

ABSTRACT

There is greater pressure on the agricultural sector to meet the nutritional needs of a growing population as desertification, urbanization and poor crop production methods reduce the yields. The hardest hit areas are developing nations, particularly in Africa where a large population of people relies on agriculture for sustenance and as a means of earning a living. Plaasio seeks to use blockchain technology to improve agricultural practices.

This will be done through the PLAAS blockchain and PLAAS application. Farmers, agricultural societies, governments, and buyers will be able to access important information on crops and animals through the application. The platform will rely on PLAAS tokens to incentivize farmers to provide information on crop planting and harvesting as well as details on the genetics and ancestry of animals and fowls. This will allow trackers to ascertain the breed and interbreeding of an animal from birth to slaughter or sale to another user.

PLAAS platform will reserve 20% token supply as grants for farmers in developing countries, agricultural societies, and governments can access the information by paying using PLAAS. With time, this will become a rich database that can be used to improve the animal husbandry and crop growing techniques of farmers in Africa.

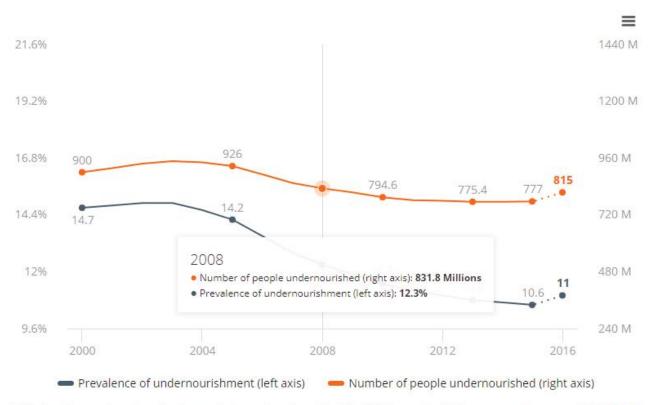


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BACKGROUND

Agriculture is the single most important sector of the economy because it fulfils one of the most fundamental needs, nourishment. Its importance is even greater considering the increase in the population. Already, one in seven people around the world is undernourished based on FAO statistics. The exact figure indicates that the number of undernourished people around the world has risen from 777 million to 815 million between 2015 and 2016. https://fao.org



NOTE: Prevalence and number of undernourished people in the world, 2000-2016. Figures for 2016 are projected estimates. SOURCE: FAO.

The reaction of most organizations is the increase in the food production. However, the Food and Agriculture Organization (FAO) estimates that around a third of all the food produced around the world is lost. The actual statistics approximate the loss of food to around 1.3 billion tons. This is food valued at more than a trillion dollars being lost each year in the food value chain. This only accounts for the food lost post-harvest. More foo is lost through poor harvesting methods or growing through the use of inferior food. The inherent exploitation and waste in the agricultural value chains are exasperating the problem.

For there to be tangible improvements in food security, the agriculture production needs to increase above the current levels. At the moment, 2.62 metric tonnes of grains are produced around the globe with around 60.5 metric tonnes of veal and beef being produced globally based on 2017 estimates. Unfortunately, the meat production has been on a decline as more farmers opt to sacrifice cattle rearing to increase their food production. However, animals play an important role in the nutrition of humans. Animal proteins provide numerous different nutrients that can help curb the problem that exists in society. Blockchain technology may be a possible solution to helping the agricultural industry meet the expected targets to ensure that starvation and malnutrition is no longer a problem facing the human race.

Additionally, 40 percent of the global GDP is from agriculture, and 80 percent of these individuals are small farmers. They are normally limited by opportunity and access to credit. Most financial institutions consider farming a risky industry, and they are unwilling to extend credit to small farmers. This limits their ability to gain access to fertilizer, herbicides, and pesticides. As a result, they make losses. They are also unable to embrace modern farming methods like greenhouse farming because small-scale farmers do not have the capital to purchases the required equipment.



STATEMENT OF THE PROBLEM

Currently, the world is grappling with a problem of inefficient food production. As stated, more than a third of all the food produced is wasted before it reaches the end consumer. Coupled with the reduction in the arable land available, there is a lot of pressure on farmers to improve their yield production. Already urbanization, biofuel production, soil degradation and lack of water are reducing the amount of land that farmers are able to produce. One of the main trends that is being seen is a reduction in the animal protein consumption as more farmers opt to maximize on crop production as opposed to animal rearing. This has a lot to do with the competition that humans and animals have when it comes to consumption of plant produce.

However, livestock and crop farming should always complement each other. Some of the animal products like milk and eggs are used in many sectors. They are important ingredients in most dishes around the world. The decrease in their production is leading to worsening malnutrition as more people lack essential animal-based proteins when they lack these products.

