



Revolutionary Blockchain Platform for the
Agricultural Business Ecosystem

**Enabling Verified, Instant and
Secure Transactions for Real
Commodities**

www.grainchain.io

ABSTRACT

Since the dawn of agriculture, human beings have continually sought higher efficiency and security in the production and trading of food. The modern age has seen the economics of agriculture and soft commodities.¹ As with any industry, the food growing and trading industry is repeatedly transformed by technological innovations, making food safer, more accessible, varied, and cheaper. In the 1850's advancements in refrigeration and food preservation dramatically lowered food prices and increased availability. In the 1940's innovation came in the form of gasoline tractors replacing horse-drawn plows. Today, blockchain technology is poised to play a major part in the agricultural revolution of our time.

GrainChain's patent-pending solution utilizes blockchain technology to address numerous issues present within the soft commodities markets, such as fraud at all stages, large and small-scale corruption, payment delays, access to futures commodities market, and a cycle of debt that is difficult to escape.

GrainChain turns the industry on its heads by protecting those most vulnerable: the farmers themselves. GrainChain utilizes the well-known properties of blockchains to address the systemic problems present in soft commodities markets, an industry in which the GrainChain team already has first-hand experience in building software solutions.

The GrainChain system greatly increases transparency and accountability within the agriculture business by eliminating disparate and wasteful paper trails, greatly eliminating the opportunity for fraud and dramatically reducing time and costs. It ensures the prompt and secure execution of contracts between farmers and buyers, by both automatically facilitating payment to the farmer and making available the corresponding financial instrument for trading on commodities markets while verifying it is backed by only real assets in the system. This shortens a process that can currently take weeks down to a nearly instantaneous one. GrainChain benefits farmers, buyers, brokers, storage facilities, banks, suppliers of agricultural goods, governments, and ultimately every food consumer on earth. Ultimately, everyone benefits from a more honest and efficient agricultural industry.

THIS DOCUMENT IS NOT A PROSPECTUS

This document does not constitute or imply a prospectus of any sort. No wording contained herein should be construed as a solicitation for investment. Accordingly, this whitepaper does not pertain in any way to an offering of securities in any jurisdiction worldwide whatsoever. Rather, this whitepaper constitutes a technical description of the functionality of the GrainChain.

¹ Commodities which are grown rather than mined, such as coffee, cocoa, sugar, corn, wheat, soybeans, and fruit.

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EXECUTIVE SUMMARY

Mission

GrainChain's mission is to dramatically streamline the issuance, buying, and selling of commodities by using blockchain technology to eliminate sources of friction which contribute to the burdensome time and financial costs of legacy systems. Our goal is to make commodities trading fast, safe, secure, and verifiable for everyone in the ecosystem: farmers, buyers, traders, governments, suppliers, banks, and exchanges.

OVERVIEW

GrainChain introduces blockchain technology to an untapped multi-trillion-dollar global industry: agriculture. GrainChain's innovation can facilitate instant payment to suppliers and farmers, and the immediate availability of tradable commodities to buyers. It attacks fraud and corruption through certification and accountability, and it streamlines procedures for all participants in the commodities market.

GrainChain is a comprehensive blockchain platform where data on commodities is stored on the blockchain, and prompt farmers payouts and ownership changes are facilitated via smart contracts and native utility tokens. Thus, GrainChain addresses some of the most pressing issues facing the agricultural business today by enabling verifiability of goods, ease of financial transactions, protection of farmers from fraud and theft, and circumventing issues of currency fluctuations and conversions. By ensuring immediate, secure payment to farmers through tokens and smart contracts, GrainChain eliminates the need for burdensome third-party loans. This dramatically reduces uncertainty and increases profit for food producers.

Commodities buyers, brokers, storage facilities, banks, and governments all also stand to reap substantial benefits.

Thanks to blockchain architecture, the GrainChain system creates a digital yet secure record of commodity data and transactions. This prevents wasteful and siloed paper trails, reduces transactions fees and uncertainty for all stakeholders, and creates the ability for dramatically improved accountability and reporting, all while allowing commodities to be traded immediately on the futures market.

Who We Are

Our team is one with significant experience building and deploying software solutions for the agriculture industry. In 2013, the GrainChain founders created Silosys, one of the leading integrated cloud-based software solutions for the soft commodities industries. Silosys is functional software currently operating in 17 sites throughout Texas. Over the past four years, the Silosys system has processed over two billion pounds of commodities representing over \$350 million USD.

