobe et IRIS sont les types de vente correspondant aux classes 0, 1 et 2 du Standard Afrique de l'AFCOT

TABLEAU 8-8: ECARTS DE PRIX DE VENTE MOYENS SELON LE GRADE ET LA LONGUEUR DU COTON FIBRE A L'EXPORTATION POUR LE PRINCIPAUX TYPES DE VENTE (EN CFAF/KG)

8.65 Modalités de mise à FOB et perspective

Les trois intervenants (Bolloré Logistics, Camas et Sonotra) opèrent avec certaines différences selon leurs capacités de stockage au port. La Sonotra n'en a pas du tout et elle s'est spécialisée dans la réception de coton "instruit"⁴² pour pouvoir les mettre en container sans avoir à l'entreposer. Camas, dont le responsable rencontré est un ancien collaborateur du patron de Sonotra, procède de même. Bolloré-Logistics disposant de capacités substantielles de stock au port de Douala, et encore plus à la gare de N'Gaoundéré, a un avantage sur ses concurrents, même si pour son client, l'entreposage a un coût.

L'entreposage au port ressort comme un aspect majeur dans la bonne gestion des embarquements des ventes. Pour deux des trois transitaires interviewés, l'investissement en magasin de stockage (estimé à un milliard de CFAF pour un magasin opérationnel de 4000 tonnes) est une option rentable. La SDCC aurait même à y gagner en se contentant de donner le magasin en gérance. Une telle possibilité de magasinage autorise même l'option de la vente ex-magasin qui peut intéresser les négociants.

Le paiement de tous les frais et taxes pour la mise à FOB constitue une avance pour le compte de la SDCC et il puise sur la trésorerie des transitaires qui peuvent avoir recours au crédit de court terme. L'un d'entre eux se tourne notamment avec succès vers les institutions de microfinance qui ont assez de liquidités mais pas assez de clients.

Le service de mise à FOB du coton fibre pourrait s'avérer plus compliqué, et donc plus coûteux, avec la perspective du contrôle contradictoire du poids à l'embarquement. Les pays cotonniers de l'Afrique francophone se préparent à cette pratique pour se prémunir des contestations sur le poids⁴³ à l'arrivée au port de destination. En pratique, la SDCC cherche à identifier un opérateur "certifiant" pour le représenter au contrôle contradictoire. Cela a un coût pour le vendeur qu'est la SDCC mais aussi pour certains négociants s'ils ne recourent pas déjà à l'intervention d'un opérateur pour les représenter. Mais pour la SDCC, un autre coût plus important pourrait découler de la manière dont le contrôle de poids sera envisagé. S'il faut un contrôle du poids balle à balle, le coût sera notable du fait de toutes les manipulations nécessaires. L'un des transitaires rencontrés pense même qu'il lui sera impossible de le réaliser.

Un tel phénomène de changement de pratique en réponse à des réactions venant des pays de destination est très curieux. La SDCC, comme ses consœurs dans les autres pays cotonniers de l'Afrique francophone, vend en position FOB selon le règlement général européen porté par l'AFCOT, sa responsabilité devrait s'arrêter à l'embarquement sur le bateau, du moins selon les règles qui prévalaient avant la fusion en 2008 de plusieurs règlements, dont ceux du Havre, de Gand et de Barcelone, en un seul règlement général européen. La SDCC n'a aucun contrôle sur ce qui se passe par la suite et ne peut en être tenue responsable. La prise en compte des récriminations venant des acteurs dans les pays de destination ne devrait pas avoir lieu, selon la signification de l'incoterm FOB. La raison peut découler de la confusion créée par l'option de "poids de chargement certifié" introduite dans le règlement général européen, option faisant peser d'ailleurs le coût de la certification au vendeur.

Il est aussi curieux que la pratique du contrôle contradictoire à l'embarquement, du poids comme des autres critères contractuels de la vente, ne soit pas réalisé jusqu'à ce jour alors qu'il doit l'être selon le règlement général européen (comme des autres règlements d'ailleurs). Un *modus operandi* s'était imposé pendant des décennies et il va être remis en cause pour créer une situation perdant-perdant. Si la raison de cette remise en cause est

⁴² C'est-à-dire avec l'information sur le client et sur la date d'embarquement. Une fois réceptionné, le transitaire dispose de 21 jours pour réaliser l'embarquement. Mais il faudrait au minimum 15 jours pour réaliser toutes les formalités car le port de Douala se distinguerait par des délais très longs. Tout ajout dans les formalités, comme le paiement de la taxe à l'exportation, se traduira par un allongement des délais.

⁴³ Au Cameroun, un des transitaires n'est pas précis sur les différences de poids observées à la réception par rapport aux poids usine des balles, alors qu'un autre dit n'observer au mieux qu'un écart d'un kilogramme, ce qui est largement dans l'intervalle de tolérance prévu.

effectivement la prise en compte induite des récriminations au port de destination, la perspective en vue laisse assez pantois.

Dans l'ensemble, le règlement porté par l'AFCOT et auquel recourt le Cameroun, comme tous les autres pays de l'Afrique francophone, est devenu complexe depuis qu'il est devenu européen en 2008. Il l'est au regard du règlement de l'International Cotton Association (ICA) basée à Liverpool (disponible en une quinzaine de langues dont le français). Ce dernier propose un outil d'édition de contrat standard que nous avons utilisé (annexe 8.66), avec possibilité d'en enregistrer le modèle pour faciliter les usages ultérieurs. L'AFCOT en proposait aussi, avec un format un peu sommaire (annexe 8.67), mais pas depuis le passage au règlement européen.

8.66 Exemple de contrat édité par l'outil en ligne de l'ICA



The International Cotton Association Limited International Shipment Contract Form

Cost Insurance and Freight (CIF), Cost and Freight (CFR), Free Carrier (FCA) and other similar terms

Contract Number: **Tenta_2019_05_01**
Other Contract Number: **None**
Dated: **29th April 2019**

Seller:	Sodecoton	Buyer:	Guoji MianHua Gongsi
	3 Avenue Patrice Lumumba		124 East Red Orient
	Garoua City		Avenue
	North Province		Shanghai
	Cameroon		China
	Email: totokof@gmail.com		Email: GJMHS@126.com
	Tel: +237 699688677		Tel: +86 119645234

1) Cotton Specifications

Origin:	Upland, crop 2018
Grade:	Plebe
Staple:	1"5/32
Micronaire	3.8 to 4.2 NCL
Strength	30 NCL

2) Price

Fixed Unit Price:	86.4567 c/lb
Fixation Call Month Year:	

3) Terms

FOB FREE ON BOARD	
Port/Place of Loading:	Douala

4) Quantity

Contract Quantity	2,000 MTon
Number of Bales:	9524
Weight Per Bale:	210 kg
Variation Allowed	
Weight Basis	Net Certified Shipping Weights Final
Tare	Fixed Tare

5) Freight and Shipment

Terms	FOB FREE ON BOARD
Place of Loading	
Destination	
Details	2019, July 10 The seller must get any export licence necessary. The buyer must get any import licence necessary and must tell the seller that he has this licence before the first permitted shipment date.
Freight Final	Any variation in the current freight rate () at time of shipment is for 's account

6) Payment Terms

10 days after loading on ship

Initial and Date here: Seller: _____ Buyer: _____

Page 1 of 2

7) Documents Required

Phytosanitary Certificate
Certificate of Origin
Packing/Weight List

Additional pages in this Contract: None

Special Clauses

None

8) General

- This contract incorporates the Bylaws and Rules of the International Cotton Association, Limited as they were when the contract was agreed.
The conditions below are an integral part of this contract.
This contract cannot be changed unless we agree in writing.
This contract cannot be cancelled for any reason.

9) Arbitration Agreement

All disputes relating to this contract will be resolved through arbitration in accordance with the Bylaws and Rules of the International Cotton Association Limited. This agreement incorporates the Bylaws and Rules of the International Cotton Association Limited which set out the Association's arbitration procedure.

(Note: If both parties agree, the words 'All disputes' can be changed to read 'Quality disputes' or 'Technical disputes'. But if nothing else is agreed, the words 'All disputes' apply.)

Either of the parties must not take legal action against other party anywhere in the world over a dispute suitable for arbitration, other than to obtain security for any claim, unless the party has first obtained an arbitration award from the International Cotton Association Limited and exhausted all means of appeal allowed by the Association's Bylaws.

It is the responsibility of both parties to read and complete ICA Bylaws and Rules which are available on the ICA website.

Seller's Signature

Ali ABBA on behalf of the seller

Date

Buyer's Signature

ZhongGuo LI on behalf of the buyer

Date

Initial and Date here: Seller: _____ Buyer: _____

Page 2 of 2

8.67 Modèle pour contrat du Règlement Général du Havre

AFcot > Consulter un dossier http://www.afcot.org/dossier.asp?DOSS_CLE=222&versImp=yes 5901

Annexe V: Contrat type d'achat et vente de coton brut [Fermer cette fenêtre](#)

Annexe V: Contrat type d'achat et vente de coton brut

ANNEXE V

CONTRAT TYPE D'ACHAT et VENTE de COTON BRUT
Aux Conditions du Règlement Général et de l'Arbitrage du Havre

« Les parties ci-dessous dénommées, conviennent expressément, sauf dispositions particulières, de l'application au présent contrat des dispositions du RÈGLEMENT GÉNÉRAL du HAVRE, qu'elles reconnaissent bien connaître et dont elles se dispensent mutuellement de la nécessité d'en annexer le texte aux présentes. »

1/ N° DE CONTRAT : DATE :

2/ PARTIES AU CONTRAT
Acheteur : Vendeur :

3/ MARCHANDISE :
Origine :
Récolte :
Provenance :

4/ QUANTITE (réf. Art. 1 à 6 et 48 à 52 du RGH)
Nombre de balles : Poids : Tolérance : %
Franchise : %

5/ QUALITE : Micronaire :
(réf. Art. 7, 13 et 65 du RGH)
Désignation :
Type privé :

6/ CONTRAT DE CHARGEMENT :
(réf. Art. 24 et 27 du RGH)
PERIODE DE CHARGEMENT :

7/ CONTRAT DE LIVRAISON :
(réf. Art. 31 et 34 du RGH)
PERIODE DE LIVRAISON :

8/ CONDITIONS - INCOTERMS :
(réf. Art. 26, 27, 29 et 30 du RGH)

9/ PRIX :
(réf. Art. 19 à 23 du RGH)

10/ PAIEMENT :
(réf. Art. 53 à 57 du RGH)

11/ ASSURANCE ET RISQUES DE GUERRE :
(réf. Art. 26-4, 36 et 37 du RGH)

12/ LICENCES :
(réf. Art. 28 du RGH)

13/ TAXE ET PRIME D'EXPORTATION :
(réf. Art. 23 du RGH)

14/ CLAUSES PARTICULIERES :

30/01/2006 16:00

15/ REGLEMENT GENERAL :

« Ce contrat étant assorti de la clause RGH, l'Acheteur et le Vendeur sont tenus de se conformer, à moins de stipulations contraires, aux Règles et Usages tels qu'ils sont précisés dans le REGLEMENT GENERAL du HAVRE, ainsi qu'aux règles applicables à la forme de vente maritime adoptée par les parties, selon la clause 8 ci-dessus. »

16/ ARBITRAGE :

« Sous réserve des dispositions particulières applicables à l'arbitrage « qualité » - clause 5 ci dessus -, les parties conviennent de soumettre tout litige relatif à l'exécution du présent contrat, exclusivement à l'ARBITRAGE, tel que prévu et organisé par l'article 63 du REGLEMENT GENERAL du HAVRE. »

17/ CESSIION, MODIFICATION, RESOLUTION DU CONTRAT :

« Le présent contrat ne peut être cédé à un tiers ni modifié, ni résolu sans l'accord des deux parties, sauf décision de Justice. »

18/ CLAUSE DE RESERVE DE PROPRIETE :
(réf. Art. 23 du RGH)

« La marchandise est vendue avec réserve de propriété dans les conditions visées à l'article 60 bis du R.G.H. »

Etabli à : le :

SIGNATURES AUTORISEES :

Acheteur : Vendeur :

8.68 Circulaire sur la taxe à l'exportation du coton

REPUBLIQUE DU CAMEROUN
PAIX-TRAVAIL-PATRIE

MINISTRE DES FINANCES

DIRECTION GENERALE DES DOUANES

Site web : www.douanes.cm



REPUBLIC OF CAMEROON
PEACE-WORK-FATHERLAND

MINISTRY OF FINANCE

DIRECTORATE GENERAL OF CUSTOMS

E-mail: douanes-cam@minfi.gov.cm

CIRCULAIRE N° 004 /MINFI/DGD du 04 JAN 2018

Précisant les modalités d'application de certaines dispositions de la loi n° 2017/021 du 20 décembre 2017 portant loi de finances de la République du Cameroun pour l'exercice 2018

La présente Circulaire précise les modalités d'application de certaines dispositions de la loi n° 2017/021 du 20 décembre 2017 portant loi de finances pour l'exercice 2018. A ce titre, les dispositions des articles Deuxième, Troisième, Cinquième, Sixième, Septième, Huitième, Neuvième, Dixième, Treizième de cette loi doivent être mises en œuvre ainsi qu'il suit :

A- Des dispositions de l'Article Deuxième

1- Droits de sortie et autres prélèvements à l'exportation

a) Principe général :

Les produits bruts d'origine animale, végétale ou minière sont soumis au paiement des droits de sortie à l'exportation au taux de 2 % de leur valeur imposable (FOB).

Il en découle que les produits de rente précédemment exclus de ce prélèvement par la loi de finances 2017 (coton, caoutchouc (produits de l'hévéa), huile de palme, banane, haricot et ananas) sont désormais soumis au droit de sortie au taux de 2 %.

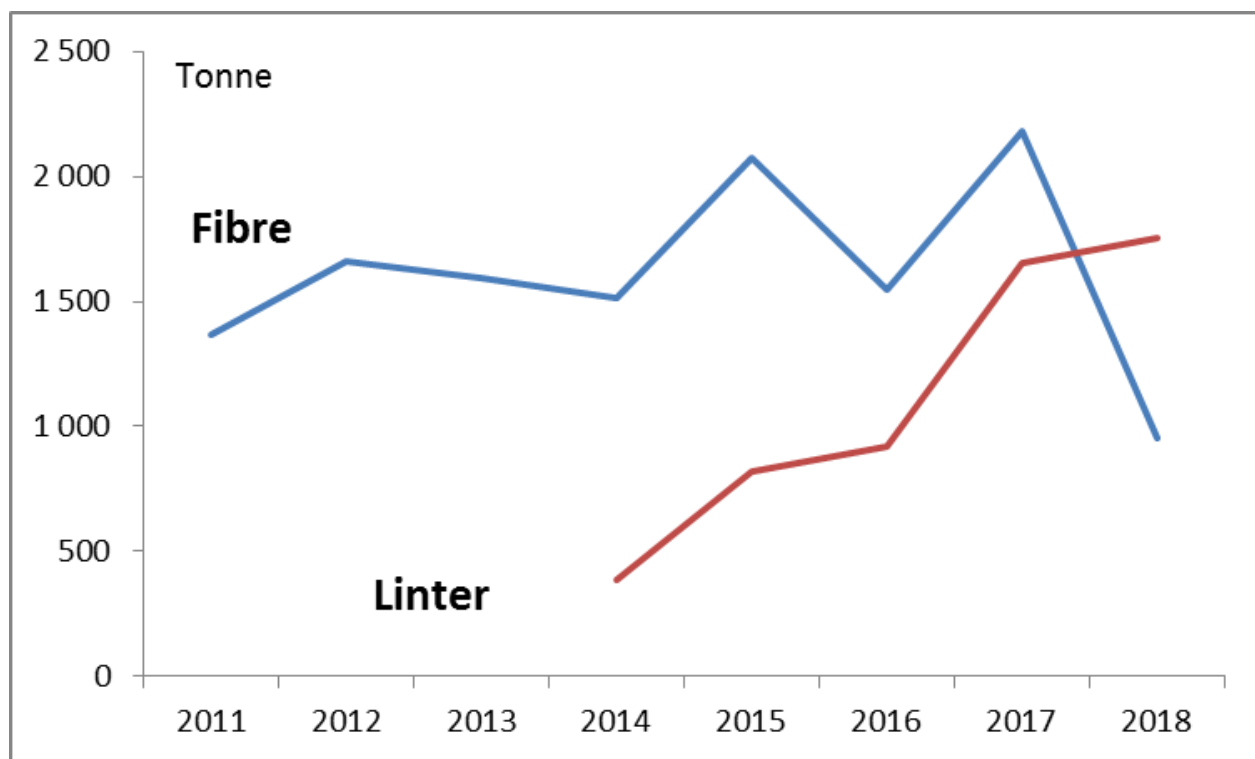
b) Dérogations au principe général :

b.1) Les produits industriels manufacturés au Cameroun, les produits du cru d'origine animale, végétale et minière ayant subi une ouvraison ou transformés au Cameroun sont exonérés du droit de sortie à l'exportation ;

b.2) Les produits locaux suivants sont soumis à un droit de sortie au taux de 5 % : gomme arabique, riz, huile de palme, piment, noix de cola, mil, sorgho, poivre, le légume appelé Gnetum Africanum (Eru /Okok de la sous- position tarifaire 0709.99 90 100).