This calls for an intensification of the agricultural practices rather than swapping the production of the se different products. Intensification involves improvement of the yields using entire transport an agement of the resources. This includes better crops that are more fication in vulnerable areas or the rearing of animals that require less controlled more yields. In many developing countries, this is possible because the echnology as over developed to ascertain the best breeds that can be reared in certain best crops that are resistant to drought and pests.

bgy has not been adopted in Africa and many countries in developing animal breeds are mixtures of multiple breeds leading to lower yield than s. Additionally, the grains that are used are from hybrids that have lost l. This leads to lower yields for both crops and animals each year. There is an ecosystem that can ascertain the breed of these animals and crops. on the genetic background of animals allows the farmer to provide it litions. This allows the propagation of the right genetic characteristics to event the decline in yield with each generation.

n Africa is the ability to guide the value chains in the industry. Africa relies populatives. Whereas some of worked, others are prone to fraud and nent of resources. These problems harm farmers leading to losses. The int has forced many farmers to opt to sell their products in local markets. It is also difficult for farmers to acquire new technology that may help in heir yield. This includes drip irrigation system, greenhouses and other modern hat a being used in developed countries to increase the yield. These are serious continent that is largely reliant on agriculture for more than half of the GDP.

HOW BLOCKCHAIN CAN SOLVE PROBLEMS IN AGRICULTURE INDUSTRY

Technology has transformed the way we think and do business. With the advanced use of technology, upcoming challenges are given advanced solutions away from the traditional way of doing business. The distributed ledger like Blockchain has created a significant and innovative way of conducting business, especially in the agricultural field. The idea behind using Blockchain in agriculture is to remove the inefficiencies in the sector through proper inventory management, adequate reinforcement and most importantly to meant food safety standards.

Blockchain seamlessly offers a link to the various sectors of the supply chain. It provides technology that is the most suitable alternative in solving agricultural problems due to its efficiency of understanding the source and the journey of the produce, hence, no late delays and delivery of stale foods. Therefore, Blockchain ensures every member of the supply chain is accountable to the customer and through its decentralized system, one can track and see the location of the products throughout the entire process. The transparency feature of using the Blockchain technology gives both the customer and the farmer the confidence in the knowledge of supply chain. The distribution channels are streamlined, hence reducing the cases of fraud, ensuring the supply chain is streamlined, leaving the supply chain satisfied.

Also, Blockchain is used for data monitoring. It offers the farmers an opportunity to capture data, thus, helping in deriving a more efficient plan regarding spaces and the profit margins of the farmers. Blockchain technology can use wireless senses in the fields to capture the growth of crops, harvesting processes and the yields using blockchain to record data. Every stakeholder in the supply chain can track the data records; this is invaluable asset in agriculture.

The agricultural sector is very sensitive and critical field in just a simple human error; it causes millions of loses. The adoption of blockchain technology in the agriculture sector can curb human errors and minimize the wastage of resources. Blockchain can be helpful to farmers have sufficient knowledge on tainted products in the market through tracking of the supply chain. Therefore, using the data provided for by the blockchain, the farmer can prevent future losses.

PLAAS SOLUTION

A Limited Proof of Extinction protocol commodity verification Platform, for farmers data storage, tracking and validation with Price discovery via SMS alerts and Market discovery via futures contracts.

WHAT IS PLAAS?

Plaas is the name of the technology that is used by the Agricultural business Plaas (Plaas Farmers system) which was founded in 2017 in Gaborone Botswana by satoshicentre Bitcoin and Lightning Labs. The name Plaas is an Afrikaans word that means a Farm. Plaas is the first project released under the satoshicentre brand.

THE PLAAS BLOCKCHAIN PLATFORM

In order to achieve its mandate, PLAAS is seeking to leverage blockchain technology by providing all the players in the African agricultural sector with a platform where they can store and share information about crops and animals securely. The platform works by using blockchain technology to store sensitive agricultural data like the breed and ancestry of animals to help buyers identify the traits of the animals that they are buying. This gives insight of whether the animal is able to produce high yields based on the past ancestry and the conditions of the new farm. Additionally, the platform also provides information on plants and animals to keep track of the food security in the country remotely. This is done by leveraging RFID information and combining it with blockchain technology to ensure all the animals in the platform can be tracked, and their genetic information is available to users.

The platform will also provide an online marketplace for buyers and sellers on the market who can use the native PLAAS coin to remit payments. Cooperatives can also use the platform to track the contributions of the farmers and disburse payment through the platform to avoid fraud and mismanagement of resources. The main purpose is the growth of the platform.



SEND

RECEIVE

TRANSACTION RECORDS

SEND AND RECEIVE YOU PLAAS TOKENS

Enter Data and receive PLAAS tokens

 Farmer generates a unique stock ID for every item in stock. This ID should be attached to each animal using an RFID tag.

The wallet will allow users, farmers individuals and cooperatives to sending and receiving PLAAS Tokens over the network

 The farmer keeps a record of these IDs securely. These will be used to reward valid shares that are submitted to the pls network Stock ID: P23dwc2e3drgve5if3w4vd5...

Stock ID: P566i45et54ted5rfw34fw5w...