This industry experience and track record of success is the foundation on which GrainChain was born. Working on Silosys gave our team first-hand understanding of the inefficiencies in the agriculture industry, and with the continued maturation of blockchain technology we saw the opportunity to address their causes more effectively.

The leading problems we recognized were the long delays in determining the value of incoming produce due to the then cumbersome, manual processes of evaluating those goods. Everyone in the system, from farmers to the futures markets, was kept waiting weeks to know the exact value of the commodity.

Through Silosys we developed automated systems that collapse this wait time to zero, while eliminating inefficiency, error, and corruption by providing immediate and accurate measurements and documentation of the agricultural yield. Our innovation drastically reduced the potential of cheating with the weights, bribery, and many other dishonest schemes that were distorting commodities prices in the past all while increasing speed and performance. This software also provides immediate reporting that is trackable in the software systems, rather than paper notes, further reducing long-run costs.

As we expanded the scope and automation of this network, we recognized that while we can nearly eliminate cheating on the physical side through our IT software and sensor hardware, many of the deeper problems and sources of friction were built into the financial systems surrounding the agricultural industry.

With the rise of blockchain technology and smart contracts, we recognized that there is an opportunity to provide a platform that will help the growers, agents, and even governments who are often in the most compromised positions vis-à-vis commodities brokers and bank agents.

GrainChain is uniquely positioned to seize this opportunity because of its established relationships with all stakeholders in the agricultural industry—farmers, commodities traders, equipment and seed vendors, and governments. Silosys software will integrate directly with GrainChain from the start to provide more benefits to the industry and provide an immediate proof of concept. We will then leverage industry relationships to partner with various other third-party IT system providers to extend our reach and impact. Furthermore, the GrainChain team is already in direct negotiation with governments in North America seeking a system that will improve cash flow for farmers and reduce corruption throughout the industry.

This direct plan of action and network of support for implementation drastically sets GrainChain apart from other blockchain projects.

TRANSFORMING AGRICULTURE

The Problem

GrainChain operates in the area of soft commodities, which generally refers to agricultural products such as coffee, cocoa, sugar, cotton, fruit, grain, and other agricultural products. Commodities are traded in a variety of ways, including as futures on commodities markets then as realized commodities once delivered. At any stage along the way, the financial instrument (shares) representing the commodity may change hands, and this may happen multiple times before the commodity reaches a retailer or manufacturer.

The agricultural industry uses a dated model to ensure that the commodities are tested, paid for, and certified before reaching the buyer. Currently, there is a substantial time lag between the purchase of the commodity, its availability, and final payment to the farmer.

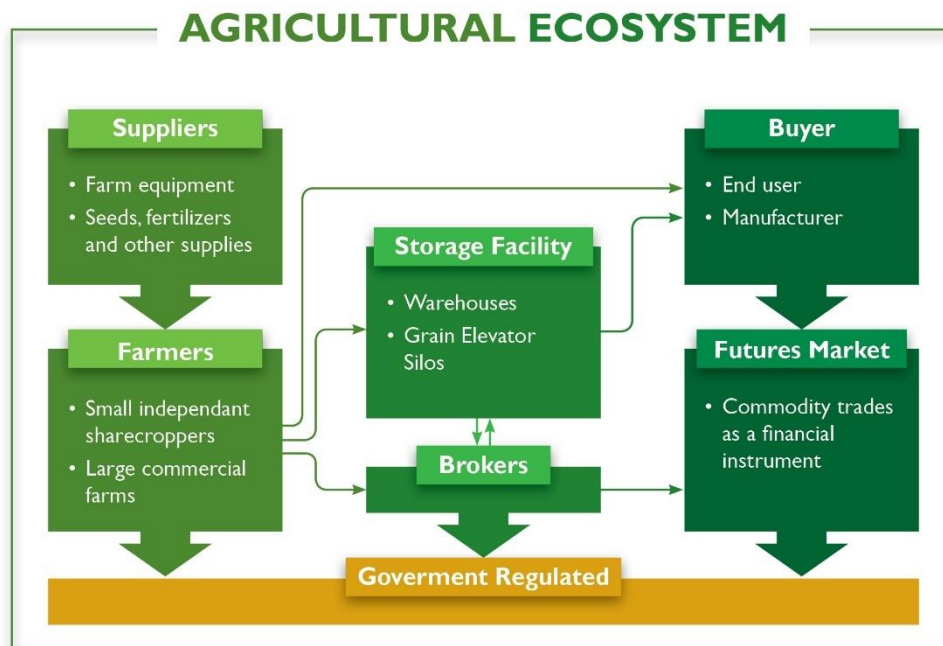


Diagram 1: Agricultural ecosystem

The following is an outline of the transactions that take place in the lifecycle of the crop itself. In each stage, inefficiencies present themselves, as shown in Diagram 1:

- ◆ Farmers purchase seeds, fertilizer and goods, often by taking out loans or using lines of credit before the start of the season. The farmer may have to exchange currencies to do this, paying additional fees in the process. At the start of the planting season, there is a particular promise made about the crop type, amount planted, the acreage, yield, etc. often with a corresponding futures contract on the market.
- ◆ The farmer deposits the crop at the silo and receives a certificate, rather than actual cash. Legally the commodity now belongs to the buyer, but there is significant lag time before the farmer receives the funds. During the lag time, the farmer, holding just a certificate, may also be susceptible to currency fluctuations, particularly in international transactions which make up \$1.8 billion of agriculture trade.
- ◆ The farmer needs to deal with and wait for multiple parties to receive final payment for their produce. They must work with the silo to ensure proper measurements, the silo business office to complete paperwork, an accounting firm to produce the invoice, and then the buyers account payable. Not to mention file reporting and paperwork with numerous extraneous parties such as various government and tax agencies, and of course the local banking system.
- ◆ The commodity buyer must then wait for independent verification directly from the silo, trust the silo's reporting and that the commodity was not shipped somewhere else in the meantime. Then, they must process all this paperwork for potentially hundreds or thousands of separate commodities at the end of a harvest season, commonly leading to a logjam.
- ◆ All the while, the farmer continues to cover their expenses by taking out lines of credit and loans **even though they have already delivered the agricultural goods to the silo**. If business is being done internationally, then this lengthy period can also subject the farmer to the added inconvenience of unpredictable currency fluctuations.

(See Diagram 1).

Clearly, this system puts all participants in extremely vulnerable positions. Cycles of debt, currency fluctuation, slow or inaccurate measurements of the commodities, access to the commodities, insecure financial transactions, and inefficient financial flow are all present issues. Depending on the size of the delivery, the country, and the type of commodity, these challenges can vary, though it is usually in the poorest countries that have the worst financial consequences. The tremendous injustice of this system is that the most important people in food production, our actual growers and buyers are all getting a bad deal.

Additional Challenges: Corruption

The challenges to both farmers and buyers in developed countries like the United States are enormous. However in addition to the same set of problems, agriculture in less developed countries also suffer from systemic levels of corruption. At Silosys we've established relationships in the Mexican agriculture industry that have informed us of the additional problems in these regions. In Mexico, the grain supply is centrally managed by the government to help control food prices, but despite owning the granaries, the government has poor control over corruption. Disappearance of grain is a regular problem, and farmers and government workers are left extremely vulnerable to the negative impacts of fraud and corruption.

By working extensively with Mexican farmers, we've compiled a grim outline of the gross realities within the current agricultural system faced by the men and women who grow the world's food:

- ◆ Scale manipulation and misreporting of intake of commodities at the grain silos by corporate and government officials alike. Silos who misreport have an incentive, not just in underpaying the farmer, but in selling the "hidden" product on the black market. Farmers are pressured into staying silent, as silos can refuse to purchase from "troublemakers".
- ◆ Bribery by clerks at multiple stages: while the government purchases the grain directly from the farmer, the clerks who facilitate these transactions wield an enormous amount of leverage as farms depend on them for their income. To deliver the government check, the clerk often demands a cash bribe from the farmer. This kind of kickback is common.
- ◆ When cashing or depositing a received check, the farmer can be subject to either physical threat or to the simple pressure that the bank clerk will not assist them unless a share of the check goes to the clerk
- ◆ When going to the government agencies to report income, the farmer is again vulnerable to clerks who expect to get a cut of the profit, and in turn misreport to the government.
- ◆ Threat of physical violence and coercion: walking to the bank can constitute a problem to an individual's safety. Farmers are targets if they are carrying a large sum for deposit or from cashing their check.