8.69 Vente locale de fibre et de linter



8.70 Variabilité génétique de la teneur en huile des graines de coton et perspective de son exploitation

La teneur des graines de coton au Cameroun équivaut à ce qui est habituellement rencontrée dans le monde, avec peu de variation. L'absence de variation procède du fait que les variétés de coton ont rarement été sélectionnées pour leur teneur en huile dans le monde, on peut même douter qu'elles l'eussent jamais été, car la fibre a toujours été considérée comme LE produit de la culture cotonnière.

Pourtant une grande variabilité génétique existe en matière de teneur en huile et en protéines des graines de coton. Cette variabilité est restituée dans le Tableau 8-9 relatif aux teneurs d'un millier de génotypes de la banque de gènes du CIRAD. Il montre qu'il y a un gros pourcentage des génotypes avec une teneur en huile de 24 à 28% (teneur rapportée aux graines délintées, donc légèrement supérieure à la teneur exprimée au poids des graines).

	Oil contents of dried and delinted cottonseed			
	16.0-19.9%	20.0-23.9%	24.0-27.9%	28.0-31.9%
% cultivars	3.0	29.1	62.2	5.6
Number cultivars	35	332	709	64
Total number of	1140			

TABEAU 8-9: VARIABILITE GENETIQUE POUR LA TENEUR DES GRAINES DE COTON EN HUILE

Il est aujourd'hui plus facile de sélectionner simultanément pour les caractéristiques de la fibre et pour celles des graines. Le recours à la technologie de résonance magnétique permet de mesurer les teneurs en huile et en protéines sans détruire les graines, alors que celles-ci sont rares en début de programme de création variétale. Un projet de recherche associant plusieurs pays africains a été soumis à un appel de l'Union Africaine, à l'initiative du CIRAD, pour exploiter la variabilité génétique contrôlant la teneur en huile et en protéines. Le CIRAD a fait associer l'IRAD à la réalisation du projet. Près d'un an après le dépôt du dossier, l'absence de retour de l'Union Africaine fait craindre que le dossier a été perdu à Addis Abeba. La pertinence du projet demeure, et il peut être approprié et adapté pour être exécuté uniquement par le Cameroun.

8.71 Capacités industrielles de trituration et produits vendus de la campagne 2017-18

	Unité	Usine de Garoua	Uisine de Maroua	Total
Capacité journalière	Tonne	250	125	375
Nombre de jours		330	330	330
Capacité maximale	Tonne	82 500	41 250	123 750
Rendement huile brute/graine	litre/tonne	166.3	136.1	151.2
Rendement huile brute/graine	kg/tonne	149.7	122.5	136.1
Rendement huile neutre/brute		0.930	0.915	0.9225
Rendement huile raffinée/neutre		0.981	0.980	0.9805
Rendement huile conditionnée/raffinée		1.000	1.000	1.000
Rendement huile conditionnée/graine	litre/tonne	151.7	122.0	136.8
Rendement huile conditionnée/graine	kg/tonne	136.6	109.8	123.1
Rendement tourteaux sur graine		0.597	0.587	0.592
Graines triturées	Tonne			119 146
Vente d'huile raffinée, conditionnée	10 ³ litres			18 015
Vente d'Alibet	Tonne			20 199
Vente Nutribet	Tonne			20 429
Vente Appetibet	Tonne			1 099
Vente de tourteaux	Tonne			160
Vente de coques	Tonne			2 576

8.72 Méthode et données utilisées pour les producteurs

Nous avons fait les calculs en distinguant les quatre types de producteurs selon la taille de la sole cotonnière, mais aussi le groupe des producteurs semenciers qui bénéficient d'une prime et même d'une incitation à intensifier davantage l'utilisation des engrais. Cela a été possible en nous servant de plusieurs jeux de données fournies par la SDCC.

- Le jeu de données de la DSE a permis de connaître les caractéristiques des producteurs de quatre types selon la taille de leur sole cotonnière (de moins d'un hectare à plus de dix hectares), notamment leur fréquence à disposer des principaux matériels de culture attelée. Les données concernent aussi les consommations d'intrants et les rendements, ainsi que les dépenses pour la main-d'œuvre temporaire et pour l'alimentation et les soins des animaux des exploitations. Des hypothèses sont retenues pour pouvoir calculer les amortissements de matériel et l'affectation à la sole cotonnière des dépenses réalisées pour l'alimentation et les soins des animaux ;
- La fiche de répartition des producteurs selon la taille de la sole cotonnière pour l'ensemble des producteurs, fiche que nous avons demandée et fournie avant la première mission au Cameroun. Cette fiche nous a permis de cerner les fréquences des quatre types de producteurs dans la réalité ;
- La fiche, également demandée préalablement à la mission de terrain, sur la production semencière en milieu paysan avec le nombre de producteurs et les productions ;
- Les données sur les crédits à rembourser pour les intrants effectivement distribués aux producteurs.

Les données utilisées sont restituées dans le tableau suivant, ainsi que les paramètres utilisés pour calculer l'amortissement du matériel attelé. L'hypothèse sous-jacente aux paramètres retenus est que le matériel attelé est le plus souvent d'acquisition ancienne, déjà amorti en grande partie et ce d'autant plus que les producteurs sont âgés (ce qui est corrélé avec la taille de la sole cotonnière). Ce sont donc les petits producteurs qui ont à amortir le matériel, quoique possédé en plus faible quantité.

Grâce aux données de la DSE de la SDCC il nous a été possible de tenir compte des dépenses en intrants pour calculer l'indicateur MARI (Marge Après Remboursement des Intrants), fréquemment utilisé dans les pays cotonniers de l'Afrique francophone, mais aussi les dépenses de services liées au recours à la main-d'œuvre temporaire, les dépenses pour le bétail (la part affectée à la sole cotonnière) et les amortissements.

Du fait que dans tous les GP, la valeur de la différence de pesée n'est pas redistribuée aux producteurs mais laissée comme ressource des GP, il est justifié de considérer que les producteurs paient un service de commercialisation réalisé pour eux par les GP dont ils relèvent. Nous faisons apparaître le coût de ce service dans le compte d'exploitation des producteurs. Cette option nous conduit aussi à analyser le compte de ce service pour cerner la valeur ajoutée indirecte qui en résulte et comment celle-ci est répartie.

	Unité	Total	Type 1	Type 2	Type 3	Type 4	P_Sem
Nombre de producteurs		152 612	88 557	31 330	5 053	1 390	26 283
Fréquence	%	100	70.10	24.80	4.00	1.10	
Surface totale	Ha	182 610	44 785	58 218	30 107	17 621	31 879
Moyenne surface coton	Ha	1.20	0.51	1.89	6.05	12.88	1.21
Rendement moyen	Kg/ha	1 392	1 303	1 286	1 603	1 450	1 377
Production égrenée	Tonne	254 181	59 287	76 054	49 005	25 945	43 890
Production commercialisée-payée/GP	Tonne	246 769	57 445	73 691	47 482	25 138	43 012
Différence de pesées	Tonne	7 412	1 842	2 363	1 523	806	878
Pratiques d'intensification							
Coût du traitement des semences	106 CFA	379	93	121	63	37	66.20
Coût des traitements herbicides	106 CFA	3 152	773	1 005	520	304	550.28
Coût des traitements insecticides	106 CFA	7 123	3 897	1 576	307	99	1243.48
Nombre de traitements insecticide/ha		4.1	9.0	2.8	1.1	0.6	4.1
Coût des régulateurs de croissance	106 CFA	49	6	15	11	9	8.62
Coût des engrais NPK	106 CFA	10 886	2 692	3 331	1 914	1 048	1900.41
Dose moyenne NPK à l'hectare	Kg/ha	175	177	168	187	175	175
Coût des engrais urée	106 CFA	1 742	258	595	364	221	304.19
Dose moyenne urée à l'hectare	Kg/ha	30	18	32	38	39	30
Part alimbet allouée à la sole du coton	%	50.18	80.00	70.00	60.00	50.00	
Part santé animale allouée à la sole du coton	%	72.37	80.00	70.00	60.00	50.00	
Amortissement							
Charrue bovine	106 CFA						
Prix unitaire	CFA	52 500	52 500	52 500	52 500	52 500	52 500
% exploitation en ayant	%	54.9	32.9	57.0	86.0	90.3	77.8
Nb d'équipement des "ayant"		1.5	1.2	1.4	1.7	2.6	1.9
% des équipements à amortir	%		100	80	50	40	56.7
Durée d'amortissement			10	10	10	10	10
Charrette							
Prix unitaire	CFA	267 000	267 000	267 000	267 000	267 000	267 000
% exploitation en ayant	%		3.9	13.6	35.0	48.4	32.3
Nb d'équipement des "ayant"			1.1	1.1	1.0	1.2	1.1
% des équipements à amortir	%		100	100	100	80	93.3
Durée d'amortissement			20	20	20	20	20

TABLEAU 8-10 ELEMENTS POUR LE CALCUL DES COMPTES DE PRODUCTION ET D'EXPLOITATION DES PRODUCTEURS DE COTON

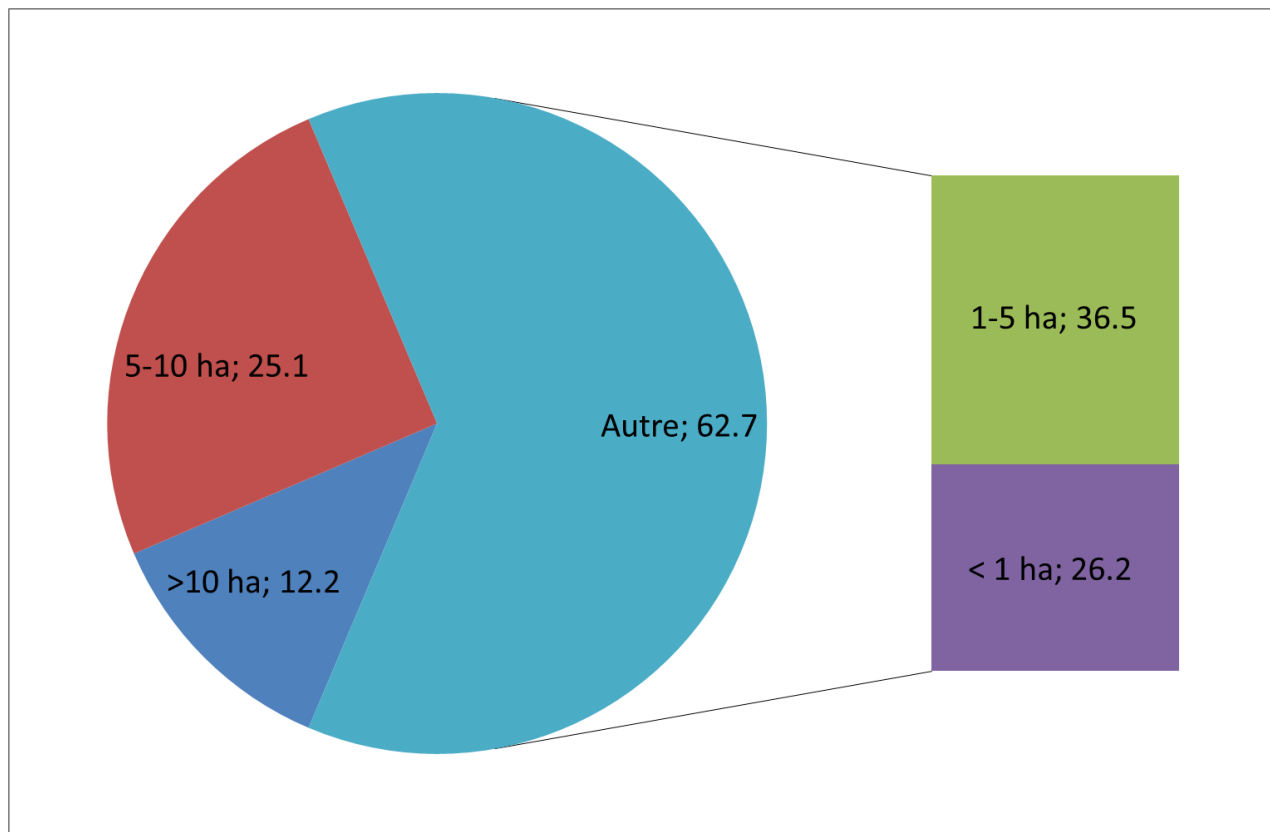
8.73 Compte d'exploitation de tous les producteurs selon leur type

		Tous	Types de producteurs				Semenciers
			< 1 ha	1-5 ha	5-10 ha	>10 ha	
Nombre de producteurs		152 612	88 557	31 330	5 053	1 390	26 283
en % du total			58.0	20.5	3.3	0.9	17.2
Surface par producteur	ha	1.20	0.51	1.89	6.05	12.88	1.21
Rendement	kg/ha	1 392	1 303	1 286	1 603	1 450	1 377
Production par producteur	kg	1 666	669	2 428	9 698	18 670	1 670
Production totale, coton-graine	tonne	254 181	59 287	76 054	49 005	25 945	43 890
Produit	10 ⁶ CFA	64 607	14 892	19 104	12 309	6 517	11 785
Intrants	10 ⁶ CFA	24 829	8 434	6 997	3 301	1 764	4 333
Frais de commercialisation	10 ⁶ CFA	1 806	443	569	367	194	233
Aliment + prophylaxi	10 ⁶ CFA	1 094	213	154	138	406	184
MARI*	10 ⁶ CFA	39 778	6 458	12 107	9 008	4 753	7 452
Valeur ajoutée	10 ⁶ CFA	36 878	5 802	11 384	8 504	4 153	7 035
en % du total			15.7	30.9	23.1	11.3	19.1
Salaires	10 ⁶ CFA	2 280	1 519	436	103	12	210
Frais financiers	10 ⁶ CFA	0	0	0	0	0	0
Taxes	10 ⁶ CFA	0	0	0	0	0	0
Résultat brut	10 ⁶ CFA	34 598	4 283	10 948	8 401	4 141	6 825
Amortissement	10 ⁶ CFA	1 868	703	446	109	35	576
Résultat net	10 ⁶ CFA	32 730	3 580	10 502	8 292	4 107	6 249
en mois de SMIG		902 393	98 700	289 556	228 623	113 228	172 286
en mois de salaire moyen		287 104	31 402	92 124	72 738	36 024	54 814

* Marge Après Remboursement des Intrants ;

Salaire minimum interprofessionnel garanti (SMIG) de 36 270 FCFA (en 2016) et SM (salaire moyen) de 114 000 (en 2019)

**8.74 Répartition de la VA des producteurs selon les tailles de leurs soles
cotonnières, %**



8.75 Méthode de calcul du compte d'exploitation du service de fourniture d'intrants

Au cours de la campagne 2017-18, les producteurs ont payé les intrants importés par la CNPC-C et distribués par la SDCC avec compensation des frais de gestion sur commission. Le compte d'exploitation correspondant au volume/montant des intrants effectivement utilisés par les producteurs permet de calculer la valeur ajoutée associée aux intrants utilisés, ici une valeur ajoutée indirecte, et de savoir comment celle-ci est redistribuée.

Nous nous sommes servis des données fournies par la CNPC-C parce qu'elle assume la fonction d'importation des intrants et de leur distribution de manière contractuelle avec la SDCC. Nous ne nous sommes pas basés sur le compte de résultat de la CNPC-C, ou pas directement, aussi le compte d'exploitation que nous obtenons n'est pas celui de la CNPC-C. La raison est que le compte d'exploitation établi concerne les quantités effectivement distribués et payés par les producteurs, ce qui est différent des quantités acquises au cours de la campagne.

Pour établir le compte d'exploitation correspondant aux intrants utilisés dans la campagne, nous sommes partis :

- des montants de l'exigible des crédits intrants de la campagne, fournis à notre demande par la DPA de la SDCC ;
- des formules de calcul du prix de revient des intrants (engrais NPK, urée, insecticides et l'ensemble des herbicides avec les produits de traitement de semence), fournies par la CNPC-C. Nous n'avons pas pris en compte les régulateurs de croissance qui restent peu utilisés et qui correspondent à des montants faibles. Un exemple de formule de calcul du prix de revient est présenté dans le tableau suivant (Figure 8.4). A partir des formules de prix de revient, il est possible de décomposer le coût des intrants payés en ses diverses composantes de coût à l'importation, coût de transport, coûts des frais financiers et des taxes.
- du compte de résultat de CNPC-C, correspondant cependant à l'année civile 2017, pour intégrer les coûts de fonctionnement de cet organisme, notamment les salaires.

Il en résulte le compte d'exploitation ci-après (Tableau 8-11).