Stock ID: P9j8hj78u754eo3do4d6787...

Stock ID: P89u8965f789sfcrefw4hmk.

Stock ID: Pujke345cod4dod8kj84ccd..

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FEATURES OF THE PLAAS PLATFORM

The PLAAS platform has several different features. They include:

i. An immutable archive of information

Once an animal or fowl has been tagged and added to the platform, the information on the ancestry and ownership will always be available to users. This information is stored in an immutable ledger that cannot be changed. This means that buyers will always have access to information that is authentic and trustworthy.

ii. Effective agricultural smart contracts

Smart Contracts are useful because they provide a detailed account of the transaction that occurs between different parties. These transactions are saved in the ledger as blocks. This means that everyone can see the transaction that took place. This eliminates fraud and theft because the smart contracts have to be approved by both parties. A detailed record of who sellers sold animals and animal products to will always be recorded in the ledger using the smart contracts developed.

iii. RFID and sensor technology

PLAAS combines RFID with blockchain technology to provide an animal tracking system. Additionally, the RFID chips hold information that can be read using an RFID reader. The information on the chips will include the owner of the animal and the genetic information. In the case of plants, PLAAS leverages wireless sensors that are set up in participating farms allowing easy monitoring of the planting, growth, and harvesting of crops remotely. The information in the sensors and RFID are captured in real-time and relayed to the blockchain.

iv. Transparency

The blockchain technology provides transparency to participating farmers and their cooperatives. The cooperatives can use the RFID and sensors to assess the yields of farmers while farmers can assess the use of cooperative funds in the blockchain. This increases trust while preventing the alteration of the information recorded. This allows both parties to monitor the agricultural sector.

v. Security of the platform is guaranteed

PLAAS is a decentralized platform that uses cryptography and pseudonyms in the blockchain to secure the platform. Unlike centralized platforms that rely on cybersecurity, the PLAAS platform is more secure. Hackers cannot use brute force to enter into the platform, and the sensitive information of users on the platform is protected.

vi. Next-gen mobile application

Africa, as a region, does not have the highest penetration of computers and laptops. PLAAS decided instead to use a mobile application to provide farmers access to the platform. The application is available for Android, Windows and iOS devices. It is customizable to ensure that all users can configure it using plugins that will increase the effectiveness. Regardless of the device, everyone can access the PLAAS blockchain using a phone, tablet, laptop or computer.

vii Integrated e-wallet and exchange

The mobile application also includes an e-wallet that farmers can use. Africa does not have as many e-wallets and exchanges like other more developed regions. PLAAS chose to solve this by providing an inbuilt e-wallet and exchange on the application. This allows users to process and remit payments using the platform.

vii Integrated e-wallet and exchange

The Plaas Farmers Futures allows farmers all around the world to trade futures on their products (currently available in Botswana and Kenya only but will announce as more countries are added).

HOW DOES THE PLAAS FARMERS FUTURE WORKS

Contract bearer get the items delivered when contract closes. Pay 50% upfront, 25% mid-cycle and 25% before delivery date. the owner of the contract does not directly receive the items but they determine who gets the items using a unique shipment code.

1. **contract id on the blockchain**

2. **farmers value / selling price -** 80% farmers, 20% PNV(plaas validator node) The plaas version 0.1 the Miche(pron. meechee) will feature an introduction of the extinction algorithm for validating farm produce.anyone can be a plaas node validator! a PNV uses an rfid enabled node, to scan and record commodity parameters as determined by the contract requirements

3. **contract state**

- * opening when a farmer opens a new contract and anyone can close it. all opening contracts are validated
- * closing when you buy a contract it remains closing until delivered
- * trading when your contract is on re-sale before delivery
- * expiring if you fail to pay, your contract expires and can be bought by anyone. you will loose initial deposit.

- 4. **contract code**
- 5. **market value / buying price**

start closing a contract of your choice, by paying current owner

you will get a shipment code to unlock your contract upon delivery

Contract Definition

lets take a sample contract of just one egg, the farmer sells us an egg future contract at 8 PLAAS but the current market price of one egg is between 9 - 10 PLS.

Future earning when the contract is closed can be calculated by

(9-8)/8*100 = 12.5% per egg contract (low), (10-8)/8*100 = 25% per egg contract (high) Although the contract owner does not get the actual items, they get a code that unlocks shipment upon delivery.

UNIQUE PROPOSITION

The platform offers benefits to everyone on the platform. Since it is decentralized, most of the functions are automated by the smart contracts in the source code. The main users of the information are farmers, buyers, agricultural societies, governments and the PLAAS parent company.

BENEFIT TO FARMERS

The platform greatly relies on collaboration with farmers to provide the sensitive information. In order to incentivize farmers to provide this information, the PLAAS platform will reserve 20% token supply as grants for farmers in developing countries. With the grant money they can use the system freely. The farmers can choose to encrypt data such as genetics of crops or livestock and sell that tyo others. Then other farmers have to buy the Plaas token to get the key to decrypt it. PLAAS will work with farmers to install RFID chips on animals and sensors on the farms to monitor crops. The data provided gives farmers a supplementary earning. Additionally, farmers will also be able to monitor their crops and animals remotely using the PLAAS application.