The Solution

GrainChain is a comprehensive blockchain platform that modernizes the agricultural industry. It tracks every aspect of farm products from initial storage, to their own exchange on financial markets. Blockchain technology was developed as a "trustless" system, meaning that it is designed so that even parties who do not know or trust one another can ensure that contracts are honored and that information on the blockchain is 100% reliable. GrainChain leverages these properties and establishes an immutable record system that significantly improves the transparency and accountability of the soft commodities market. By employing smart contracts it also dramatically speeds up the payment process while reducing fees and exposure to foreign currency fluctuations. GrainChain's patent-pending implementation provides fast

payment, ensured currency stability, and full compensation for farmers, all while eliminating various opportunities for fraud and corruption through improved transparency and reporting.

GRAINCHAIN'S SOLUTION PROVIDES:

- ◆ Smart Contract Execution
 - ❖ Smart contracts guarantee reliable and efficient transactions. Contracts execute transactions automatically on the validation that a particular action was taken. No additional intervention is needed, eliminating costs and delay.
 - ❖ Immediately triggered payouts to farmers for the delivery of the commodity via our utility token, pegged to the currency of their choice. For example, if the contract says that the farmer will get \$25,000 upon delivery of 156 tons of corn, as soon as that corn is weighed on the scales at the silo and registered as received, the funds are transferred automatically.
- ◆ Trustworthy Data
 - ❖ Immutable records of each time money or commodity ownership changes hands, so nothing can "go missing" or be "skimmed." The amount weighed originally is the amount the farmer gets paid, the amount traded on the commodities market, etc. Nothing goes under the table.
 - ❖ A blockchain platform that ensures accurate regulation reports and dramatically reduces corruption within the system, making the system attractive to governments, especially in third-world countries.
- ◆ Comprehensive Solution and Integration
 - ❖ GrainChain's Transaction Platform allows agricultural sellers and buyers to instantly convert GrainPay tokens to their local fiat currency, cutting out international banking and transfer fees.
 - ❖ Integration with all silo IT solutions, including Silosys, that provide the delivery and details of commodities, and creation of an immutable record the moment a delivery is made to a warehouse or silo.

GrainChain allows all participants to trust the system, and one another, because it substantially reduces room for corruption and fraud with its employment of blockchain permanence and smart contract programmability. Anyone using the system knows the data is immutable, and that they must be fair and honest with their dealings with everyone in the system as all actions are entirely recorded and traceable.

In addition, GrainChain's utility token is 100% backed by fiat currency which provides individuals and organizations in the agricultural industry with a secure and predictable method of transferring commodities. The fixed minimum reserve ratio between all outstanding tokens in circulation and associated real-world assets ensures trust and stability in the internal platform.

TIMING

The commodities industry is increasingly implementing the IT solutions and systems that Silosys and its competitors currently provide. This shows a readiness in the industry to begin modernizing and moving away from paper, on which it still largely runs. While the Silosys software takes a significant step forward in eliminating physical paperwork and improving reporting, something far more disruptive is required to adequately address the plethora of underlying inefficiencies in the ecosystem.

The following evolutions within the industry lay the groundwork for the implementation of GrainChain:

- ◆ Large-scale grain buyers are moving from paper-based solutions to software-based systems for efficiency and reliability.
- ◆ Digitization of scales and scientific reading instruments means that the industry can count on reliable measures of quantity and quality of commodities, and farmers can ensure they are getting credited properly.
- ◆ Grain buyers understand the benefits of using apps, including those that allow farmers, traders, and buyers to have access to reporting (such as grain status and movement, market prices, etc.)
- ◆ The most popular solutions (such as Silosys) include end-to-end contracting, invoicing and accounting and payment processing systems, making it straightforward to integrate with a solution such as GrainChain in the future.
- ◆ GrainChain is currently actively negotiating with a Mexican state government to provide solutions which address rampant fraud and corruption.

Our connections with farmers, commodities traders, equipment and seed vendors, and other stakeholders throughout the ecosystem has given us valuable insight into their needs, as well as the ability to solicit ongoing feedback regarding feature development. Because of our deep ties with the organizations and governments involved, we are in a position to ensure the rapid adoption of the GrainChain system at a large scale in North America.

THE GRAINCHAIN PLATFORM

Ecosystem

The GrainChain target market encompasses an industry with 3 trillion USD volume annually in global trade. Despite this size, antiquated and paper-based systems are still very much the norm. GrainChain takes this industry and moves it directly into a seamless blockchain-based transaction model. Doing so however requires an explicit understanding of the various stakeholders in the system, their needs, and as little friction in the transition as possible.