Calcul du prix de revient de l'engrais complexe NPK

UREE : 12 000 tonnes
ENGRAIS NPKSB : 45 000 tonnes

STRUCTURES COUTS	COUT / TONNE
	NPKSB
TONNAGE	
COUT FOB	150 870
COUT CAF DLA	188 916
TAXE SGS(0,95% PRIX FOB))	1 433
DOUANE (6,7% PRIX CAF+23,22 f/t= besc)	12 681
TRANSIT/ACONNAGE DLA	10 500
TVA	2 021
TRANSPORT DLA-NDERE TTC	58 433
TVA	-
TOTAL I-rendu NGAOUNDERE	273 984
TRANSPORT NDERE-MARCHE	25 000
TVA TRANSPORT	4 237
FRAIS DE GESTION SDCC (3%)	9 097
TVA FRAIS GEST° SDCC	1 751
TOTAL II	40 085
FRAIS GEST° CNPC (3%)	1 203
TVA	231
PRIME GESTION GP (2 000 f/tonne)	2 000
TOTAL III	3 434
TOTAL IV FRAIS FINANCIERS 12 MOIS (4% TTC)	12 700
TOTAL V (rendu magasin villageois)	330 203
Coût revient sac 50 kg 2017/2018	-
REPORT STOCK 2016/2017	NPKSB
REPORT STOCK 2016/2017	4 877
COUT REVIENT tonne/SAC 2016/2017	394 740
FRAIS FINANCIERS 12 MOIS (0% TTC)	-
MONTANT TOTAL STOCK REPORT	1 925 146 980
Coût revient sac 50 kg stock 2016/2017	-
Coût Moyen pondéré engrais 2017/2018	COUT / TONNE
	NPKSB
TONNAGE	49 877
COUT TOTAL PROGRAMME ENGRAIS	16 784 277 397
COUT A LA TONNE	336 513
Coût moyen pondéré du sac de 50 kg	-
PROPOSITION PRIX CESSION	17 000

FIGURE 8.4: DECOMPOSITION DU COUT DE REVIENT DE L'ENGRAIS NPK

Charges		Produits	
Achat d'intrants	14 902 928 435	Vente d'intrants	23 282 627 708
Engrais NPK	6 048 605 863	Engrais NPK	10 885 950 000
Urée	871 535 377	Urée	1 742 488 000
Herbicides + Ttmt semences	2 164 338 312	Herbicides + Ttmt semences	3 531 280 100
Insecticides	5 818 448 883	Insecticides	7 122 909 608
Autres achats	416 932 848	Vente de produits accessoires	2 826 479
Transit/aconnage	393 359 138	Travaux et services vendus	64 211 138
Transport		Autres produits	44 664 390
Transport des intrants	3 127 844 599		
Autres transports	105 100 475		
Frais de gestion SDCC	593 884 174		
Prime aux GP	44 869 329		
Services extérieurs	200 010 755		
Autres charges	898 161		
Total Charges 19 785 827 913		Total Produits 23 394 329 714	
Valeur ajoutée	3 608 501 800	Subvention d'exploitation	95 246 766
Salaires	425 061 894		
FF & Assurance			
Fr. financiers sur intrants	908 473 272		
Autres frais financiers	16 473 013		
Taxes			
Taxes sur intrants			
SGS au port	123 490 976		
Droit de douane	999 366 091		
TVA	445 320 455		
Impôt sur résultat	13 690 079		
Résultat brut	771 872 786		
Amortissement	64 783 662		
Résultat net	707 089 125		

TABEAU 8-11: COMPTE D'EXPLOITATION DE LA FOURNITURE D'INTRANTS PAR LA CNPC-C, CFA

8.76 Méthode et données pour le compte d'exploitation de l'acteur SDCC

Les comptes d'exploitation des fonctions de la commercialisation du CG, de l'égrenage et de la trituration ont été établis à partir des données fournies par la direction de la comptabilité de la SDCC. Ce sont des données qui ont été auditées par deux firmes comme de coutume (KPMG et Ernst-Young). Les données ont correspondu à l'année d'exercice comptable de 2018, qui couvre en fait partiellement la campagne agricole 2017-18 d'une part et la campagne agricole 2018-19. Un cut-off est appliqué par la SDCC pour arrêter les comptes pour la seule campagne 2017-18. Nous n'avons pas l'information sur les paramètres du cut-off appliqué par la SDCC, nous avons été amenés à en déterminer un pour parvenir à quasiment aux mêmes valeurs pour toutes les lignes comptables.

A la différence de la SDCC, nous ne devons pas tenir compte des lignes de provision ou de reprise de provision pour la dépréciation des stocks, ni de la ligne de pertes et profits non incorporables aux produits de coton. Aussi, il en résultera que le résultat que nous obtenons sera supérieur à celui à celui retenu par la SDCC, d'environ 3,3 milliards CFAF.

Les données de comptabilité analytique fournies par la SDCC se rapportent aux coûts des diverses activités de la SDCC. Celle-ci distingue l'entretien des routes, l'activité d'assistance rurale mais qui correspond à l'encadrement des producteurs et à la commercialisation du CG produit par les paysans, l'égrenage, les huileries de Garoua et de Maroua considérées séparément, la commercialisation, et l'administration. Au sein de chaque activité, des sous-activités peuvent être considérées. Par exemple, on trouve les sous-activités de manutention du CG et de classement du coton fibre dans les usines d'égrenage qui relèvent de deux activités différentes (production de fibre et commercialisation). Les données sont donc très détaillées. La sous-activité de transport de CG nous est très utile en nous permettant de distinguer les coûts afférant et de les appliquer pour estimer la valeur ajoutée indirecte liée à la prestation des transporteurs privés.

Pour les besoins de la méthode VCA4D, nous avons procédé à établir les comptes d'exploitation pour trois fonctions. La fonction que nous appelons commercialisation de CG regroupe les activités d'entretien des routes et d'assistance rurale. La fonction d'égrenage regroupe l'égrenage et la sous-activité de commercialisation relative au coton fibre. La fonction de trituration réunit les activités des deux huileries et la sous-activité de commercialisation des produits de la trituration. Les coûts de l'activité d'administration sont à répartir entre les trois fonctions selon une clef de répartition découlant de celle que la SDCC adopte pour calculer les coûts de revient de ses différents produits (29,71%, 55,18% et 15,11% respectivement pour les trois activités de commercialisation du CG, d'égrenage et de trituration).

Nous avons maintenu les rubriques de la comptabilité analytique telles qu'elles sont utilisées à la SDCC, avec une exception. Nous avons extrait les dépenses d'assurance de la rubrique P62 des services extérieurs A.

8.77 Compte d'exploitation de la commercialisation du CG à la SDCC, en CFAF

Charges		Produits	
P60_Achats	76 805 563 269	Vente de produits finis	
dont Matières premières de base	68 511 636 144	Cession interne de CG	68 511 636 144
Paievements aux GP	2 411 555 673	Variation de stocks	461 176 066
Autres	5 882 371 452	P70_Ventes_marchandises	1 476 227 936
P61_Transport	290 342 662	P70_Ventes_autres	944 447 211
P62_Services Ext. A	396 357 774	P77_Produits financiers	15 897 438
P63_Services Ext. B	1 331 423 653	Transfert de charge	3 177 328 553
P65_Autres	214 252 050		
Total Charges 79 037 939 407		Total Produits 74 586 713 347	
Valeur ajoutée	-4 451 226 060		
P66_Salaires	5 797 243 419		
dont Temporaires	790 015 488		
Permanents	5 007 227 931		
P67_Frais financiers	1 302 468 826		
P67_Assurances	481 551 222		
P64_Taxes	1 371 183 278		
Résultat brut	-13 403 672 805		
P68_Amortissements	2 651 710 401		
Résultat net	-16 055 383 206		

8.78 Compte d'exploitation de l'égrenage à la SDCC, en CFAF

Charges		Produits	
P60_Achats	75 856 568 402	Ventes de produits finis	107 624 387 150
dont Matières premières de base	68 511 636 144	Cession interne	12 409 855 510
		Variation de stocks	7 871 012 855
Autres	7 344 932 258	P70_Ventes_marchandises	
P61_Transport	5 574 276 268	P70_Ventes_autres	133 791 658
P62_Services Ext. A	280 650 425		
P63_Services Ext. B	4 429 275 708		
P65_Autres	362 983 568		
Total charges 86 503 754 371		Total produits	128 039 047 173
Valeur ajoutée	41 535 292 802		
P66_Salaires	4 578 753 818		
dont Temporaires	1 279 214 037		
Permanents	3 299 539 781		
P67_Frais financiers	2 248 037 978		
P67_Assur	445 658 420		
P64_Taxes	4 214 288 029		
Résultat brut	30 048 554 556		
P68_Amortissements	1 644 614 493		
Résultat net	28 403 940 063		

8.79 Compte d'exploitation de la trituration, en CFAF

Charges		Produits	
P60_Achats	17 654 942 283	Ventes de produits finis	20 230 528 473
dont Matières premières de base	11 466 678 410		
		Variation de stocks	-944 255 711
Autres	6 188 263 873	P70_Ventes_marchandises	
P61_Transport	200 310 055	P70_Ventes_autres	122 065 860
P62_Services Ext. A	301 279 323		
P63_Services Ext. B	540 601 833		
P65_Autres	99 493 031		
Total Charges 18 796 626 524		Total Produits 19 408 338 622	
Valeur ajoutée	611 712 097		
P66_Salaires	2 206 189 141		
dont Temporaires	433 026 191		
Permanents	1 773 162 949		
P67_Frais financiers	615 582 708		
P67_Assur	154 882 364		
P64_Taxes	381 089 929		
Résultat brut	-2 746 032 045		
P68_Amortissements	1 133 892 792		
Résultat net	-3 879 924 837		

8.80 Synthèse des coûts de missions de service public

Missions	Montants	2014	2015	2016	2017	Total	Date d'instruction de paiement
Totalité	Paiement instruit	4.998		3.000		7.998	mai-18
Professionalisation	montant validé ¹			1.963			mars-18
	prétention ²	1.273	1.066	1.090	0.873	4.302	
Elevage	montant validé ¹			0.766			mars-18
	prétention ²	0.400	0.351	0.430	0.335	1.516	
Recherche	montant validé ¹			1.403			mars-18
	prétention ²	0.795	0.536	0.585	0.818	2.734	
Pistes rurales	montant validé ¹			2.412			mars-18
	prétention ²	1.192	1.527	1.605	1.845	6.169	

¹ Validé par la mission interministérielle de mars 2018, sans indication si les montants sont avec taxe incluse ou pas.

² Les chiffres des prétentions de 2016 et 2017 ont été fournis par la SDCC et soumis à examen par la mission interministérielle. Ceux des années 2014 et 2015 nous ont été fournis par ailleurs par la SDCC

8.81 Précisions sur le calcul du compte d'exploitation des GP

Les GP disposent de deux sources de recettes dans leur fonctionnement. Comme indiqué dans l'analyse fonctionnelle, la première source de recettes vient de la SDCC pour rémunérer le personnel permanent dans le suivi de la campagne agricole et pour compenser les dépenses engagées dans la réalisation de la commercialisation. La deuxième source de recettes est la valeur des excédents de pesée entre le pont bascule des usines et les villages. Le montant des excédents de pesée a été fourni directement par la DPA qui dispose du total des pesées au niveau des usines et de celles réalisées dans les villages. Il ne s'agit pas d'une sortie monétaire spécifique de la SDCC car elle paie simplement ce qu'elle a reçu dans ses usines, mais d'une recette additionnelle au montant attendu par les producteurs selon les pesées faites dans les villages et que ces producteurs ont opté de laisser comme ressource collective de leurs GP. En d'autres termes, il s'agit d'une contribution volontaire des producteurs à leurs GP.

Pour les recettes venant spécifiquement de la SDCC en faveur des GP, nous avons pris les dépenses enregistrées à la SDCC, selon les comptes de résultat fournis par la Direction de comptabilité. Ces dépenses correspondent notamment à la rémunération des GP pour le suivi de la campagne agricole au montant forfaitaire de 5500 CFAF/tonne de CG. Il s'y ajoute la compensation des frais pour le fonctionnement des équipes d'achat, ainsi que le versement de diverses primes pour récompenser la bonne exécution du travail.

Pour identifier les charges engagées dans les GP, nous nous sommes appuyés sur les budgets prévisionnels d'un échantillon de GP. Pour toutes les campagnes, les GP sont tenus d'établir un budget prévisionnel qui doit être validé en AG. Les documents de budgets prévisionnels ne sont pas consolidés et ils restent au niveau de chaque GP. Grâce à la collaboration de la Division Professionnalisation, nous avons pu obtenir les scans des budgets d'une quinzaine de GP relevant de cinq régions de la SDCC.

L'établissement de budget partiel n'est pas encore un exercice parfaitement conduit, mais ce sera un thème que la DP compte aborder dès les mois à venir. On observe des erreurs de calcul et les dépenses ne sont pas toujours équilibrées avec les recettes.

Les budgets obtenus permettent cependant de cerner les dépenses de fonctionnement des GP et de les répartir selon leur nature ou rubrique. La déclinaison des différentes rubriques de dépenses est reproduite dans le tableau ci-après.

Achats
Achat journaux
Achat papeterie commercialisation
Achat papeterie de la campagne agricole
Achat papeterie, photocopie,
Autres
Autres
Financier
Frais de gestion de compte (1100 Fx12 mois)
Frais
Contribution annuelle au fonctionnement de l'Union
Frais de déplacement des membres du CD
Frais transport et déplacement agents techniques
Nourriture des manœuvres coton
Transport et déplacement accompagnateurs coton
Transport et déplacement comité directeur
Primes
Appui remuneration fonction CPA (250 F/Tonne de coton)
Primes à payer aux CCC (.....Fx.....CCC)
Primes à payer aux membres CD (Répartition individuelle)
Primes aux agents techniques
Rémunération
Autres rémunérations
Frais chargement du CG
Frais commission de lot
Frais équipe achat coton (1200 F/Tonne)
Paie gardien marché coton et CPA
Salaires
Rémunération des agents techniques
Services
Autres CampAgri
Formation équipe achat (transport et déplacement)
Formation équipe technique
Location bascule (250 F/Tonne)
Nettoyage et confection Hangar marché coton

Dans l'optique d'établir le compte d'exploitation, nous avons calculé pour chaque GP les ratios des différentes rubriques de dépenses rapportées au total des deux recettes les plus importantes, à savoir la prime de campagne agricole (5500 CFAF/tonne) et la valeur de l'excédent de pesée entre l'usine d'égrenage et le village. Nous avons retenu les moyennes de ces ratios sur l'échantillon de 15 GP pour estimer les charges de fonctionnement pour l'ensemble des GP.

L'estimation des amortissements est plus délicate car les GP investissent aussi. Les investissements portent surtout sur des constructions dont certains sont nécessaires au fonctionnement des GP (comme les bureaux ou la réfection des magasins) alors que d'autres relèvent des réalisations sociales comme les salles de classes ou les

cases de santé. Les investissements peuvent concerner l'acquisition de matériel pour le fonctionnement des GP (comme des vélos pour le déplacement des agents de suivi technique) ou pour le bien-être des villages (comme la réalisation d'un forage). Les GP font donc face à des frais d'amortissement qui ne sont pas comptabilisés comme tels dans leurs comptes. Nous avons estimé ces amortissements à partir du ratio des dépenses de construction rapporté au total des deux recettes principales déjà mentionnées. Le ratio obtenu à partir de la moyenne observée dans l'échantillon de 15 GP a été de 13,3%, nous avons considéré que les amortissements ont correspondu à la moitié de ce ratio.

8.82 Compte d'exploitation des GP, en million CFAF

Emplois		Ressources	
Achats	146		
Paie ment de services	366	Frais de commercialisation	2 412
Frais divers	459		
Autres	11	Excédent pont bascule	1 806
		Produits financiers	24
Total Charges 981		Total Produits 4 242	
Valeur ajoutée	3 260		
Rémunérations			
Salaires du personnel	1 092		
Primes au personnel et CD	632		
Frais financiers	18		
Taxes	0		
Résultat Brut	1 519		
Amortissement	200		
Resultat net	1 320		

8.83 Mode de calcul du compte d'exploitation du transport routier privé

L'analyse des coûts du transport du CG par la SDCC fait apparaître que les consommations intermédiaires (CI) sont représentées par des achats (AC), des dépenses d'entretien et maintenance (EM), des paiements de services (SE) et de prestations de service (PS). Par définition la Valeur ajoutée (VA) est égale à $Y - CI$, où Y est le chiffre d'affaires de la prestation de transport.

Si nous retenons l'hypothèse que μ est le ratio de VA sur le chiffre d'affaires, on a $VA = \mu Y$ ou $Y = VA * 1/\mu$. Il en découle que :

$$VA = Y - CI = VA * 1/\mu - CI$$

D'où l'on tire $VA = CI * \mu / (1 - \mu)$ qui peut être calculé puisque CI est connu par les données de la SDCC.

