Cases of Blockchain use in Agriculture







| Result | s from | n a CTA funded review by | WUR of | applications | using b | l <u>ockcha</u> | ain, (| of rele | vance | to agri | culture | i <u>n ACP cour</u> | tries | | Impact | CTA | |
|---------------------------------|--------|---|-------------------------------|---|------------------------------|--------------------------|---------|-----------------|-------|---------------------------------------|--------------------------|----------------------|------------------|---|--|--|---|
| Name | Logo | Goal | Type org | Name | Country | Application | Created | Status | Token | Consensus Algorithm | Protocol | Country PCA | Region | Subject | Category | Solution | Beneficiaries |
| <u>Agriledger</u> | | Social enterprise project using distributed ledger technology and mobile apps for agricultural producers. | For profit | Agriledger | United Kingdom | Mobile app | 2016 | Active | | | | ТВО | TBD | Agriculture | Farmers Participation | improving tools supply chain | participants agricultural supply chain |
| Bext360 | | Supply chain management | For profit | Bext360 | United States | Platform | 2016 | Active | | | SaaS | Uganda | Africa | Food | | Supply chains of coffee, seafood, timber, minerals, cottoin, palm oil. | Value chain |
| <u>Binkabi</u> | | Decentralised agricultural commodity trading | For profit | Binkabi | United Kingdom | Platform | 2017 | Active | | | Barter Block | | Africa | Trading | | decentralised commodity trading | the network |
| <u>Bitseeds</u> | | Plant seeds/trees per token | Foundation of start up | BitSeeds | United States | Token | 2016 | Running | | Proof of work Proof of stake | Bitcoin | Japan | Pacific | Forestry | Resilience | Planting trees | Rainforest Foundation |
| <u>Bitt</u> | | Payment system/digital asses exchange | Early stage venture | Bitt | Barbados | Platform/wall et | 2013 | Active | | | | Barbados | Caribbean | Finance | Remittances | Cryptocurrency in emerging markets | Diaspora, people transferring money |
| Project X | | Development of a sustainable entrepreneurial culture | Foundation | Bitt | Barbados | | | | | | | Barbados | Caribbean | Entrepreneurship | Market Access | Sustainabile entrepreneurial culture | Community |
| <u>Cardano</u> | | Blockchain in Coffee supply chain | Foundation | ЮНК | UK | Protocol | 2018 | <u>Trial</u> | | | Cardano | Ethiopia | Africa | Food | Traceability | Tracing coffee | value chain, consumers, regulators |
| Cashaa | | No-fee remittance system | Tech Start up | Cashaa | London | Wallet / App | 2016 | Active | | | CAS | Nigeria | Africa | Finance | Remittances | Inefficient remittance process | Diaspora, people transferring money |
| <u>Demeter</u> | | A central hub to rent and farm micro fields anywere in the world | Tech Start up | Demeter.life | Hong Kong | Platform, Token (DME) | 2017 | Developing | | PoW | Ethereum | TBD | TBD | Agriculture | Landownership | Higher wages farmers Lower consumer price Transparent chain Efficient shipping times | Farmers/valuechain |
| Dorae | | Tracing raw materials (cobalt, coltan) | Private company | Dorae inc. Etherisc | US/UK/Cayman | Platform | 2014 | <u>Use Case</u> | | PoW | Ethereum | DRC | Africa | Mining | Traceability | traceability raw materials | Value chain |
| Fairchain | | (crop) insurance Create a fair chain for coffee | Tech Start up Private company | Moyee Coffee | Netherlands | | 2017 | Running | | | | Ethiopia | Africa | Agriculture | Resilience Farmers Participation Traceability | Higher wages farmers Transparent chain | Valuechain |
| <u>Finterra</u> | | Funding community projects | Tech Start up | Finterra | Singapore | Platform | 2018 | Active | | | | Kenya | Africa | Finance | Haceability | a crowdfunding platform that enables users to create smart contracts for various projects | Network (individuals and organisations) |