The following stakeholders are considered in the GrainChain design:

- ◆ **Farmers:** Growers, both large and small, sell futures and crops, and purchase seed, equipment and labor.
- ◆ **Buyers:** Commodities buyers purchase goods either as futures or at the time of harvest, and sell those goods on the secondary market. Commodities buyers also represent their holdings in terms of futures and other financial instruments on the commodities markets.
- ◆ **Silo (Elevator) Operators:** Operators purchase goods from farmers and sell them to the commodities markets and the next buyers in the ecosystem. Silo operators often find themselves operating as lenders, providing bridge loans to the farmers while the funds are being transferred.
- ◆ **Equipment, seed, and materials vendors:** Sellers of farming equipment, seed, fertilizer and other goods to farmers are part of the ecosystem. Seed vendors, for example, are both buyers and sellers across the market.
- ◆ **Technology vendors:** Technology vendors, like Silosys, sell their technology and services to players throughout the system.
- ◆ **Banks, government, and commodities markets:** Financial and governmental institutions are involved in the agricultural trade business at a variety of touchpoints, with payments flowing in both directions.

BREAKDOWN

While the first software system that GrainChain has partnered with is Silosys, GrainChain's blockchain solution is designed to interface with any existing software systems that utilize its API. Using data feeds provided by this software, the GrainChain platform records the crop delivery in an immutable record that is linked to the commodity and participants perpetually. It also has connectivity to the GrainChain reserve, which issues a utility token immediately to farmers based on the price of the commodity at the time of delivery, and pegged to the currency of choice of that farmer.

THE FLOW OF THE SOFTWARE AND THE UTILITY TOKEN RESERVE ARE AS FOLLOWS:

1. Upon delivery to the silo or warehouse, the weight and quality of the crop are measured and the record of the delivery and the exact quantities are entered as an immutable record to GrainChain.
2. The broker, now with proof of the receipt of the goods, can easily trade the commodity on the open market, or in the futures commodities market, with full assurance from buyers that the goods are accounted for.
3. Payment from the buyer is transmitted or billed to the GrainChain reserve according to the agreement with that buyer. The equivalent utility tokens are issued.
4. GrainChain purchases currency at the market rate in the currency that the farmer prefers, and places the tokens in the farmer’s wallet/account.
5. From that moment on, the GrainChain certificate follows those goods, ensuring that the possibility of fraud is significantly reduced on the commodity buyers’ ends.
6. The farmer does not have to deal with cash or checks. The funds can be used at any time or held in the reserve.
7. If requested, appropriate fees and taxes can be withdrawn automatically in the currency of the government charging the tax.

The GrainChain solution ensures transparency in the soft commodities market, protects farmers, and provides dramatic improvements in the ability of farmers to be paid in a timely way and in a way that protects their financial interests.