Une fois VA est calculé, il est alors possible de calculer les ratios de tous les postes de dépenses du transport du CG de la SDCC en référence à la VA . Les résultats obtenus⁴⁴ sont :

Achat, en % VA	113.86
Entretien-maintenance, % VA	1.42
Services, % VA	3.85
Prestation service, % VA	3.09
Salaires, % VA	28.27
Assurances, % VA	15.30
Taxes, % VA	14.86
Frais financiers, % VA	6.00

Ce sont ces ratios que nous appliquons au cas du transport routier assuré par les opérateurs privés. Le recours aux données de la SDCC ne permet pas de déterminer le coût d'amortissement. De manière arbitraire, nous avons considéré qu'il correspond à cinq fois le coût engagé pour l'entretien et maintenance du matériel roulant.

⁴⁴ Sauf pour les frais financiers qui n'apparaissent pas dans les dépenses du transport de CG de la SDCC. Nous avons retenu arbitrairement le ratio de 6%.

8.84 Compte d'exploitation de la prestation des transporteurs routiers privés, en CFAF

Charges		Produits	
Achat	2 733 603 774	Chiffre d'affaires	5 335 366 035
Entretien-maintenance	34 169 549		
Services	92 553 546		
Prestation service	74 124 451		
Valeur Ajoutée	2 400 914 716		
Salaires	678 730 887		
Frais financiers	144 054 883		
Assurances	367 420 153		
Taxes	356 833 182		
Résultat brut	853 875 611		
Amortissement	170 847 745		
Résultat net	683 027 866		

8.85 Compte d'exploitation des fournisseurs de biens et de services à la Sodecoton, hors transporteurs routiers, en CFAF

Compte d'exploitation des fournisseurs de biens à la SDCC, selon une clef d'estimation de la VA et de sa répartition entre les différents postes estimés en pourcentages du chiffre d'affaires

% du CA	Charges	Produits
		Chiffre d'affaires 19 416
35.0	VA 6 795	
6.2	Salaires 1 196	
2.3	FF & Assurance 453	
3.8	Taxes 737	
	Résultat brut 4 409	
0.8	Amortissement 158	
	Résultat net 4 251	

Compte d'exploitation des fournisseurs de biens à la SDCC, selon une clef d'estimation de la VA et de sa répartition entre les différents postes estimés en pourcentages du chiffre d'affaires

% du CA	Charges	Produits
		Chiffre d'affaires 7 280
30.0	VA 2 184	
6.2	Salaires 449	
2.3	FF & Assurance 170	
3.8	Taxes 276	
	Résultat brut 1 289	
0.8	Amortissement 59	
	Résultat net 1 230	

8.86 Comptes d'exploitation de la CICAM, en million CFAF

Localité	Unité de Garoua	Unités de Douala	Total
Fonctions	Filature, tissage	Impression, teinture, tissage et confection éponge	
Produits	3 697	8 308	12 005
Charges	2 336	9 395	11 730
Valeur ajoutée	1 361	-1 087	275
VA % produits	36.8		2.3
Salaires	1 521	1 109	2 630
Frais financiers	106	239	346
Taxes	71	237	308
Résultat brut	-338	-2 671	-3 009
Amortissement	457	515	971
Résultat net	-794	-3 186	-3 980

Compte d'exploitation de l'unité de Garoua

Charges		Produits	
Matières premières	1 296	Transfert de tissus	3 586
Autres matières		Transfert de filés	111
Energie et eau	756		
Pièces et entretien	167		
Autres consommables	10		
Prestation de service			
Frais divers d'exploitation	82		
Frais généraux usine	24		
Total charges	2 336	Total produits	3 697
Valeur ajoutée	1 361		
Salaires	1 521		
F. financiers	106		
Impôts et taxes	71		
Résultat brut	-338		
Amortissement	457		
Résultat net	-794		

Compte d'exploitation de l'unité de Douala

Charges		Produits	
Matières premières à base de coton	4 051	Vente produits fabriqués	7 859
Autres matières premières	1 066	Vente produits importés	401
Energie et eau	973	Autres produits	48
Pièces et entretien	443		
Autres consommables	31		
Prestation de service, Gravure	118		
Frais divers d'exploitation	166		
Frais généraux usine	34		
Frais généraux de siège	1 513		
Frais de distribution	593		
Frais de commercialisation	407		
Total charges	9 395	Total produits	8 308
Valeur ajoutée	-1 087		
Salaires	1 109		
F. financiers	239		
Impôts et taxes	237		
Résultat brut	-2 671		
Amortissement	515		
Résultat net	-3 186		

8.87 Éléments de base pour le calcul du compte d'exploitation de la confection textile artisanale

Intitulé	Unité	Coût
Bande tissu pour un dimol fin, largeur 1 doigt	m	75
Bande de tissu pour un dimol moyen, largeur 2 doigts	m	40
Nb fuseau fil fin pour dimol fin		50
Nb fuseau fil moyen pour dimol fin		50
Nb fuseau fil moyen pour dimol moyen		100
Prix d'un fuseau de fil fin	CFA	250
Prix d'un fuseau de fil moyen	CFA	150
Prix de vente de tissu pour dimol fin	CFA	40 000
Prix de vente de tissu pour dimol moyen	CFA	30 000
Prix de broderie fine	CFA	40 000
Prix de broderie moyennement fine	CFA	25 000
Prix de couture	CFA	10 000
Prix du battage/repassage	CFA	5 000
Prix d'un dimol fin	CFA	150 000
Prix d'un dimol moyen	CFA	90 000
Nb dimol par village et par mois		20
dont dimol fin		10
et dimol moyen		10
Nb de villages tisserands		100
Poids d'un dimol	kg	2
Poids de tissu/dimol	kg	2
Poids de fil/dimol	kg	2
Poids de fibre/dimol	kg	2
Poids de CG/dimol	kg	5
Poids total CG pour fil de tissu	Tonne	117
Poids de CG pour fil de couture d'un dimol	Tonne	5

8.88 Comptes d'exploitation des acteurs de la confection textile artisanale, en CFAF

Fileuses

Charges		Produits	
Achat CG pour fil desti	17	Fil fin	240
Achat CG/fil de couture	0.7	Fil moyen	180
VA	402		
VA/Village	4.0		

Tisserands

Charges		Produits	
Achat de fil	420	Tissus 1 doigt	480
		Tissu 2 doigts	360
VA	420		
VA/Village	4.2		

Couturiers

Charges		Produits	
Achat de tissu	840	Dimol tissu fin	1800
Fil moyen pour couture	14.4	Dimol tissu moyen	1080
Service de broderie	780		
Battage/repassage	120		
VA	1125.6		
VA/Village	11.3		

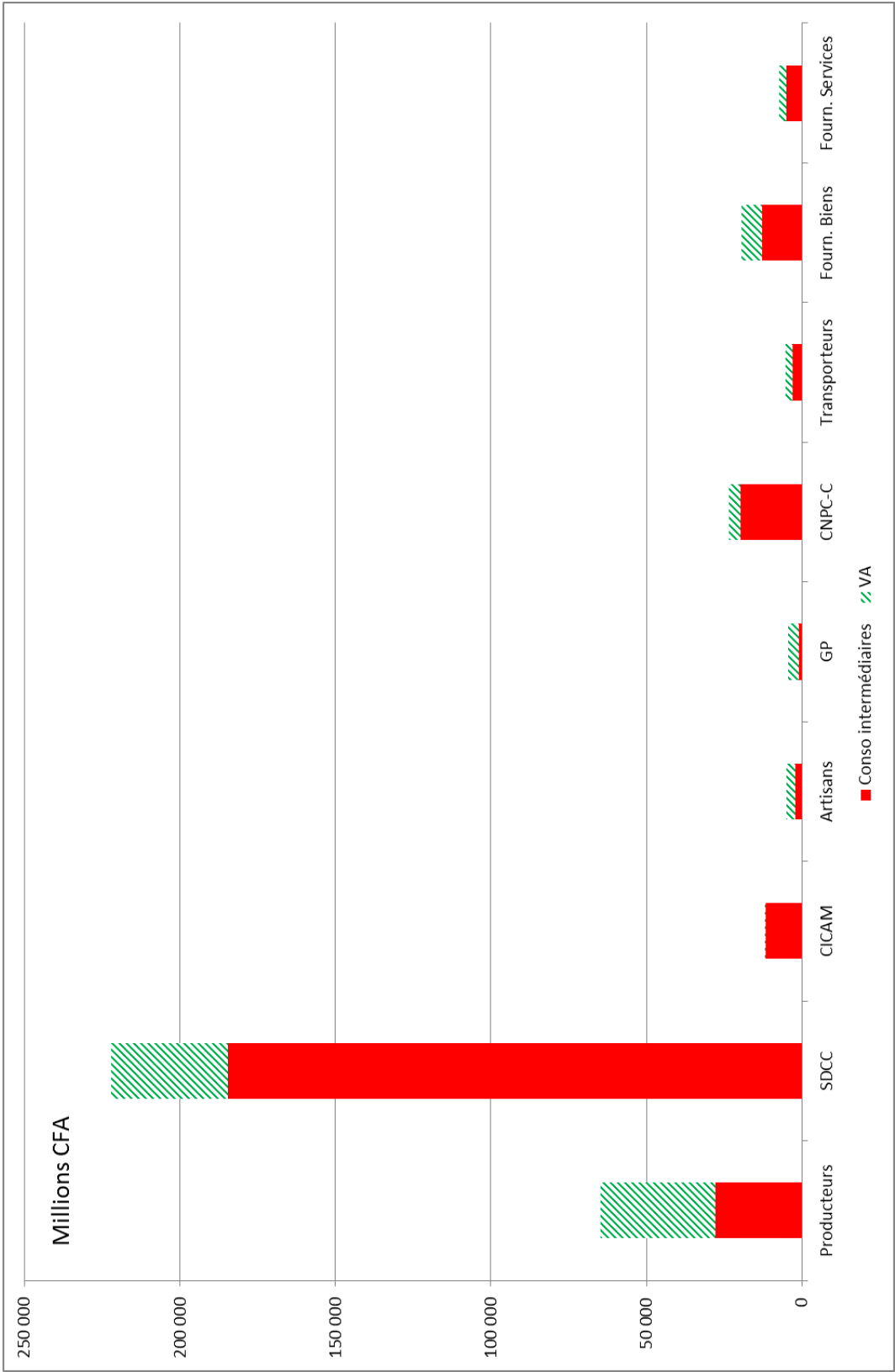
Batteurs/repasseurs

Charges	0	Produits	120
VA	120		
VA/village	1.2		

Brodeurs

Charges		Produits	780
Fil de broderie	18		
VA	762		
VA/village	7.62		

8.89 Chiffres d'affaires et VA des acteurs directs et indirects



8.90 Estimations des importations par les acteurs de la CV

Acteurs concernés	Montant, 10 ⁶ CFA	Remarques
Producteurs	518	Produits de soin des animaux
SDCC	19 416	Achats divers pour les trois fonctions
CICAM	1 243	Achats autres que les matières premières de coton
GP	89	Achats pour le fonctionnement
CNPC-C	14 903	Intrants importés
Transporteurs	2 734	Achats
Fournisseurs de biens à SDCC	12 620	Totalité des consommations intermédiaires
Fournisseurs de services à SDCC	5 096	Totalité des consommations intermédiaires
Total	56 619	

8.91 Comptes d'exploitation des producteurs par type avec consolidation des paysans semenciers

	Unité	Tous	Types de producteurs			
			< 1 ha	1-5 ha	5-10 ha	>10 ha
Nombre de producteurs		152 612	106 981	37 848	6 104	1 679
en % du total		100.0	70.1	24.8	4.0	1.1
Surface totale	ha	182 610	67 132	66 124	31 382	17 972
Surface par producteur	ha	1.20	0.63	1.75	5.14	10.71
Rendement	kg/ha	1 392	1 341	1 315	1 618	1 470
Production par producteur	kg	1 666	842	2 297	8 315	15 742
Production totale, coton-graine	tonne	254 181	90 054	86 939	50 760	26 427
Produit	106 CFA	64 607	23 153	22 026	12 781	6 647
Intrants	106 CFA	24 829	11 471	8 072	3 474	1 812
Frais de commercialisation	106 CFA	1 806	607	627	376	197
Aliment + prophylaxi	106 CFA	1 094	342	200	145	408
MARI*	106 CFA	39 778	11 682	13 955	9 306	4 835
Valeur ajoutée	106 CFA	36 878	10 733	13 128	8 785	4 231
en % du produit		57.1	46.4	59.6	68.7	63.7
Salaires (Main-d'œuvre tempo.)	106 CFA	2 280	1 666	488	111	14
Frais financiers	106 CFA	0	0	0	0	0
Taxes	106 CFA	0	0	0	0	0
Résultat brut	106 CFA	34 598	9 067	12 640	8 674	4 216
Amortissement	106 CFA	1 868	1 107	588	132	41
Résultat net	106 CFA	32 730	7 960	12 052	8 542	4 176

* Marge Après Remboursement des Intrants

8.92 Compte d'exploitation de tous les acteurs directs de la CV

en millions de FCFA

	Acteurs directs							
	Producteurs	Sodecoton			Sodecoton	Artisans	CICAM	Total direct
		Comm CG	Egrenage	Trituration				
Chiffre d'affaires	64 607	74 587	128 039	19 408	222 034	5 040	8 308	299 989
Valeur ajoutée (VA)								
Montant	36 878	-4 451	41 535	612	37 696	2 830	275	77 679
% CA	57.1	-6.0	32.4	3.2	17.0	56.2		
Salaires								
Montant	2 280	5 797	4 579	2 206	12 582	0	2 630	17 492
% VA	6.2	-130.2	11.0	360.7	33.4			22.5
Frais financiers/Assurances								
Montant	0	1 784	2 694	770	5 248	0	346	5 594
% VA	0.0	-40.1	6.5	126.0	13.9			7.2
Taxes								
Montant	0	1 371	4 214	381	5 967	0	308	6 275
% VA	0.0	-30.8	10.1	62.3	15.8			8.1
Résultat Brut	34 598	-13 404	30 049	-2 746	13 899	2 830	-3 009	48 318
Amortissement	1 868	2 652	1 645	1 134	5 430	0	971	8 270
Résultat net	32 730	-16 055	28 404	-3 880	8 469	2 830	-3 980	40 048

en % du total des acteurs directs

	Acteurs directs							
	Producteurs	Sodecoton			Sodecoton	Artisans	CICAM	Total direct
		Comm CG	Egrenage	Trituration				
Chiffre d'affaires	21.5	24.9	42.7	6.5	74.0	1.7	2.8	100.0
Valeur ajoutée (VA)	47.5	-5.7	53.5	0.8	48.5	3.6	0.4	100.0
Salaires	13.0	33.1	26.2	12.6	71.9	0.0	15.0	100.0
Frais financiers/Assuranc	0.0	31.9	48.2	13.8	93.8	0.0	6.2	100.0
Taxes	0.0	21.9	67.2	6.1	95.1	0.0	4.9	100.0
Résultat Brut	71.6	-27.7	62.2	-5.7	28.8	5.9	-6.2	100.0
Amortissement	22.6	32.1	19.9	13.7	65.7	0.0	11.7	100.0
Résultat net	81.7	-40.1	70.9	-9.7	21.1	7.1	-9.9	100.0

8.93 Comptes d'exploitation des acteurs indirects de la CV

en millions de FCFA

	Acteurs indirects					Total indirect
	GP	CNPC-C	Transporteurs	Fournisseurs de biens	Fournisseurs de services	
Chiffre d'affaires	4 242	23 394	5 335	19 416	7 280	59 667
Valeur ajoutée (VA)						
Montant	3 260	3 609	2 401	6 795	2 184	18 249
% CA	76.9	15.4	45.0	35.0	30.0	
Subvention d'exploitation		95				
Salaires						
Montant	1 723	425	679	1 196	449	4 472
% VA	52.9	11.8	28.3	17.6	20.5	24.5
Frais financiers/Assurances						
Montant	18	925	511	453	170	2 077
% VA	0.5	25.6	21.3	6.7	7.8	11.4
Taxes						
Montant	0	1 582	357	737	276	2 952
% VA	0.0	43.8	14.9	10.8	12.7	16.2
Résultat Brut	1 519	772	854	4 409	1 289	8 843
Amortissement	200	65	171	158	59	652
Résultat net	1 320	707	683	4 251	1 230	8 191

en % des acteurs indirects

	Acteurs indirects					Total indirect
	GP	CNPC-C	Transporteurs	Fournisseurs de biens	Fournisseurs de services	
Chiffre d'affaires	7.1	39.2	8.9	32.5	12.2	100.0
Valeur ajoutée (VA)	17.9	19.8	13.2	37.2	12.0	100.0
Salaires	38.5	9.5	15.2	26.8	10.0	100.0
Frais financiers/Assuranc	0.8	44.5	24.6	21.8	8.2	100.0
Taxes	0.0	53.6	12.1	25.0	9.4	100.0
Résultat Brut	17.2	8.7	9.7	49.9	14.6	100.0
Amortissement	30.6	9.9	26.2	24.2	9.1	100.0
Résultat net	16.1	8.6	8.3	51.9	15.0	100.0

8.94 Méthode et scénarii de simulation

Les informations glanées au cours de l'étude nous amènent à indiquer que l'évolution de la production dépend de multiples facteurs que sont le nombre de producteurs, leur distribution selon les quatre types distingués selon la taille de la sole cotonnière, la surface moyenne au sein de chaque type, le rendement et l'intensification dans l'usage des facteurs de production (intrants, main-d'œuvre...). Il est possible de faire varier tous ces facteurs en même temps, mais pour faire ressortir l'importance relative des facteurs pour atteindre l'objectif de production indiqué, il suffit de considérer quelques scénarii en variant le nombre de producteurs, la distribution des producteurs entre les quatre types et le rendement. Les résultats des simulations sont présentés dans l'annexe 8.95 et l'annexe 8.96. Ces simulations ont été réalisées pour les scénarii suivants, en considérant comme référence le scénario S_0 correspondant à la situation de la campagne 2017-18 :

- S_1 : pas de changement du nombre total des producteurs ni de variation de rendement, mais seulement un certain niveau de passage des producteurs de type 1 à 2, de type 2 à 3, et de type 3 à 4 ;
- S_2 : comme S_1 mais avec augmentation de 15% du nombre total de producteurs ;
- S_3 : comme S_1 mais avec un gain de rendement de 10% ;
- S_4 : comme S_3 mais le gain de rendement est poussé à 15% ;
- S_5 : comme S_2 , avec augmentation de 15% du nombre de producteurs et de 10% de rendement ;
- S_6 : comme S_5 , mais avec gain de rendement de 15% pour un objectif de production de 600 000 tonnes.