BENEFIT TO BUYERS

All those who want to make purchases in regions where PLAAS has been adopted can use the platform to get information on the crops and the animals in the different farms. This is particularly useful for those who purchase during harvest. They can determine the farms that have recently harvested to purchase fresh produce. They can also get information on the ancestry of animals especially when they are purchasing animals for rearing. The buyers only pay a small fee to access the information on the platform.

BENEFIT TO AGRICULTURAL SOCIETIES

Agricultural societies like farmer cooperatives can use the platform to monitor how well member farmers are doing. They can see the animal and crop yields remotely without incurring transportation costs. They can also record yield data on the platform to ensure that it is secure and transparent. They can also process payments to farmers on the platform to reduce transaction costs and prevent fraud that is common in the region. This can be all achieved at a fraction of the cost.

BENEFIT TO THE GOVERNMENT

The biggest challenge most African governments have is monitoring the agricultural sector. It is very expensive to send agriculture workers to assess how farmers are doing multiple times each season. However, at a fraction of the cost, governments and governmental departments can assess data on the progress of agricultural activities in their countries.

BENEFIT TO SATOSHICENTRE

The data collected from the different farms can help satoshicentre and the Plaas project formulate policies to tackle specific problems. It can also use the information to seek help from donors like the IMF, FAO and World Bank to introduce new farming technologies to the region. Satoshicentre will also add information to the platform collected through research to increase the knowledge base on the platform.

Technical Aspects

Plaas will initially operate as on an Ethereum blockchain with the plan to move it to the Plaas Limited-Proof-of -Extinction Blockchain.

Plaas is a protocol token whose blockchain runs on a proof called Limited Proof-of-Extinction (LPOE), where blocks are created by miners that are validating data.

BLOCK STATS:

Protocol: POS+LPOE Block Time: 12 hours

Total supply: 50,000,000 PLAAS

Components

- Valid Share: a single data entry that has passed validation checks and has been submitted by a node to be included in a block and conforms to the structure as described in section 1.2.2
- Node/Validator: a user+hardware+software component that verifies validity of data provided by farmer and record this for entry to the chain.
- Extinction: a stock ID is considered extinct if it will no longer be able to produce valid shares. That means the stock specimen is no longer alive.

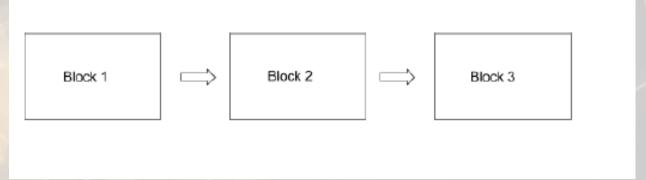
Protocol overview

When a new block is successfully added to the chain, new Plaas tokens are created. These tokens are awarded to stock ID's included in the block proportionately by count and to the node that submitted in the ration.

```
Node award = coins minted/3
Share award = (coins minted * 2) / (3 * valid shares)
```

Blocks

- index
- previousHash (this determines the previous block)
- timestamp
- data (combines all the valid shares generated by network validators)
- hash (sha256 (index+previousHash+timestamp+data)



Each block contains up to 50,000 entries called shares that hold valid stock information in the format below. Share contains:

block 1

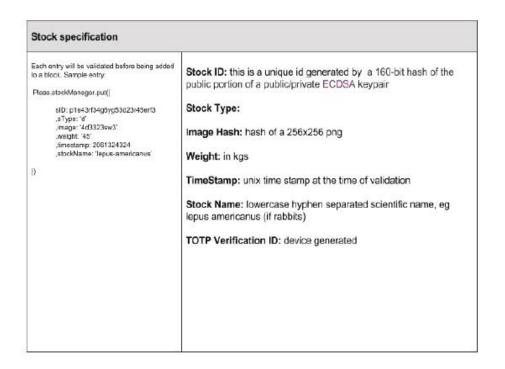


Share contains:

- Share ID
- TOTP Verification ID
- timestamp
- Stock ID
- Stock Hash

Stock ID

This is the equivalent of a public address on the Bitcoin network



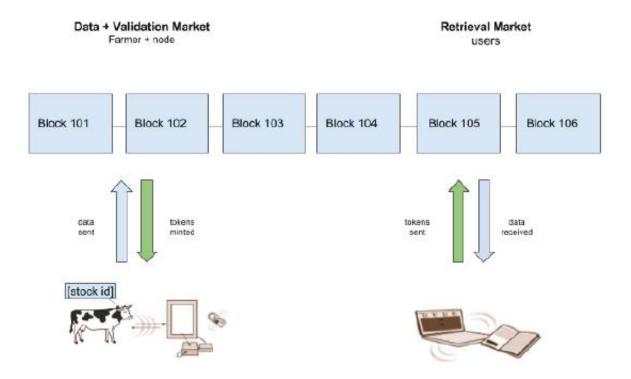
Introducing a new stock standard

Plaas Stock Compliance PSC, is not a final requirements list, its designed to grow in time to incorporate new standards requirements. To begin, we'll start with these

Organization

Plaas protocol provides a data storage and validation service via a network of independent validators that does not rely on a single coordinator, where:

- (1) clients pay to retrieve data, (2) Farmers can get grants through the use of the platform
- (3) Validation Miners earn tokens by validating data.