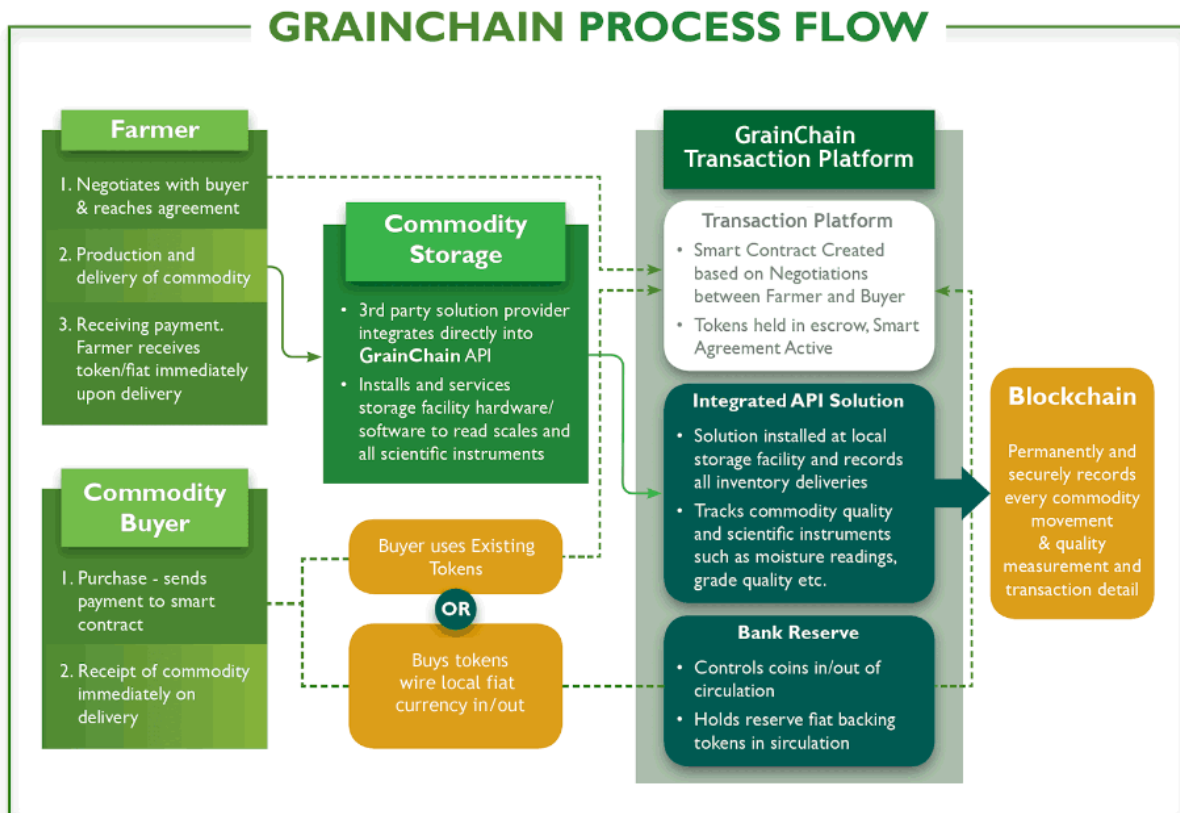


Diagram 2: GrainChain Process Flow

As shown above, the people, places, and processes for stakeholders in the ecosystem remain largely the same, ensuring no radical behavior changes are needed to utilize the platform.

As a new farming season begins, farmers and buyers come together and agree on the terms of a new contract. Building a GrainChain smart contract allows for all the purchase parameters to be established and confirmed by the two parties, and guaranteed to remain locked in.

As the crops are being harvested a farmer brings his or her commodity into a silo or warehouse. Delivery measurements are made by software such as Silosys, and the measurements are instantly transmitted and stored directly in the GrainChain blockchain. Upon entry into the system, the data automatically executes the smart contract by which the farmer is paid and the buyer gains ownership rights to the commodity. At their discretion, users of the system can generate automatic timestamped reports for their records or those of regulatory bodies for insurance and auditing purposes. The holder of the commodity has ultimate say in how much information is shared to third parties.

The system creates a network for immediate communication of supply and demand of commodities, drastically increasing efficiency throughout the whole system. Farmers are paid in tokens backed by fiat currency held in escrow. The Farmer can convert the token into fiat currency selected in the smart contract and deposit the currency straight into their local bank account or hold the tokens in our system. All the information within the system is processed in real time by instruments and techniques that minimize the possibility of fraud. What used to take 2-4 weeks and be subject to a myriad of problems, now happens instantly, safely, and directly.

Sample Use Case

The following is an example of a transaction using GrainChain. The system works the same for an American buyer, or a foreign government that controls the silos. Let's say that the government of Mexico promises to buy 5 tons of maize (corn) from a specific farmer. In this case, 100 utility tokens represents 1 ton of maize so the total contract is for 500 tokens. The system works as follows:

- ◆ When the government contracts the purchase, they create a smart contract determining the weight, quality, time of delivery required, etc.
- ◆ The government puts the money in escrow for the purchase of the crop, according to the terms of the smart contract.
- ◆ GrainChain issues 500 utility tokens which are held on the GrainChain system.
- ◆ The farmer logs into GrainChain and tells the system what currency to peg the tokens to. GrainChain's reserve makes the currency conversion and holds the money in the currency of choice of the recipient until the grain is delivered.
- ◆ As the grain reaches the silo and reported measurements meet the criteria of the smart contract, then the farmer immediately receives the value of the maize he delivered, at the time of delivery.
- ◆ Once the farmer has the utility tokens, he or she converts the tokens to the local currency and directly deposited in the bank. No clerks or officials are involved: just a direct bank deposit that cannot be tapped for kickbacks, as there is nobody along the way who knows about the transfer.