8.95 Variation des nombres de producteurs, de surface et de production selon 6 scénarios

variation du nombre de producteurs par rapport à la situation de 2017-18

Scenario	Unité	Tous	Types de producteurs			
			< 1 ha	1-5 ha	5-10 ha	>10 ha
S ₀ : Initial		152 612	106 981	37 848	6 104	1 679
S ₁ (400KT) : Modif distribution types producteur		0	-38 670	25 780	11 279	1 611
S ₂ (400KT) : S ₁ avec 15% producteurs en +		22 892	-12 512	24 717	9 245	1 442
S ₃ (400KT) : S ₁ avec 10% rendement en +		0	-29 027	19 351	8 466	1 209
S ₄ (400KT) : S ₁ avec 15% rendement en +		0	-24 834	16 556	7 243	1 035
S ₅ (400KT) : S ₁ avec 15% producteur et rendement en +		22 892	-2 869	18 288	6 433	1 040
S ₆ (600KT) : S ₅ avec 15%rendement en +		22 892	-44 796	46 240	18 662	2 787

variation de la surface cotonnière par rapport à la situation de 2017-18

Scenario	Unité	Tous	Types de producteurs			
			< 1 ha	1-5 ha	5-10 ha	>10 ha
S ₀ : Initial	ha	182 610	67 132	66 124	31 382	17 972
S ₁ (400KT) : Modif distribution types producteur	ha	96 005	-24 266	45 040	57 982	17 249
S ₂ (400KT) : S ₁ avec 15% producteurs en +	ha	98 294	-7 851	43 182	47 529	15 435
S ₃ (400KT) : S ₁ avec 10% rendement en +	ha	72 064	-18 215	33 808	43 523	12 948
S ₄ (400KT) : S ₁ avec 15% rendement en +	ha	61 655	-15 584	28 925	37 236	11 078
S ₅ (400KT) : S ₁ avec 15% producteur et rendement en +	ha	74 353	-1 800	31 950	33 069	11 133
S ₆ (600KT) : S ₅ avec 15%rendement en +	ha	178 446	-28 111	80 785	95 935	29 836

variation de la production cotonnière par rapport à la situation de 2017-18

Scenario	Unité	Tous	Types de producteurs			
			< 1 ha	1-5 ha	5-10 ha	>10 ha
S ₀ : Initial	Tonne	254 181	90 054	86 939	50 760	26 427
S ₁ (400KT) : Modif distribution types producteur	Tonne	145 819	-32 552	59 219	93 787	25 365
S ₂ (400KT) : S ₁ avec 15% producteurs en +	Tonne	145 819	-10 532	56 776	76 878	22 697
S ₃ (400KT) : S ₁ avec 10% rendement en +	Tonne	145 819	-17 872	57 590	82 514	23 586
S ₄ (400KT) : S ₁ avec 15% rendement en +	Tonne	145 819	-10 532	56 776	76 878	22 697
S ₅ (400KT) : S ₁ avec 15% producteur et rendement en +	Tonne	145 819	6 349	54 903	63 915	20 652
S ₆ (600KT) : S ₅ avec 15%rendement en +	Tonne	345 819	-29 857	135 189	186 068	54 419

8.96 Variation de la MARI, de la VA, de la part dans la VA et le résultat net d'exploitation selon six scénarios

variation de la MARI par rapport à la situation de 2017-18

Scenario	Unité	Tous	Types de producteurs			
			< 1 ha	1-5 ha	5-10 ha	>10 ha
S ₀ : Initial	106 CFA	39 778	11 682	13 955	9 306	4 835
S ₁ (400KT) : Modif distribution types producteur	106 CFA	23 883	-4 919	8 284	16 214	4 304
S ₂ (400KT) : S ₁ avec 15% producteurs en +	106 CFA	22 645	-2 329	7 912	13 229	3 833
S ₃ (400KT) : S ₁ avec 10% rendement en +	106 CFA	26 254	456	-80	-35	10
S ₄ (400KT) : S ₁ avec 15% rendement en +	106 CFA	27 286	-1 008	9 653	14 368	4 272
S ₅ (400KT) : S ₁ avec 15% producteur et rendement en +	106 CFA	25 017	773	8 825	11 654	3 766
S ₆ (600KT) : S ₅ avec 15%rendement en +	106 CFA	63 706	-3 602	22 533	34 621	10 153

variation de la VA par rapport à la situation de 2017-18

Scenario	Unité	Tous	Types de producteurs			
			< 1 ha	1-5 ha	5-10 ha	>10 ha
S ₀ : Initial	106 CFA	34 598	9 067	12 640	8 674	4 216
S ₁ (400KT) : Modif distribution types producteur	106 CFA	22 250	-4 933	7 905	15 567	3 710
S ₂ (400KT) : S ₁ avec 15% producteurs en +	106 CFA	20 245	-3 350	7 562	12 732	3 302
S ₃ (400KT) : S ₁ avec 10% rendement en +	106 CFA	24 776	-2 742	9 048	14 613	3 856
S ₄ (400KT) : S ₁ avec 15% rendement en +	106 CFA	25 874	-1 554	9 519	14 019	3 891
S ₅ (400KT) : S ₁ avec 15% producteur et rendement en +	106 CFA	22 772	-619	8 645	11 364	3 382
S ₆ (600KT) : S ₅ avec 15%rendement en +	106 CFA	60 787	-3 380	21 610	33 431	9 126

variation du résultat net d'exploitation par rapport à la situation de 2017-18

Scenario	Unité	Tous	Types de producteurs			
			< 1 ha	1-5 ha	5-10 ha	>10 ha
S ₀ : Initial	106 CFA	32 730	7 960	12 052	8 542	4 176
S ₁ (400KT) : Modif distribution types producteur	106 CFA	22 147	-5 062	7 946	15 592	3 671
S ₂ (400KT) : S ₁ avec 15% producteurs en +	106 CFA	19 695	-3 952	7 612	12 769	3 267
S ₃ (400KT) : S ₁ avec 10% rendement en +	106 CFA	24 581	-3 045	9 144	14 655	3 827
S ₄ (400KT) : S ₁ avec 15% rendement en +	106 CFA	25 640	-1 933	9 639	14 068	3 866
S ₅ (400KT) : S ₁ avec 15% producteur et rendement en +	106 CFA	22 130	-1 395	8 750	11 418	3 357
S ₆ (600KT) : S ₅ avec 15%rendement en +	106 CFA	60 545	-3 398	21 474	33 410	9 059

variation de la part dans la VA de tous les producteurs par rapport à la situation de 2017-18

Scenario	Unité	Tous	Types de producteurs			
			< 1 ha	1-5 ha	5-10 ha	>10 ha
S ₀ : Initial	106 CFA	100	26.2	36.5	25.1	12.2
S ₁ (400KT) : Modif distribution types producteur	106 CFA	0	-18.9	-0.4	17.6	1.8
S ₂ (400KT) : S ₁ avec 15% producteurs en +	106 CFA	0	-15.8	0.3	14.0	1.5
S ₃ (400KT) : S ₁ avec 10% rendement en +	106 CFA	0	-15.6	0.0	14.2	1.4
S ₄ (400KT) : S ₁ avec 15% rendement en +	106 CFA	0	-13.8	0.1	12.5	1.2
S ₅ (400KT) : S ₁ avec 15% producteur et rendement en +	106 CFA	0	-11.5	0.6	9.9	1.1
S ₆ (600KT) : S ₅ avec 15%rendement en +	106 CFA	0	-20.2	-0.6	19.1	1.8

variation de la part dansle résultat netd'exploitation de tous les producteurs par rapport à la situation de 2017-18

Scenario	Unité	Tous	Types de producteurs			
			< 1 ha	1-5 ha	5-10 ha	>10 ha
S ₀ : Initial	106 CFA	100	24.3	36.8	26.1	12.8
S ₁ (400KT) : Modif distribution types producteur	106 CFA	0	-19.0	-0.4	17.9	1.5
S ₂ (400KT) : S ₁ avec 15% producteurs en +	106 CFA	0	-16.7	0.7	14.6	1.4
S ₃ (400KT) : S ₁ avec 10% rendement en +	106 CFA	0	-15.7	0.2	14.4	1.2
S ₄ (400KT) : S ₁ avec 15% rendement en +	106 CFA	0	-14.0	0.3	12.6	1.0
S ₅ (400KT) : S ₁ avec 15% producteur et rendement en +	106 CFA	0	-12.4	1.1	10.3	1.0
S ₆ (600KT) : S ₅ avec 15%rendement en +	106 CFA	0	-19.4	-0.9	18.9	1.4

8.97 Part des producteurs dans la VA des acteurs directs et dans la VA totale

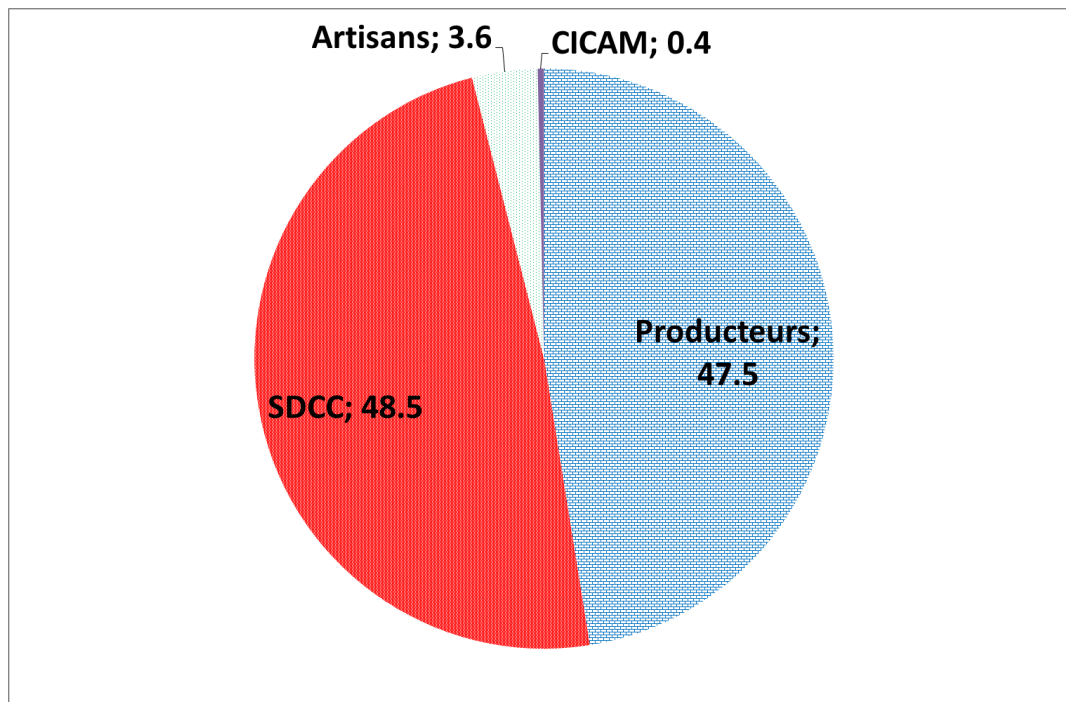


FIGURE 8.5 : PARTS DES ACTEURS DIRECTS DANS LA VA DIRECTE, %

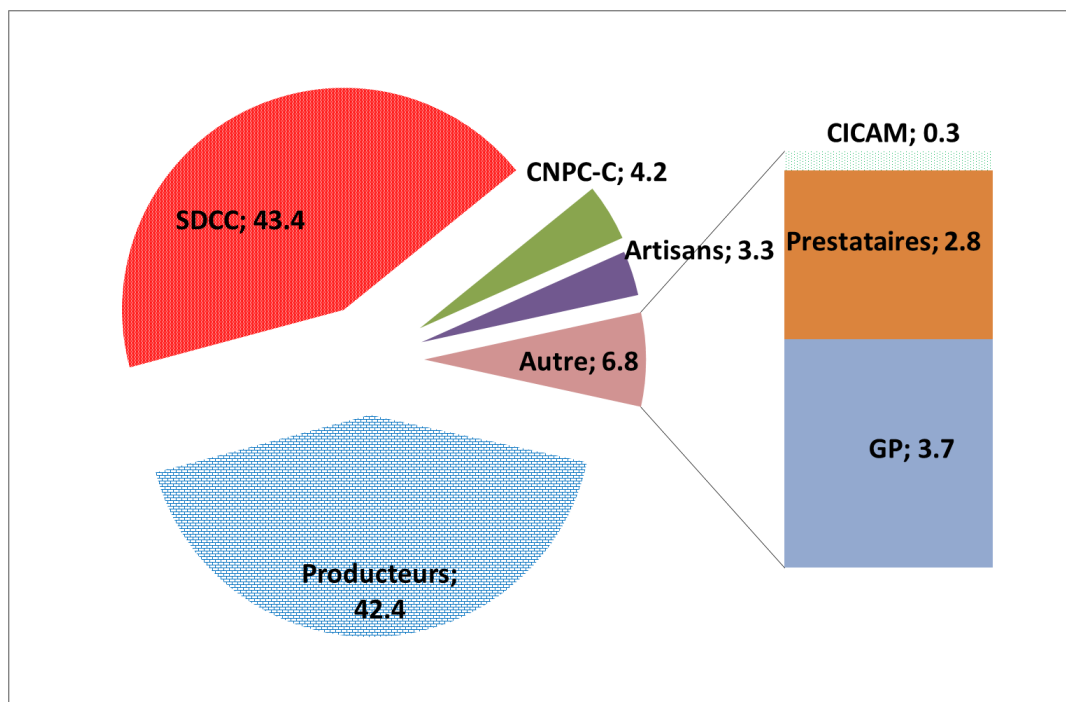


FIGURE 8.6 : PARTS DES ACTEURS DANS LA VA TOTALE, %

8.98 Variation du résultat net de la SDCC (hors trituration), en milliards CFAF, selon variations du prix mondial et du taux de change