Proof-of-Existence vs Limited Proof-of-Extinction

Since Entries on the blockchain will require a high degree of time accuracywe would need an accurate way to verify the timestamps. For this we use a two-step process that first validates the timestamp using a Time-Based One-time Password algorithm.

Motivation

This approach would allow users to map data to a highly accurate time stamp as well as enable independent validation using just an accurate internal clock. This approach would also allow the network to set variable parameters for each stock item

Proof-of-Existence

The reliability of PoE depends on the security of the underlying blockchain. Assuming a competitive mining process that generates publicly visible, authenticated timestamps (such as in Bitcoin), the PoE certification process can be relied upon with a high degree of confidence.

However, timestamps

sourced from the blockchain do not offer a high degree of precision or accuracy, due to the lack of a concept of global time in the Bitcoin protocol, lag time in block creation, and transaction/block propagationtime across the peer-to-peer network. [2] Thus, blockchain PoE may not be appropriate for applications that require highly precise/accurate timestamps.

Limited Proof-of-Extinction

This overcomes the limit of reliable time by introducing entries that include a verifiable hash generated using the HMAC-Based One-Time Password (HOTP) algorithm defined by RFC 4226 and the Time-Based One-time Password (TOTP) algorithm defined in RFC 6238. Using the stock ID as reference, L-PoE only allows valid shares on any block to

- variable 'time-periods' of between 10-30 seconds a day, once per day.
- (x) number of days since the last successfully submitted share
- (y) number of days before the first successfully submitted share

Invalid shares are rejected

protocol

In this Section, we give an overview of the Plaas network by describing the operations performed by the clients, the farmers and the network. We present the methods of the client's protocol in Figure 4.3.1 and the farmers protocol in Figure 4.3.2 and the farmers protocol in Figure 4.3.2. The overall network Protocol is presented in Figure 4.3.4.

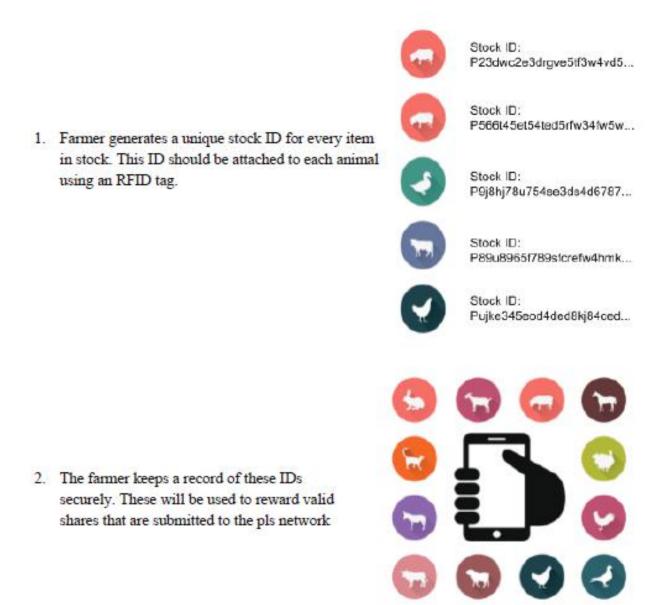
Customer cycle

Each call to the Plaas blockchain to retrieve data requires the user to spend PLS Tokens

Farmers cycle

Each stock entry on the chain contains stock data

- 1. Farmer generates a unique stock ID for every item in stock. This ID shouldbe attached to each animal using an RFID tag.
- 2. The farmer keeps a record of these IDs securely. These will be used to reward valid shares that are submitted to the pls network



https://www.scribd.com > document > security-study-guide

Nodes cycle

Each entry on the chain contains stock data and when successfully added, it rewards the node with PLAAS Tokens. The node(miner) share these at a pre-published rate with the farmer.

Guarantees and Requirements

The following are the intuitions on how the Plaas network achieves integrity, retrievability, public verifiability and incentive-compatibility.

- Achieving Integrity: stock data is recorded at the farm by the farmer and node operator every daythrough an automated process that captures stock data such as weight, location, image, and other health information. This is saved to the blockchain and remains valid only for a limited period of time until the next validation event is due. For the data to be valid it will be entered by custom hardware that will be.
- Achieving Retrievability: In a request, clients specify the current time and Product ID after verifying the request with a minimum number of tokens.
- Achieving Public Verifiability and Auditability: Nodes are required to submit their proofs of existence to the blockchain. Any user in the network can verify the validity of these proofs, without having access to the outsourced data. Since the proofs are stored on the blockchain, they are a trace of operation that can be audited at any time.
- Achieving Incentive Compatibility: Nodes are rewarded for uploading stock data to the blockchain. When farmers commit to store some data, then they are required to generate proofs. Nodes that skip proofs are not rewarded for their data.