| Food Trust Blockchain | | improve the companies' ability to identify issues involved with food recalls | Consortium | Walmart, Nestlé, Dole, Driscoll, Golden State Foods, Kroger, McCormick, McLane, Tyson Foods, Unileyer | Global | Platform | 2018 | Running | | | IBM (Hyperledger?) | | Global | Food | Food Safety | Food safety through traceability | Food companies |
| lxo Foundation | | Optimize sustainable development impact> "proof of impact" | Foundation | Ixo | South Africa | Protocol | 2017 | Running (?) | | Proof of impact (?) | lxo | Uganda | Africa | <u>Development</u> | | enables anyone to collect, measure, evaluate, value, and tokenize verified impact data. | Unicef Innovation Fund |
| Land Layby | | Land management | Tech Start up | Land Layby Technologies | Australia, Ghana, UK, USA | Platform | 2017 | Running | | | Harambee token | Ghana & Kenya | Africa | Land ownership | | Verification of land transactions | land owners |
| <u>Pesabase</u> | | Remittance, payment and banking e-wallet solution | Tech Start up | Pesabase | Australia | Wallet / App | 2017 | Developing | | Pow? | OmiseGo (Ethereum?) | South Sudan | Africa | Finance | Remittances | financial simplification and inclusion in Africa. | Diaspora, people transferring money |
| <u>Poseidon</u> | | Climate positive purchase | Non Profit Foundation | Dorae inc. | Malta | Platform, tokens | 2017 | running | | stellar consensus protocol (not | Stellar (Ocean token) | Guatemalan Caribbean | Caribbean | Conservation Livelihoods Climate Change | Resilience | Indirect through Ecosphere+ | Ecosphere + |
| Provenance | | Transparency in product supply chains | Tech Start up | Project Provenance Ltd. | UK | Platform (?) | | Running | | | | | | | Traceability | track food items from the farm to | |
| Ripe | | Digital food supply chain Tracing coffee | For profit | ripe.io Starbucks | United States | Platform | 2018 | Active | | | | TBD | TBD Africa | Food/Agriculture | Traceability Traceability | the fork | Value chain |
| Tuna | | Trace tuna against slavery and for sustainability | NGO | WWF | New Zealand | Flationiii | 2016 | Usecase | | | | Fiii. New Zealand | Pacific | Fishery | Resilience | More certain traceability of tuna | Valuechain |
| | | | | | | | | | | | | | | | | • | |
| Bitlumens | | A peer to peer platform where users adopt PV systems to reduce carbon emissions | For Profit | Bitlumens GmbH | Switzerland | Platform | 2017 | Active | BLS | | Ethereum | Guatemala | Latin America | Credit Resilience | Resilience | include women living in rural villages into the financial system by providing microcredit and pay as you go solutions | |
| Waterig | | Community-level crowdfunding and micro- ownership without a central authority | For Profit | | Hong-Kong | Hubs/module s | 2017 | Piloting | | | | | | Agriculture | | decentralise water, food, energy | |
| <u>Ricult</u> | | An integrated digital platform that addresses the end to end needs of smallholder farmers in developing countries, using predictive psychometric tools, credit scoring algorithms, and agronomy & weather analytics | For Profit | Ricult | USA | | | | | | | Thailand/Pakistan | Asia | Agriculture | Market Access | Marketplace, crop selling, credit, agriculture data insights & Analytics | Value chain |
| <u>Bitminutes</u> | | A pre-paid minutes asset backed token that collateralizes micro-loans for over 2 billion consumers in | For Profit | BitMinutes | USA | | 2012 | | вмт | | | | Global | Credit | Resilience | | |
| sustainability international | | An organization on a mission to alleviate poverty, conserve ecosystems, and improve the health of indigenous communities with technology. | | | USA | | 2007 | | | | | Nigeria | Africa | Agriculture | | | |
| <u>Faircoin</u> | | A global cryptocurrency to be used for transfers among a global cooperative network | ? | FairCoin | Spain | Crypto | 2014 | Active | FAIR | Proof of connection | | | Global | Participation Credit | | Ethical coin | Users of the token |