Variation taux de change		Prix de vente en US cents/livre, variation en % par rapport au niveau de 2017-18																	
%	Eurodol CFAdol	-40%	-35%	-30%	-25%	-20%	-15%	-10%	-5%	Référence	5%	10%	15%	20%	25%	30%	35%	40%	
-40%	815	45 0990	48 8572	52 6155	56 3737	60 1320	63 8902	67 6485	71 4067	75 1650	78 9232	82 6815	86 4397	90 1980	93 9562	97 7145	101 4727	105 2310	
-40%	0.6762	815	12.3	16.3	20.6	25.3	30.3	35.7	41.7	48.2	55.4	63.3	72.1	82.0	93.1	105.6	120.0	136.5	155.8
-35%	0.7326	786	8.5	12.3	16.5	21.0	25.8	31.1	36.8	43.1	50.0	57.7	66.2	75.7	86.3	98.4	112.3	128.3	146.9
-30%	0.7890	757	4.7	8.4	12.3	16.7	21.3	26.4	31.9	38.0	44.6	52.0	60.2	69.3	79.6	91.3	104.6	120.0	137.9
-25%	0.8453	728	0.8	4.4	8.2	12.3	16.8	21.7	27.0	32.8	39.3	46.3	54.2	63.0	72.9	84.1	96.9	111.7	128.9
-20%	0.9017	698	-3.0	0.4	4.1	8.0	12.3	17.0	22.1	27.7	33.9	40.7	48.2	56.7	66.2	76.9	89.2	103.4	120.0
-15%	0.9580	669	-6.9	-3.6	-0.1	3.7	7.9	12.3	17.2	22.6	28.5	35.0	42.2	50.3	59.4	69.7	81.5	95.1	111.0
-10%	1.0144	640	-10.7	-7.6	-4.2	-0.6	3.4	7.7	12.3	17.5	23.1	29.3	36.3	44.0	52.7	62.6	73.8	86.9	102.0
-5%	1.0707	611	-14.6	-11.6	-8.3	-4.9	-1.1	3.0	7.5	12.3	17.7	23.7	30.3	37.7	46.0	55.4	66.2	78.6	93.1
Référence	1.1271	582	-18.4	-15.6	-12.5	-9.2	-5.6	-1.7	2.6	7.2	12.3	18.0	24.3	31.3	39.3	48.2	58.5	70.3	84.1
5%	1.1834	553	-22.2	-19.5	-16.6	-13.5	-10.1	-6.4	-2.3	2.1	7.0	12.3	18.3	25.0	32.5	41.0	50.8	62.0	75.1
10%	1.2398	524	-26.1	-23.5	-20.8	-17.8	-14.6	-11.0	-7.2	-3.0	1.6	6.7	12.3	18.7	25.8	33.9	43.1	53.7	66.2
15%	1.2961	495	-29.9	-27.5	-24.9	-22.1	-19.0	-15.7	-12.1	-8.2	-3.8	1.0	6.4	12.3	19.1	26.7	35.4	45.5	57.2
20%	1.3525	466	-33.8	-31.5	-29.0	-26.4	-23.5	-20.4	-17.0	-13.3	-9.2	-4.6	0.4	6.0	12.3	19.5	27.7	37.2	48.2
25%	1.4088	437	-37.6	-35.5	-33.2	-30.7	-28.0	-25.1	-21.9	-18.4	-14.6	-10.3	-5.6	-0.3	5.6	12.3	20.0	28.9	39.3
30%	1.4652	407	-41.5	-39.5	-37.3	-35.0	-32.5	-29.8	-26.8	-23.5	-19.9	-16.0	-11.6	-6.6	-1.1	5.2	12.3	20.6	30.3
35%	1.5215	378	-45.3	-43.5	-41.5	-39.3	-37.0	-34.4	-31.7	-28.7	-25.3	-21.6	-17.5	-13.0	-7.8	-2.0	4.7	12.3	21.3
40%	1.5779	349	-49.2	-47.4	-45.6	-43.6	-41.5	-39.1	-36.6	-33.8	-30.7	-27.3	-23.5	-19.3	-14.6	-9.2	-3.0	4.1	12.3

8.99 Entretiens et interviews pour l'analyse sociale

I	interview (date/Identité)	Détails de l'interview
I1	DUE du 25.2	Discussion initiale
I2	DUE avec partenaires	Briefing du 25.2
I3	Oumar B	var.infos de base sur Sodecoton (25/26)
I4	DPA SDCC, 27.2	Premier contact
I5	DAG SDCC	Personnel SDCC
I6	Suivi-Evaluation	Enquete et banque de donné
I7	Usine Garoua 1	Egrenage
I8	Usine Garoua 2	Huilerie
I9	SDCC Professionalisation, 28.2	introduction
I10	CNPC-C, CA;	reunion de 90 min
I11	SDCC DPA-Sud, 1.3	Politique de production
I12	CICAM	visite usine à Garoua avec directeur
I13	COFIL	entretiens dans bureaux
I14	Sigrist	Invitation privé de l'équipe M1
I15	Chauffeur-producteur, 2.3	Entretiens à Garoua
I16	GP Bah Tao, 4.3	focus group
I17	GPLandau 1	focus group
I18	Bureaux et techniciens Landau 1	Rencontre zone, secteur,
I19	SDCC	Rencontre zone, secteur, région Mayo-Galké
I20	GIC Laina Kawtal, 5.3	focus group
I21	GIC Ouaro Dandi	focus group
I22	SDCC Zone Ndong	rencontre région, pesage, transport pour FOB
I23	Commercante	Entretien sur les magouilles à la douane Tchadienne vers Cameroun (Njamena)
I24	GIC Ouaro Dandi, 6.3	focus group
I25	jeunes/femmes GIC Ouaro D.	focus group restreint
I26	GIC Lama Laouane 1	group de migrants du Nord-Extrême
I27	Romain C.	Premier entretiens, notamment sur la gouvernance
I28	Youssef ((SDCC, Profess), 7.3	entretiens sur les Lamidat
I29	GIC Guider-Lamarde	coton-cultteurs peri-urbain
I30	Lamidat de Guider	entretien avec le Ministre de l'élevage (Zarkisanou), Ministre de l'Agriculture (Bounou) et Ministre de la Justice et de la religion (Alkali)
I31	DG SDCC	premier entretien

I32	SDCC, 8.3	Debriefing Sodecoton
I33	DAP SDCC	entretiens avec Abdoulaye, aussi sur l'agriculture biologique et les expériences de SDCC avec le coton bio
I34	Employé du train; 9.3	Entretien sur le future de l'agriculture
I35	FEICOM	Focus group improvisé dans le train sur les femmes, l'appui aux communes et la politique nationale
I36	African Commodities; 12.3	Discussion avec responsables de la filière anacarde (Alexi, Alexandre)
I37	CED, Samuel Nguiffo	Longer discussion and sharing on development
I37b	Dieudonné Masso, 13.3	Coordination at institutional level. Organising next day
I38	INS, 14.3	Comptabilité national et démographie
I39	PNDP, 14.3	Information on the national programm to train communal staff and make PCDs
I40	MINFOF, protection aires et faunes, 14.3	la situation difficile des éléphants dans le Nord. Le parc au Chad et so connectivité dans le Nord-Extrême. Les couloirs nécessaires
I41	GIZ 14.3 et 26.4	Discussion sur la stratégie pour une approche de terroir et infos sur le PADER ainsi que les projets sur le coton durable
I42	Producteur intellectuel 27.4	Interview de 3 hrs dans le train Yaoundé-N'Ggaunderé
I43	GIZ-PADER Garoua 28.4.	Avec 6 cadre du PADER (1.5 hrs)
I44	SODECOTON 29.4	Discussion sur démographie et fertilité des sols
I45	Village Doumba à Kaélé, 30.4.19	
I46	Village Doyang à Kaélé	
I47	Discussion SDCC Kaélé	
I48	Village Souringwa à Tschatibali, 2.5	
I49	Discussion SDCC Tschatibali, 2.5.	
I50	Debriefing avec DG, 3.5.19	Sodecoton

D document (code/auteur/année/titre) (pour plus de détails voir bibliographie)

D1	Bayiha 2016	Diversité des trajectoires vers l'agriculture biologique dans les pays en développement : le cas du Cameroun
D2	FAO 2015	Measuring Sustainability in Cotton farming Systems. Towards a Guidance Framework
D3	Mathieu 2001	The Recent Extension of Muskwari Sorghums in Northern Cameroon
D4	WB 2018	The Agriculture Investment and Market Development Project (P143417)
D5	Manyacka 2013	LA FIBRE DU DEVELOPPEMENT. Perspectives sociales et économiques de la culture du coton au Cameroun
D6	COMPACI II 2016	Rapport de performance du projet
D7	BAD 2017	Politique de prix dans la filière coton au Cameroun
D8	Devèze 2006	LE COTON, MOTEUR DU DÉVELOPPEMENT ET FACTEUR DE STABILITE DU CAMEROUN DU NORD?
D9	Sodecoton 2017	Document de faisabilité du PA3C draft 3

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D12	ILO 2015	
D13	ILO 2016	CHILD LABOUR IN COTTON. A Briefing
D14	ITC 2013	IMPROVING AFRICA'S COTTON VALUE CHAIN FOR ASIAN MARKETS
D15	LDC 2017	Creating fair and sustainable values
D16	Levrat 1984	La place du coton dans la vie des paysans du Nord-Cameroun
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D18	Roupsard 2005	Production cotonnière In: Atlas de la province Extrême-Nord Cameroun. [Online]. Marseille: IRD Éditions, 2005
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D23	Sodecoton 2017	Plan de redressement de la Sodecoton et mécanisme de sa mise en oeuvre. Rapport final. Tome 1
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D25	CONAC 2017	Rapport état de lutte contre la corruption au Cameroun en 2016
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D28	WB 1995	Cameroon. Diversity, Growth, and Poverty Reduction
D29	WB 2018	Profil de risque climatique des systèmes de production agricoles basés sur le coton dans le Nord du Cameroun. WP draft Nov
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D45	Gergely 2009	Cotton sector report Cameroon
D46	Sodecoton 2016	Rapport DPA Mai -Oct 2016
D47	Sodecoton 2010	Plan stratégique 2010/11-2014/15
D48	Sodecoton 2018	Rapport Annuel DPA 2017
D49	COWI 2017	Etudes portant sur la contribution du secteur cotonnier dans l'émergence socio-économique et la création d'emploi dans la zone cotonnière au Cameroun
D50	MINEPAT 2015	RECENSEMENT DES OPERATEURS DE LA FILIERE COTON/TEXTILE/CONFECTION. Rapport Principal
D51	Thylmann 2014	Life Cycle Assessment (LCA) of Organic Cotton. A global average
D52	WB 2008	Cameroon. Agriculture Value Chain. Competitive Study (incl. Cotton)
D53	Sodecoton 2018	Banque donnée suivi-évaluation
D54	CNPC-C 2012	Bulletin 10, Fev
D55	Sodecoton 2014	Reglement interne
D56	Sodecoton 2014	Statut du Personnel
D57	SDCC-CNPC-C	Convention financière
D58	SDCC-CNPC-C	Convention gestion intrants
D59	SDCC-CNPC-C	Convention services animation
D60		Roles femmes, gestion res nat
D61		Artisanal textile
D62	Sodecoton	Critères éligibilités aux crédit 2017/18
D63	Sodecoton	Enquete permanent
D64	Sodecoton	Fiches techniques
D65	Sodecoton 2017	Couts services
D66	Inst. Cartographie	Monographie de Mayo-Kani 2015
D67		Fiche nat. des Localités du Cameroun
D68	PNDP	div PDC (en word)
D69	GIZ 2017	Système de production agropastoral dans la région de l'Adamaoua et du Nord (PADER)
D70	IMF 2018	Country report 18/235
D71	WB 2019	EBA databank (enabling business for agriculture)

D72	FPAE 2015	Aspets de la question foncière dans les régions septentrionales du Cameroun
D73	FPAE 2015b	Rapport final. OBSERVATOIRE DE l'ACQUISITION DES TERRES A GRANDE ECHELLE AU CAMEROUN PAR LA FONDATION PAUL ANGO ELA (FPAE)
D74	Belaunde et al 2010	LAND, LEGITIMACY AND GOVERNANCE IN CAMEROON
D75	OECD 2006	
D76	WHO 2016	Health Profile Cameroon
D77	Seignobes 2010	UNE NÉGOCIATION FONCIÈRE INTROUVABLE ? L'EXEMPLE DU MAYO-REY DANS LE NORD DU CAMEROUN

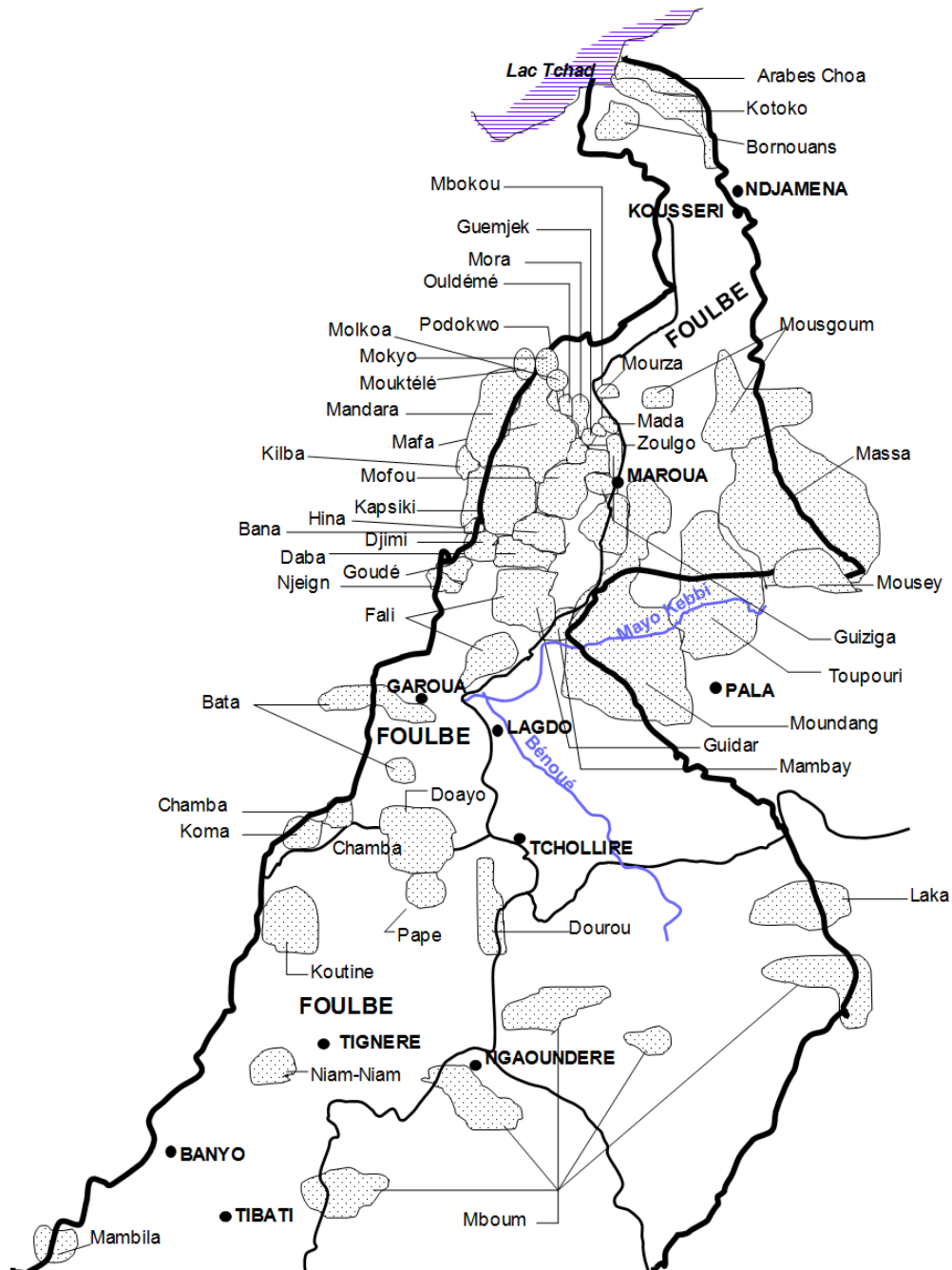
Autre littérature cité dans le chapitre 4 :

Mills, C. W. (1958). "The Sociological Imagination," Oxford University Press.

Nicolay, G. L. (2019). Understanding and Changing Farming, Food & Fiber Systems. The Organic Cotton Case in Mali and West Africa. In "Open Agriculture", Vol. 4, pp. 86.

Weber, M., ed. (1922). "Wirtschaft und Gesellschaft. Grundlagen der verstehenden Soziologie."