Plaas Retrieval and Validation Markets

Plaas platform has two markets: The Storage Market and the Retrieval Market. The two markets have the same structure but different design. The Storage Market allows farmers and nodes (validation miners) to earn Plaas Tokens for updating product information to the Plaas blockchain. The Retrieval Market allows Clients to retrieve data by paying farmers to deliver the data. In both cases, clients and farmers can set their offer and demand prices or accept current offers. The decentralized exchanges guarantee that farmers are rewarded by the clients when providing the service

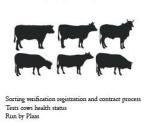
PLAAS FARM CENTRES

Satoshicentre intends to introduce the PLAAS cattle centres as part of their mission to reach out to as many Farmers as possible and introducing the blockchain technology to even the remotest areas in Africa. Together with the futures contract, even the remotest farmer will have an opportunit to become a part of the global farming village. In order to achieve this, the project intends to find agricultural lands which can be turned into PLAAS farms and these farms will enable the implementation of the PLAAS verification and tracing to be possible.

Figure 1.

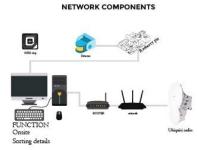


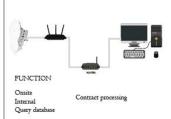
PLAAS SYSTEM INFRASTRUCTURE **PLAAS COW CENTRE**











PLAAS SYSTEM INFRASTRUCTURE

Figure 2.

Cow growth stage

BIRTH Immunization

Food and diet

Cow mature

BEFORE SLAUGHTER

Immunization

Vaccines

Food and diet

Beef market

COW PARTS

Stake Ribs

Lamb etc

PLAAS

RFID CHIP

0 - 7 days after cow birth

Vertrinary visit

Through veting by vertrinary to ensure cow grow up healthy and all symptoms and diseases are reported and evaluated by specialists.

Vets ensures farmers adhere to quality standards throughout cow growth

Market Dynamics

Plaas verifies all cow parts are genuine and provides a portal and services to authenticate meat and food.



RFID CHIP

with embedded ethereum private and public keys.

All cow data is stored and read from the chip

Vertrinary organisation... Vet ID Veting date ... Cow veted ID .. Cow details

Verfication Portal

Product ID Distributor Store ID Expiry Date

Useful Work Consensus

Besides proof of stake, what other consensus mechanisms can be used to determine which nodes are allowed to add blocks to the Plaas blockchain? What other requirements should be in place for nodes for them to be considered valid? Should be low so anyone can become a Plaas validator.

The Plaas farmers network is not complete by a long-shot, we also consider this work to be a starting point for future research on decentralized farmers market. In this section we identify and populate three categories of future work. This includes work that has been completed, what remains to be developed and what awaits description and publication, open questions for improving the current protocols, and formalization of the protocol.

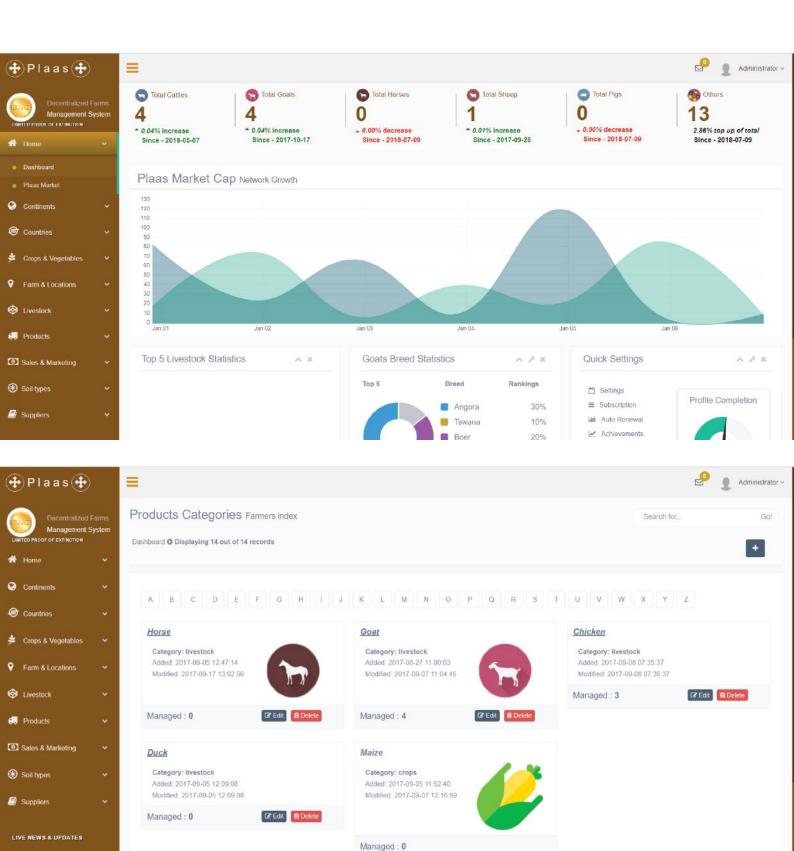
LIMITED PROOF OF EXTINCTION(KEYPOINTS)