Cases of Blockchain use in Agriculture

CTA





| Results from a CTA funded review by WUR of applications using b | | | | | | lockchain, of relevance to agriculture | | | | | | i <u>n ACP cour</u> | tries | | CTA | | |
|---|------|---|------------------|----------------------|-------------|--|---------|------------------|--------|------------------------|-------------|---------------------|--------|-------------|--------------------|---------------|---------------|
| Name | Logo | Goal | Type org | Name | Country | Application | Created | Status | Token | Consensus Algorithm | Protocol | Country | Region | Subject | Impact Category | Solution | Beneficiaries |
| <u>EcoBit</u> | | A green project supported by the Kelantan State Government in Malaysia to fund and develop green projects which will create food and provide health benefits to people. | S Partnership | | Malaysia | | 2017 | Active | EcoBit | PoS | NEM | Malaysia | Asia | Agriculture | | | |
| <u>AgUnity</u> | | A company helping the smallest farmers in developing countries via the use of blockchain tech, using Distributed Cryptoledger And Mobile Apps To Create A Circle Of Trust For Small Farmer Co-Operatives. | For Profit | AgUnity | Australia | | 2017 | Active | | | | | | Agriculture | | | |
| <u>Hara</u> | | A blockchain-based decentralized agriculture data exchange | Startup | Hara technology Ltd. | Singapore | Platform/App | 2015 | Active | HARA | | ERC20 | various | PCA | Agriculture | | data exchange | Users data |
| <u>FinComEco</u> | | A joint venture between African Potash and their Gibraltar firm TokenCommunities Limited, to operate a range of platforms and projects in the agricultural commodity markets sector in sub-Saharan Africa. | Partnership | Fincomeco | Mauritius | Ecosystem | | | | | | DRC | Africa | Agriculture | | | |
| <u>AgriDigital</u> | | A trusted and efficient agri-supply chains where all participants can operate with full confidence | | | Australia | | 2015 | Active | | | Raft | | | Agriculture | | | |
| <u>Annona</u> | | A mobile and web-based platform that suppliers use to manage procurement, payments and aggregate crop production from small-scale producers | | | USA | | 2015 | | | | Ethereum | | | Agriculture | | | |
| Te-Food | | A fresh food ecosystem which integrates supply chain companies, consumers, and governments/authorities to improve food safety, eliminate food frauds, and decrease costs of the supply chain companies. | Startup | | | | | | | | | Vietnam | | Agriculture | | | |
| <u>ZhongAn</u> | | A new blockchain-based system that tracks individual chicken from farm-to-consumer, using devices from IoT firm Wopu | 1 | | China | | 2013 | Active | | | | China | | Agriculture | | | |
| <u>OwlChain</u> | | A Taiwanese project using an Ethereum blockchain API to track food provenance | Startup | | Taiwan | | | | | | Ethereum | | | Agriculture | | | |
| Cryptotoma _toes | | A Blockchain startup based on growing edible crops from excess mining heat, that will presumably be launched soon by the co-founder of Czech cryptocurrency exchange NakamotoX | Startup | | | | | | | | | | | Agriculture | | | |
| <u>Stratumn</u> | | A startup that leverages the blockchain to reinvent how businesses create trust online, and help people and businesses trust the millions of processes that connect our world | Startup | | France | | 2015 | Proof of process | | | | | | | | | |
| <u>Sawtooth</u> <u>seafood</u> | | a modern approach to seafood traceability, one of the applications of the Hyperledger Sawtooth which is a modular platform for building, deploying, and running | Startup | | | | | | | | Hyperledger | | | Fisheries | | | |
| Viant fish | | ConsenSys with WWF, Traseable and Sea Quest implement blockchain for the Pacific tuna industry. | | | Fiji | 1 | 2017 | | | | | Fiji | | Fisheries | | | |
| <u>project</u> <u>Slavefreetrad</u> <u>e</u> | | a movement aimed at eliminating modern slavery in the supply chains of the products that we buy. | | | Switzerland | | 2016 | | | | | , | | | | | |
| Vegan Nation | | the first decentralized global community for vegans. It aims to use the power of blockchain technology in our mission to create a powerful, united, international vegan force. | | | | | | | | | | | | | | | |
| <u>Arc-net</u> | | The company arc-net connects every step of a product's journey to deliver supply chain transparency and product security. The arc-net toolset provides an easy to use scalable platform, . | | | Ireland | | 2014 | | | | | | | Agriculture | | | |
| Food Blockchain XYZ | | an Ethereum blockchain tool it calls Food Supply Chain 2.0, which aims to enable both end-to-end traceability of the | | | Switzerland | | 2016 | | | | Ethereum | | | Agriculture | | | |
| Mission Blue | | a transparent global database on blockchain on coral reefs | | | Australia | | 2017 | | | | | | | Environment | | | |

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