8.100 Diversité ethnique du Nord Cameroun



8.101 Historique de la production de coton

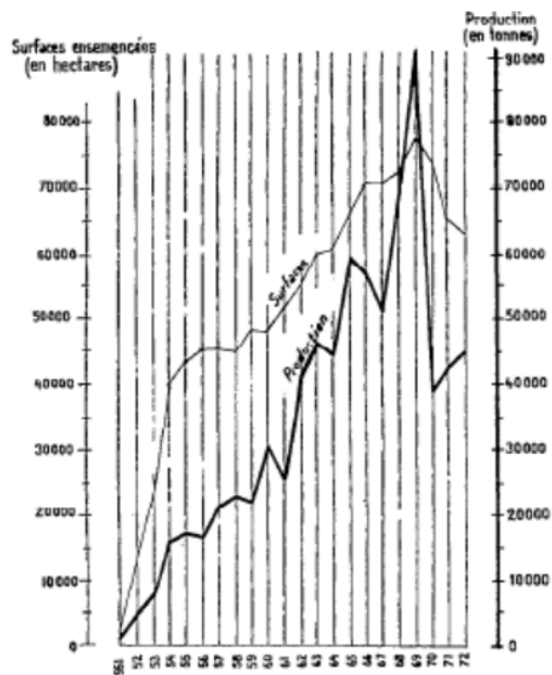
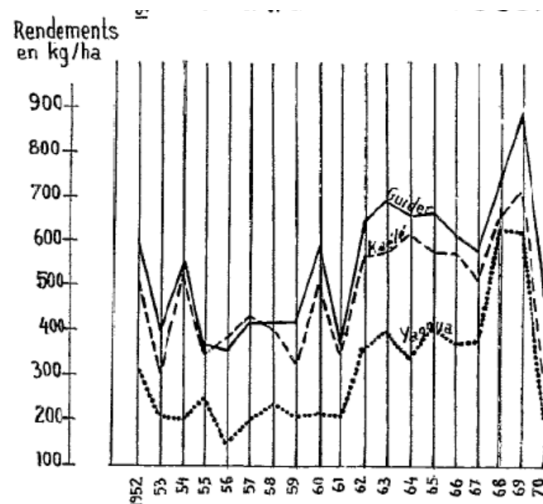


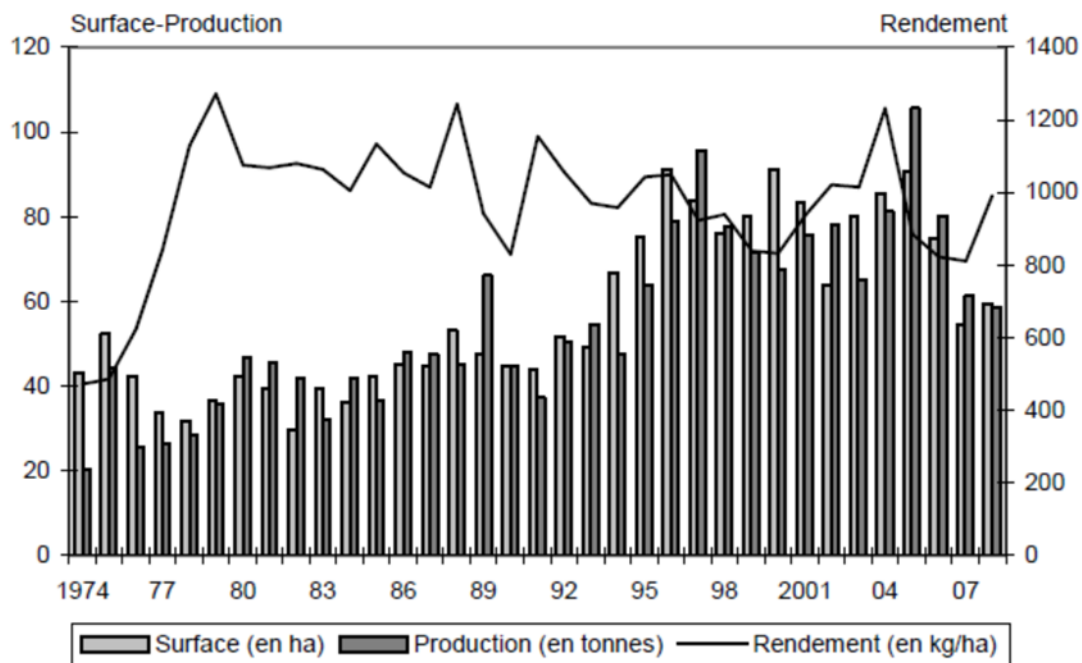
Fig. 62 Évolution des surfaces ensemencées et de la production de coton

Source : Boutrais 1984



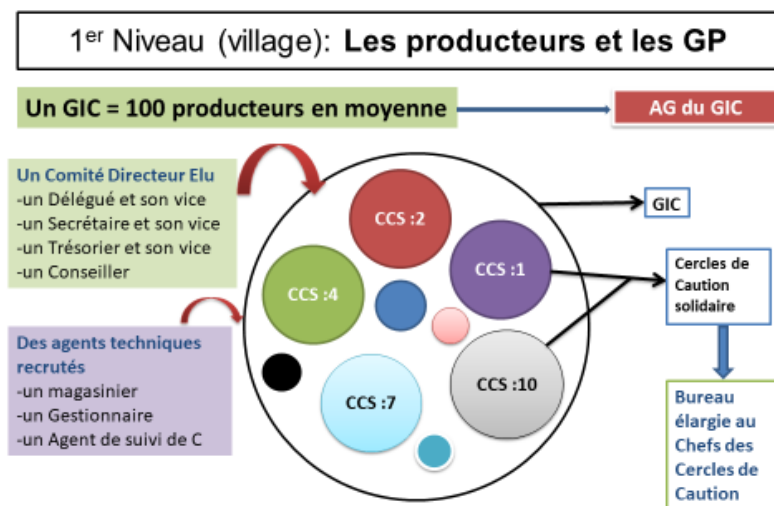
ig. 64 Évolution des rendements en coton par arrondissement

FIG. 41 : ÉVOLUTION DE LA CULTURE DANS L'EXTRÊME-NORD



Source : Levrat 2009

8.102 L'organisation des producteurs de coton sous la CCPC



8.103 Gouvernance traditionnelle et le rôle historique des Peules

Les Peuls sont arrivés dans la province du Nord au 19^{ème} siècle. Ils ont conquis les espaces les plus vitaux et se sont installés dans les plaines et vallées, faciles d'accès et zones de riches pâturages pour les troupeaux. Ils dominent de vastes territoires dans tous les départements de la province. Les populations autochtones sont sous autorité de leur administration. Le Foulbé qui est leur langue a été imposé aux autochtones et reste la langue dominante de la province.

Le système socio-politique Foulbé est imposé à tous les autres groupes ethniques. Il est hiérarchisé et centralisé autour du Lamido, qui contrôle toutes les activités socio-économiques de sa circonscription territoriale à travers un certain nombre d'organes :

- le Gouvernement ou Faada composé des ministres nommés et révocables ;
- les Ardo qui sont des chefs d'unités territoriales ;
- les Djaoro, chefs de village nommés et qui rendent compte au Lamido.

C'est pourquoi la province est morcelée d'une vingtaine de chefferies Foulbé dont les limites territoriales coïncident avec certaines circonscriptions administratives telles que les départements, les arrondissements et les districts.

On se trouve aujourd'hui devant des problèmes fonciers insolubles, des paiements de zakkat (redevance

Quelques faits sur le Lamidat de Baaba Rey- le Royaume de Rey, un Etat dans l'Etat (source :

Fondé par les Peuls Yillaga au début du XIX^e siècle, le royaume de Rey a couvert la haute vallée de la Bénoué. Dès le début, l'élément peul, très minoritaire, fait percevoir ce lamidat plus comme le prolongement d'une principauté dama, principale population autochtone, les Mbum de la région de Touboro continuant d'appeler le lamido de Rey « Mbay Dama », le chef des Dama.

Ahidjo toutefois n'osa pas démembrer Rey qui, par ailleurs lui servait de prison politique ; le lamidat demeura un vaste département, le « Mayo-Rey », d'une superficie supérieure à celle de la Belgique.

Au milieu des années 1980, il fut **décidé de créer des périmètres d'immigration** dans cet « état » fermé sans vouloir aucunement se préoccuper d'un tel encadrement politique ; sur le simple constat que la région était faiblement peuplée. L'idée constante qui accompagne tous les projets depuis la fin des années 1950 présente ces « féodalités » comme rapidement appelées à disparaître devant les impératifs économiques du développement

Le lamido pense – comme il nous l'affirmait en 1996 – qu'il est investi d'une mission, celle de garder intact l'héritage de Rey car « ni Yola, ni les Allemands, ni les Français, ni encore les présidents Ahidjo et Biya n'ont divisé mon royaume » et d'ajouter : « Rey a un devoir historique envers ses peuples, y compris au-delà de la frontière du Tchad. » Cette idéologie ne peut être que partagée par ses successeurs et l'appareil dynastique des dogari.

« Le système des lamido, autorité traditionnelle, tend à perdre de son influence depuis l'avènement du processus de démocratisation au Cameroun » (Devèze et Madaule, 1992, p. 37). C'est sur ce constat erroné et, qui plus est à Rey, que vont s'échafauder toutes les perspectives concernant l'évolution du foncier. Or, nous ne sommes pas en présence de « pesanteurs sociales » selon la rhétorique des rapports sur le Développement, mais devant des structures vivaces en continuelles adaptations. L'arrivée en 2005 du réseau de téléphonie mobile, refusé par le lamido Bouba Abdoulaye jusqu'à sa mort, ne peut que conforter une forme de libéralisation. La Sodecoton assure, elle aussi, sa présence avec la construction de sa 9^e usine d'égrenage à Homé (2006) au centre de l'axe. [GN : Touboro].

Dans la cascade des divers projets mentionnés, **il s'agit d'un demi-siècle d'une méconnaissance volontairement entretenue au nom d'une efficacité techniciste, refusant le moindre zeste d'histoire, la moindre approche sociale ou culturelle**, qui ne sauraient constituer que des entraves. L'espace est vide et cela se voit à travers les photos aériennes, les types de végétations, l'indigence des infrastructures...

traditionnelle) aux lamibe, de mobilisation d'élites de type « jeunes Peuls », très anti-migrants. Ces mêmes

mécanismes sont à l'œuvre aujourd'hui dans la région de Rey. Le second malentendu consiste à percevoir un village de migrants comme un village disposant d'un terroir au sens classique. C'est une base d'arrivées et de départs où l'on s'investit incomplètement ; on prospecte ailleurs, on revient... On aboutit ainsi à des exploitations dissociées sur deux ou trois terroirs : une partie de la famille (première femme et ses fils) reste dans le premier village alors que le chef de famille et sa dernière épouse défrichent un nouveau front pionnier. La vulgarisation des motos chinoises (2003) et la téléphonie mobile ont changé la notion de terroir et avec plus d'évidence encore dans ces zones pionnières.

Lors de la première décennie, 1985-1995, les rapports Mbum-migrants furent plutôt bons. Une certaine complémentarité économique les liait. Les Mbum apportaient des produits de la brousse, se louaient chez les migrants « entrepreneurs ». On ne relevait pas d'antagonismes fondamentaux, les deux camps en majorité chrétiens appartenaient aux mêmes églises. Grâce aux migrants, protégés par l'encadrement de la Sodecoton, les Mbum ont pu se montrer moins dociles envers les dogari. La seconde décennie voit l'apparition d'un seuil d'acceptabilité de migrants dépassée. L'arrivée ininterrompue de migrants ne cesse d'inquiéter les communautés autochtones.

C'est également dans la région mbum de Sorombeo que fut tenté le « labour chimique » ou semi-direct avec le Paraquat, qui devait ensuite se répandre dans toutes les zones de la Sodecoton.

La Sodecoton a le sentiment d'avoir beaucoup œuvré pour les Mbum et désespère de les transformer en « bons planteurs ». De leurs terroirs jadis quadrillés en blocs de cultures motorisées, divisés en parcelles de 5 ha, elles-mêmes subdivisées par des bandes anti-érosives – comme on peut le voir sur les photos aériennes de 1985 – il ne reste en 2006 que des traces. La dispersion des emblavures, le mauvais suivi des cycles culturels, l'absence de surveillance des parcelles de coton prises par le feu ou dévastées par le bétail, confirment l'image du Mbum piètre cultivateur auprès de l'encadrement Sodecoton. Les Mbum sont restés des coureurs de brousse invétérés. Il faut, pour comprendre leur économie, superposer les calendriers de chasse et de pêche à celui de l'agriculture. Comme les deux premiers sont sujets à fluctuations, l'agriculture se trouve.

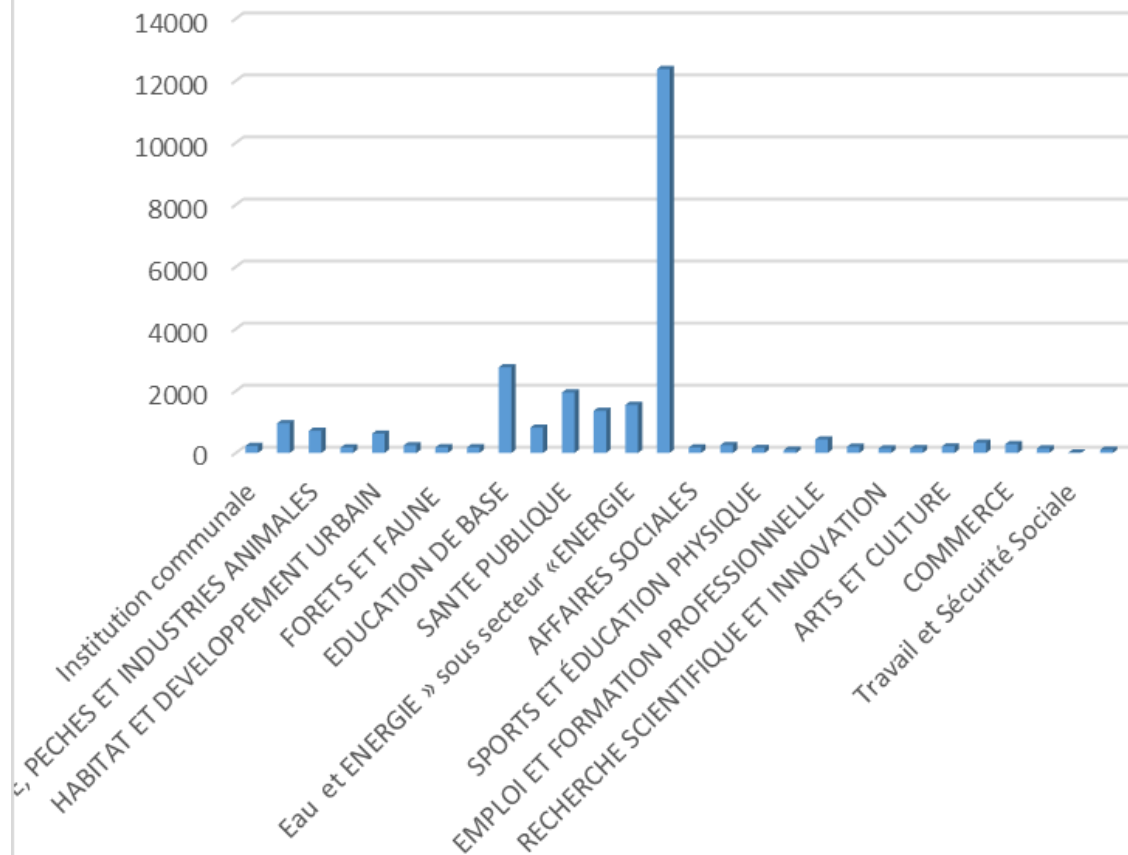
Les **Mafa** savourent pleinement « la revanche du pauvre montagnard ». De cette réussite du migrant se dégage un sentiment de supériorité sur l'autochtone, qui transparaît dans des échanges matrimoniaux déséquilibrés, mais s'exprime encore plus dans une compétition foncière qu'ils imposent aux Mbum et que ces derniers ne peuvent admettre sur leurs propres terres.

Gouvernance moderne

Toutes les Communes disposent d'un plan de développement (PDC). Elles sont supposé de gérer les infrastructures sociales. Par contre, elles ne disposent pas encore de revenus notables, reste donc dépendant de l'Etat. La base de ressources humaines (faible niveau éducatif) par rapport à leurs fonctions reste précaire.

Exemple du budget d'investissement de la commune de Poli, qui dépasse les 26 Mia de CFAF :

Le budget de la commune de Poli (en Mio FCFA; PCD 2014



8.104 Base de calcul de la consommation de gazole par tonne-kilomètre

Base de calcul de la consommation de gazole par tonne-kilomètre. La quantité du carburant par tonne-kilomètre (dernière colonne) a été utilisée pour les inventaires de transport:

Région_1	Région_2	Masse de coton transportée [t]	Masse d'intrants transportée [t]	Masse totale transportée [t]	Distance [km]	Consom- mation du carburant [l]	Consom- mation du carburant [kg]	Consom- mation du carburant par tonne [kg/t]	Distance par tonne [km/t]	Consommation du carburant par kilomètre tonne [kg/tkm]
Maroua	Extrême-Nord	48'381	4'141	52'522	439'790	230'055	194'396	3.70	8.37	0.442
Guider	Extrême-Nord	39'047	6'296	45'343	234'495	130'781	110'510	2.44	5.17	0.471
Kaele	Extrême-Nord	21'394	1'767	23'161	203'333	106'925	90'352	3.90	8.78	0.444
Tchatibali	Extrême-Nord	17'142	2'411	19'553	220'377	123'174	104'082	5.32	11.27	0.472
Garoua	Nord	47'975	582	48'557	425'327	252'445	213'316	4.39	8.76	0.502
Ngong	Nord	32'889	2'331	35'220	270'665	166'109	140'362	3.99	7.68	0.519
Mayo Galke	Nord	18'909	5'225	24'134	329'962	178'997	151'252	6.27	13.67	0.458
Touboro	Nord	16'324	1'062	17'386	244'839	144'577	122'168	7.03	14.08	0.499
Home	Nord	12'120	167	12'287	191'465	111'025	93'816	7.64	15.58	0.490

8.105 Facteurs d'allocation pour la répartition de l'impact environnemental sur les sous-produits de l'égrainage et de la trituration:

Facteurs d'allocation pour la répartition de l'impact environnemental sur les sous-produits de l'égrainage :

Output	Quantité par coton-graine [kg/kg CG]	Prix par kilo [FCFA/kg]	Prix par output	Facteur d'allocation
Fibre	0.420	1'031.84	433.37	89.381%
Graine	0.535	95.00	50.83	10.5%
Linters	0.010	66.00	0.66	0.1%
Déchets	0.035	-	-	0.0%

Facteurs d'allocation pour la répartition de l'impact environnemental sur les sous-produits de la production de l'huile:

Trituration à Garoua	Quantité par coton- graine [kg/kg CG]	Prix par kilo [FCFA/kg]	Prix par output	Facteur d'allocation
Huile raffinée, conditionnée	0.137	1'073.86	146.69	78.0%
Tourteaux	0.597	86.38	41.26	22.0%
Eau	0.266	-	-	0.0%
Trituration à Maroua				
Huile raffinée, conditionnée	0.110	1'073.86	117.91	65.5%
Tourteaux	0.624	124.39	62.08	34.5%
Eau	0.2664	-	-	0.0%

Le prix indiqué sur le tourteau de presse correspond à l'aliment pour animaux obtenu à partir de celui-ci («Alibet» à Garoua; «Nutribet» à Maroua). Lors du calcul du prix par production, il a été tenu compte du fait que quatre des cinq parties de l'alimentation animale sont constituées de tourteaux.