Cows born are tagged at plass we will be chipping cows instated, currently looking to chip them using RFID tech so the details contained in the RFID will be cows date of birth breed and heredity details health history among others including geolocation information so you can have a ranch millions of acers and with geofencing you can know what the cow has been eating and where on the ranch it is realtime including an ethereum address where all this information will be logged

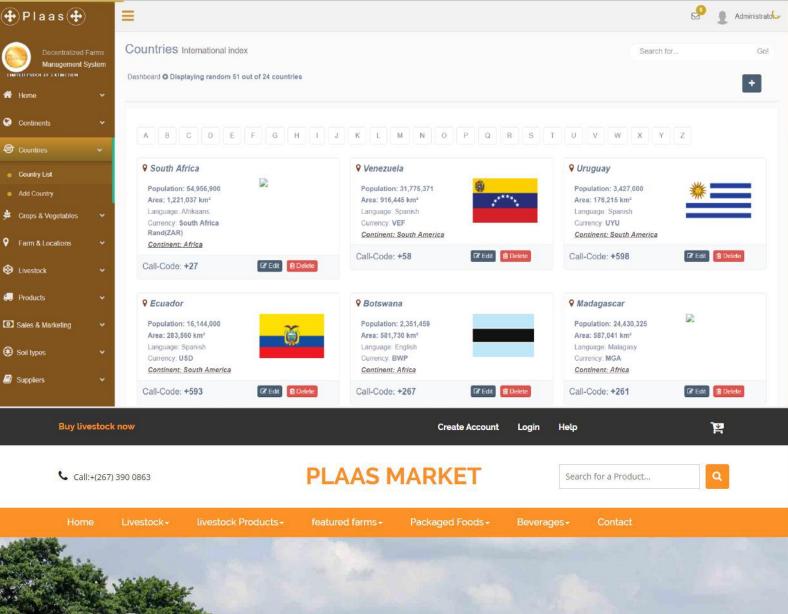
When the cow is ready for market you will know which cows are 10, 15, 18 years old and can arrange to have them brought to the slaughter house. Moreover the farm owner can know in X years and will be able to sell X amount of cows this data will prove usefull in supply chain management and pre planning.

When a cow is at the slaughter house the machines scan the chip which is basically an ethereum address and can review all data there and then knowing if this is really what they want we know of cows which are fed corn and lots of fatenning antibiotics on zero grazing docks 10 by 10 feet wide. This cows taste very different to one that has been roaming the countryside eating fresh greenery from nature.

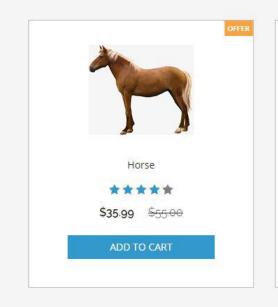
The slaughter house has a private key that signs the ethereum address and signals the PLAAS smart contract to reduct the ethereum address (for the slaughterd cow) and what this basically does is confirm this information as true so we can then save the transaction hash and ethereum address on IPFS database. Also the plass cotract will send a fixed amount of PLAAS to the dead ethereum address

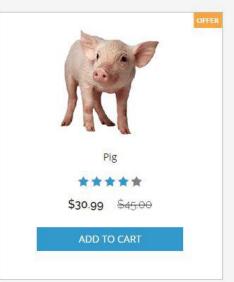


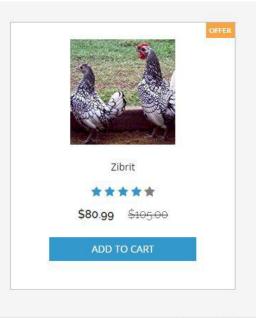
Plaas Market

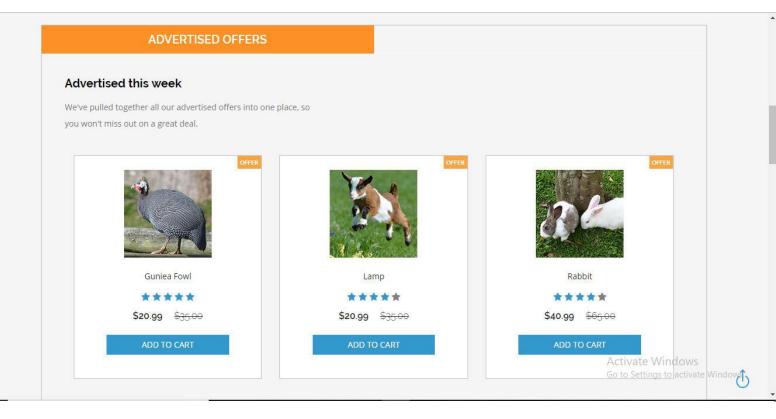












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Default sorting





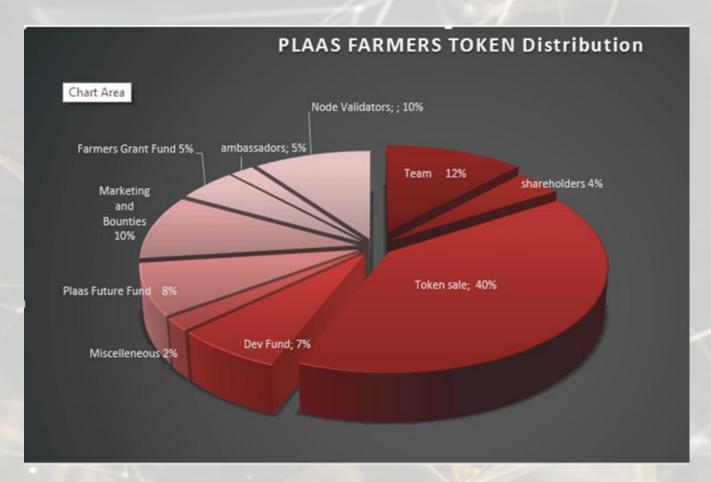








TOKEN DISTRIBUTION



PLAAS to undertake a token giveaway instead of an ICO for the development and the completion of the platform. The smart contracts will be initially developed by the organization.

The PLAAS tokens will be capped at 50,000,000 PLAAS tokens.

PLAAS token parameters

Name: PLAAS FARMERS TOKEN

Ticker: PLAAS

token Coin type: ERC20 Total supply: 50,000,000

There are a total of 50 000 000 PLAAS tokens in existence and they shall never be any PLAAS tokens.

TOKEN LOCK. (The vesting of the distributions of the tokens below will be done through a smart contract and will be publicly available.)

Team: 12 months vesting

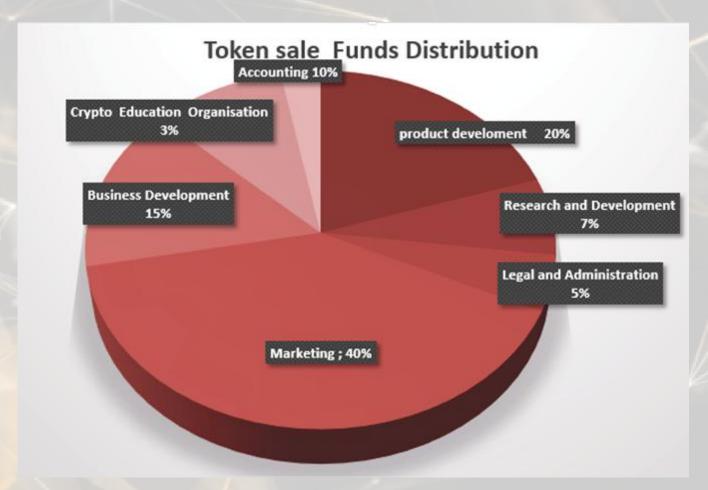
Farmers Grant: subject to 12 months vesting

Plaas Futures: Fund: subject to 48months, quarterly vesting

Marketing and Bounties: 12 months vesting

TOKEN SALE

40% of the PLAAS tokens will be distributed to investors during the crowd sale exercise.



Hardcap: 20,000 000/ \$3,012,631.58/21,052.63ETH

Token Rate: 1Eth = 950 PLAAS Token Price: \$0.15/0.0011 ETH

NB.

• Unsold Tokens to be distributed to a crypto Education Organisation as part of Satoshicentre giving back to the crypto community and contributing to the mass adoption of the technology. A transparent public involvement will be made in order to identify the crypto charity fund to receive the unsold tokens.

LEGAL NOTICE

The purpose of this Whitepaper is to provide an information about the Plaas project to its potential PLAAS token holders. The information given herein is not exhaustive and it does not imply any contractual obligations and may be considered only as the marketing information about the project. This Whitepaper is intended to provide basic data on the project to the potential token holders and what to expect as they purchase the PLAAS tokens.

Nothing herein may be interpreted as an investment quotation of any kind. This quotation of the PLAAS tokens is not an offer to sell or buy securities in any jurisdiction. Only individuals of legal age are permitted to purchase or hold the PLAAS tokens, any child below the age of 18 years will not be allowed to participate in the sale of the PLAAS unless under the guidance of a guardian or parent(necessary documents shall be required)

It is our responsibility to review carefully and accept the terms of the token sale agreement on the PLAAS tokensale project website. If you disagree with the terms partly or fully, you should not participate in tokensale