8.106 Analyse de l'incertitude des résultats de l'ACV

La simulation de Monte Carlo (Tableau 8-12) montre que l'impact sur la santé humaine par balle de coton fibre destinée à l'exportation peut être supérieur ou inférieur de près de 25 % à l'impact présenté dans ce rapport avec une probabilité de 95 %. L'impact sur la qualité des écosystèmes est moins incertain puisque, selon la simulation de Monte Carlo, l'impact environnemental n'est supérieur ou inférieur que de 3 % environ avec une probabilité de 95 %. La plus grande incertitude concerne l'épuisement des ressources, qui, avec une probabilité de 95 %, peut être supérieure de plus de 45 % et légèrement inférieure de 30 % à la valeur moyenne présentée dans ce rapport.

Si l'on examine en détail les incertitudes dans l'analyse de l'impact environnemental sur la culture de coton (effets par kg de CG), il apparaît que globalement, dans tous les systèmes de production, les incertitudes dans l'analyse environnementale sont plus grandes dans l'Extrême Nord (Figure 8.8) que dans le Nord (Figure 8.7). De plus, les résultats sur les impacts sur la santé humaine et l'épuisement des ressources dans tous les systèmes de production et dans les deux régions sont considérables, alors que les résultats sur les impacts sur la qualité des écosystèmes semblent relativement robustes par rapport aux paramètres considérés.

Domaines de protection	Unité	Moyenne	Médian	Ecart type	2.50%	97.50%
Santé humaine	AVCI	0.002119199	0.002116237	0.000251778	0.001634928	0.002619354
Qualité des écosystèmes	espèces année	3.76E-05	3.76E-05	5.96E-07	3.64E-05	3.88E-05
Epuisement des ressources	USD2013	66.868596	65.504573	12.597565	46.663863	95.92667

TABLEAU 8-12 DISTRIBUTION DES RESULTATS DE L'EVALUATION D'IMPACT/BALLE DE COTON FIBRE EXPORTEE

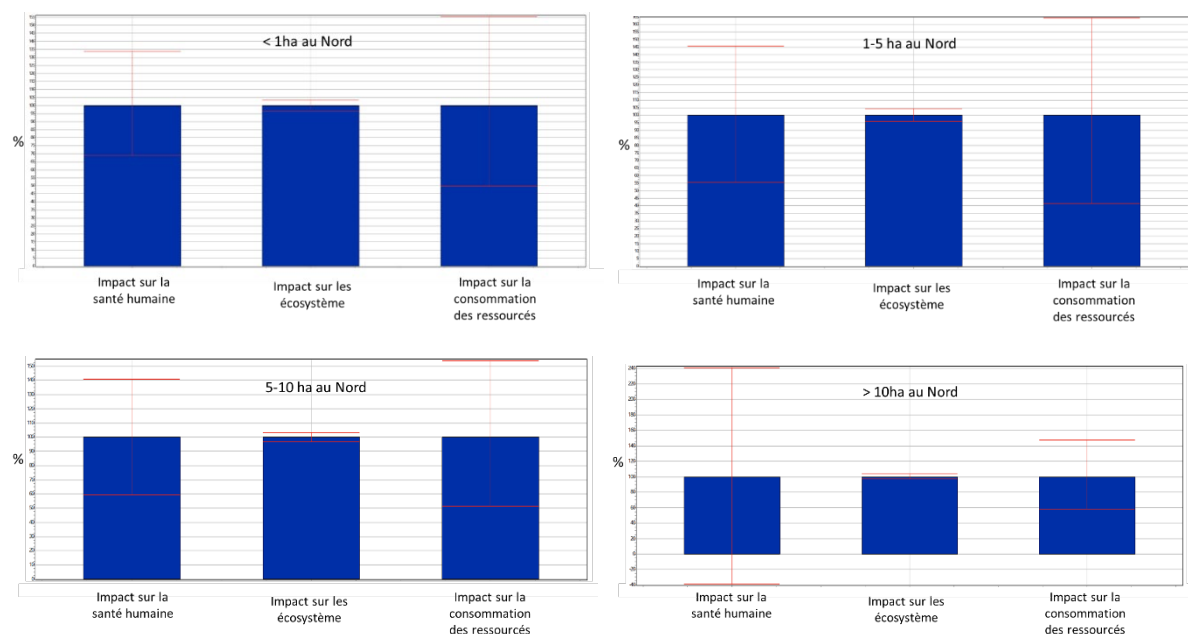


FIGURE 8.7 : DIFFUSION DES IMPACTS DANS LA CULTURE DU COTON DANS LE NORD

Selon la simulation de Monte Carlo, les résultats sur les effets de la production de coton sur la santé humaine dans les deux régions sont soumis aux plus grandes incertitudes pour les producteurs dont la sole cotonnière est de plus de 10 ha; dans l'Extrême Nord, cela vaut également pour la production de coton des producteurs dont la taille de la sole cotonnière est de 5-10 ha.

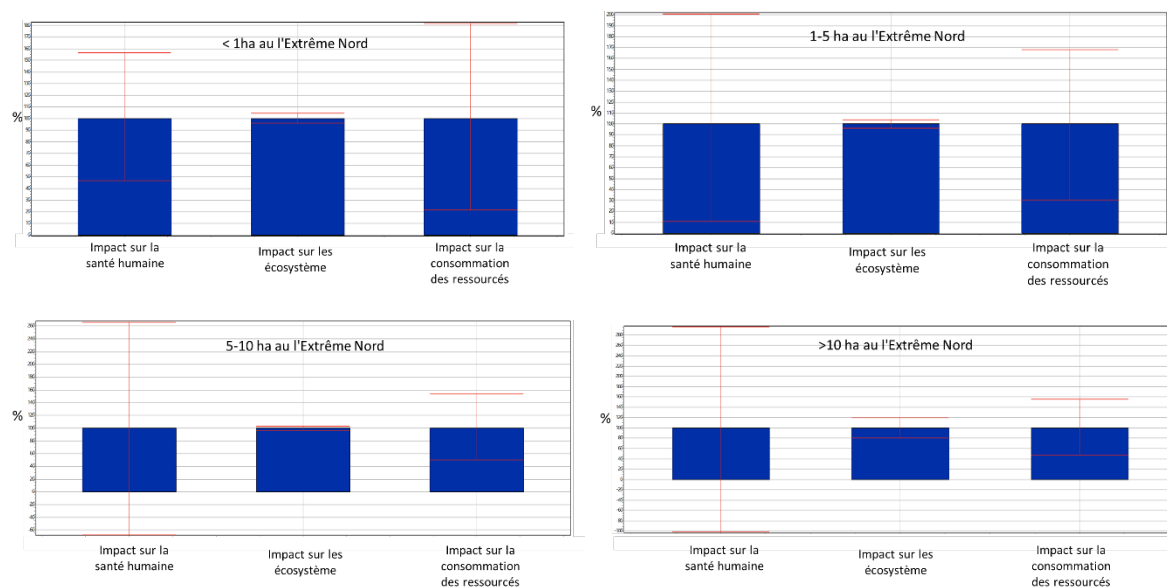


FIGURE 8.8 : DISPERSION DES IMPACTS DANS LA CULTURE DU COTON DANS L'EXTREME NORD

8.107 Liste d'actions possibles en faveur de la performance, du développement durable et de la paix sociale

La SDCC est déjà aujourd'hui une société de coton exemplaire par rapport aux autres structures économiques dans la région. Il lui faut cependant aller au-delà de sa performance actuelle pour contribuer davantage au développement durable et à la paix sociale dans sa zone d'intervention.

Les recommandations issues des analyses quadridimensionnelles de l'étude sont résumées ici par domaine.

Dans le domaine de la production agricole

1. Orienter la recherche pour tirer parti et adapter les connaissances dans le contrôle de la végétation du cotonnier, afin de gagner en productivité et en durabilité par la mise au point d'un programme de régulation de la croissance du cotonnier ;
2. Concrétiser le passage à la production et à la diffusion à grande échelle de semences modernes, délintées et traitées convenablement ;
3. Associer l'utilisation des semences modernes au recours aux semoirs adaptés pour leur efficacité et leurs coûts ;
4. Elargir l'horizon du matériel motorisé en s'inspirant des équipements mis au point pour les agricultures familiales de petite taille
5. Exploiter la variabilité génétique du cotonnier pour la teneur en huile et en protéines en l'intégrant dans le programme de création variétale et en recourant à la technique de résonance magnétique comme méthode de mesure non destructive des graines pour leurs teneurs.
6. Prendre au sérieux le déclin de la fertilité des sols et la dégradation de l'environnement naturel et identifier/adopter des indicateurs s'y rapportant (déboisement, perte de biodiversité, baisse de la nappe phréatique...). A la SDCC d'inclure les indicateurs s'y rapportant dans son système de suivi ;
7. Analyser le potentiel pour la production du coton et textile bio pour adresser en même temps les défis de bas revenu de petits producteurs ainsi que le déclin de la fertilité de sols et le manque d'emplois dans le nord.
8. Envisager la faisabilité de la production du coton et du textile bio équitable pour les petits producteurs, notamment dans l'Extrême-Nord avec certification d'une usine d'égrenage à Maroua.

Dans le domaine industriel, il est impérieux, urgent et vital de faire augmenter les capacités effectives d'égrenage, soit par de nouvelles usines, soit par des actions correctives aboutissant à augmenter le nombre de jours effectifs d'égrenage entre novembre et avril, ou les deux à la fois.

La coopération tripartite SDCC-CNPC-C-GP est un vaste domaine touchant à des activités diverses. Les recommandations sont de :

9. Mieux communiquer aux partenaires de développement (interne/nationaux et internationaux) le fonctionnement de la CV coton et les multiples services fournis par la SDCC, la CNPC-C et les GP ;
10. Abandonner l'exigence d'une Carte Nationale d'Identité valide comme critère d'éligibilité au crédit intrants, et la remplacer éventuellement par l'édition d'une carte de producteur issue d'un recensement de producteurs agricoles dans les villages ;
11. Adapter le recueil et l'exploitation des statistiques agricoles de la DPA pour connaître le nombre de producteurs de coton sans crédits intrants, les surfaces et les productions cotonnières correspondantes ;
12. Etendre l'appui à l'auto-organisation des villageois en faveur de la diversification des activités génératrices de revenu monétaire ;

13. Adapter le conseil technique aux producteurs selon leur typologie ;
14. Renforcer les moyens et les compétences de la DSE pour une conception d'enquêtes adaptées et pertinentes afin de mieux connaître les producteurs en zones cotonnières, qu'ils produisent ou pas du coton ;
15. Intégrer le cas des femmes –dans les enquêtes destinées à mieux connaître les producteurs– afin de cerner leurs pratiques culturelles spécifiques, voire l'utilisation du revenu du coton ;
16. Cerner la possibilité de récupérer les données issues des enquêtes de la Cellule Suivi Evaluation depuis son démarrage jusqu'à l'arrêt de ses activités en 2010, afin de disposer d'une connaissance sur les producteurs d'alors dans le but de mieux jauger les évolutions matérialisées depuis ;
17. Considérer d'évoluer vers la saisie sur tablette des données gérées par les GP en vue de leur exploitation pour mieux accompagner les GP ;
18. Enregistrer les cas d'insécurité et de conflits des producteurs avec les éleveurs pour disposer d'éléments objectifs pour apprécier l'évolution des deux phénomènes ;
19. Adapter le matériel de classement des fiches et documents au niveau des GP à la mesure de l'importance du travail de gestion pour éviter la perte de fiches volantes et s'assurer de la lisibilité des copies réalisées avec des feuilles carbonées ;
20. Renforcer les moyens financiers des GP pour répondre aux besoins de liquidités de leurs membres dans un contexte de retard de paiement structurel et inéluctable ;
21. Renforcer les moyens financiers des GP dans leurs réalisations sociales et/ou compenser financièrement leur contribution en services publics ;
22. Consacrer autant que possible l'utilisation du fonds intrants à l'acquisition des intrants par importation, grâce à la mise en œuvre d'un mécanisme adapté de crédit de campagne mobilisant banques de développement et banques commerciales dans le pays ;
23. Solder la TVA due à la SDCC afin d'augmenter ses capacités d'autofinancement pour faire face à ses besoins en trésorerie ;
24. Réduire le coût d'utilisation des intrants pour les producteurs par un calcul au plus juste du prix de revient des intrants voire par la mise en œuvre de politique de soutien selon des modalités diverses : ces modalités pouvant être le partage ou la prise en charge des coûts de transport, l'application d'une fiscalité favorable aux diverses étapes depuis l'importation jusqu'à la mise en place dans les villages...

Le domaine de ventes des produits concerne le coton fibre et les coproduits. S'agissant de la vente du coton fibre, essentiellement à l'exportation,

25. Analyser les systèmes de règlements disponibles (International Cotton Association et Règlement Général Européen) et choisir le système le plus adapté et le plus souple pour insérer des clauses favorables au vendeur dans le contexte du Cameroun ;
26. Simplifier la liste des types de vente et les faire correspondre au standard à privilégier, entre le standard américain (à prétention et reconnaissance internationales) et le standard de coton Afrique uniquement appliqué en Afrique francophone ;
27. Analyser les indices de prix mondial et choisir l'indice pertinent pour définir les prix objectifs à attendre lors de la vente à l'exportation du coton fibre ;

La durabilité de la trituration est l'enjeu de surmonter les difficultés actuelles d'écoulement des produits solides. Cette durabilité se répercute sur celle de l'ensemble de la chaîne de valeur. A cette fin, il convient de :

28. Mieux valoriser l'huile de coton à la hauteur de ses qualités intrinsèques en termes de composition en acides gras et mieux la distinguer des huiles concurrentes par le packaging, que ce soit par la forme de

la bouteille que par la contenance. Cela peut nécessiter une démarche de marketing qui devra tenir compte de la perception des ménagères ;

29. Engager une démarche d'exploration de la demande nationale en aliments de bétail auprès des projets d'appui à l'élevage soutenus ou impliquant le MINEPIA ;
30. Rechercher des débouchés pour les tourteaux et aliments de bétail au-delà du marché intérieur et du marché régional, en prenant acte que l'Europe importe des produits liés aux graines de coton. L'exploitation des données d'Eurostat permettrait de connaître les pays européens où se trouvent les clients potentiels. La possibilité de formuler les produits selon les besoins spécifiques est un argument à faire valoir auprès des clients potentiels ;

Dans le domaine de la transformation textile,

31. Appuyer la CICAM pour concrétiser son plan de modernisation dans la production industrielle de textile ;
32. Cerner le degré réel de la production artisanale de gandouras pour connaître le nombre de villages concernés ;
33. Faire connaître des outils/matériels simples pour gagner en productivité à l'égrenage et à la filature dans les villages de production de gandoura dans le respect du caractère socio-culturel de la production ;

Dans le domaine social et institutionnel :

34. Investir davantage dans la dimension sociale pour assurer l'existence même de la CV au-delà de 2020 ;
35. Aider les villageois à mieux s'auto-organiser et à bénéficier des nouvelles technologies (Android, solaire, autres) notamment dans le domaine de l'information technique et des marchés ;
36. Mettre en œuvre des stratégies spécifiques pour mieux répondre aux besoins et potentialités socio-écologiques des groupes sociaux différenciés selon leur niveau de production et degré de vulnérabilité (femmes, jeunes).
37. Mieux communiquer aux partenaires de développement (interne/nationaux et internationaux) le fonctionnement de la CV coton et les multiples services fournis par SDCC et CNPC-C ;
38. Appréhender les défis structurels du système coton et mieux exploiter les multiples potentialités socio-économiques en accompagnant la SDCC à aller au-delà de sa performance actuelle, certes déjà louable, pour contribuer au développement durable et à la paix sociale.

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