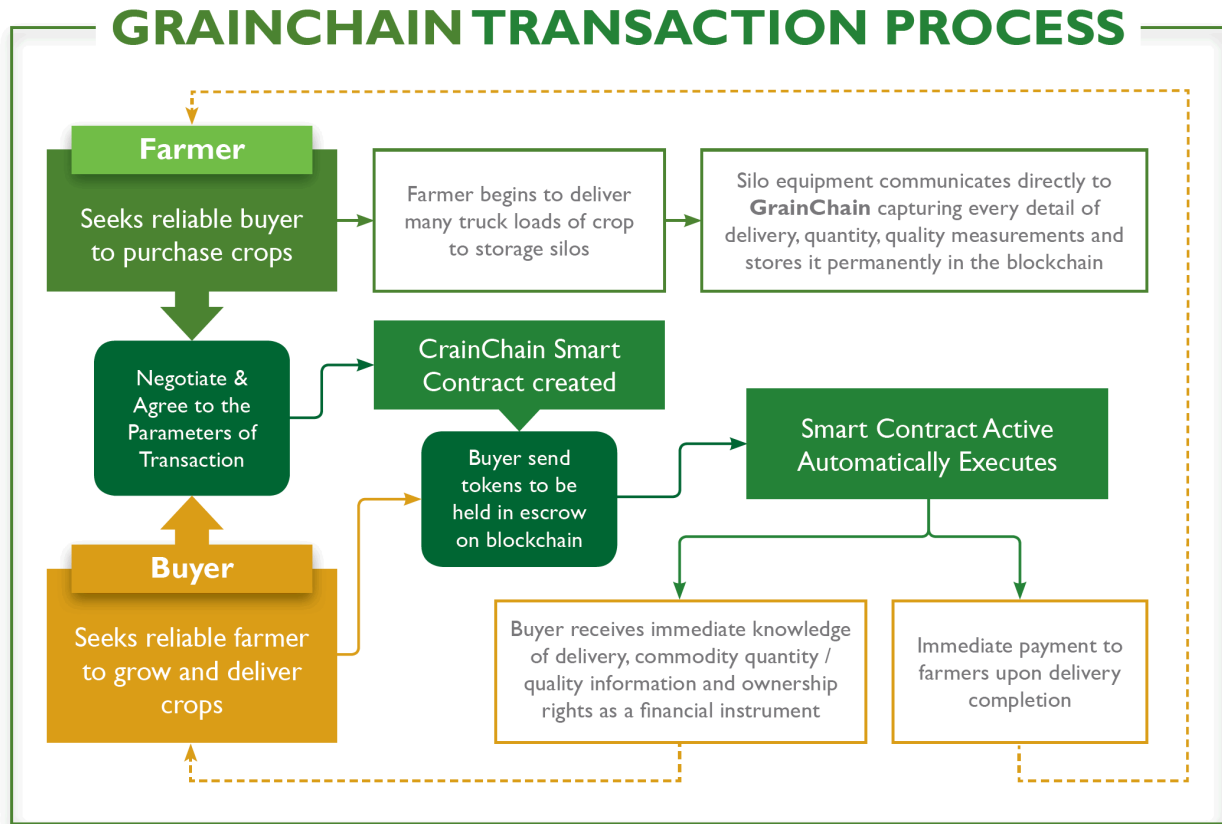


Diagram 3: GrainChain Transaction Flow

GrainChain Transaction Platform

The GrainChain Transaction Platform constitutes the central core of the utility token. The platform will perform the following functions:

- ◆ Manage the escrow account that backs GrainChain’s utility tokens.
- ◆ Issue wallets and preserve the integrity and security of those wallets to users.
- ◆ Execute the smart contracts involving monetary and utility token transactions.
- ◆ Issue GrainChain’s utility tokens associated with all commodities in the system
- ◆ Purchase and reserve fiat currencies that back GrainChain’s utility tokens in circulation.
- ◆ Provide liquidity to owners of GrainChain’s utility tokens according to the terms of their contracts (allow farmers to cash out at any time, set aside for wages or supplies, etc.)

Having this transaction platform provides fast payment, full liquidity, fixed exchange rates, and fully traceable and transparent accounting of money. Anyone in the commodities market can take advantage of the benefits of the platform for providing a reliable means of transacting within the industry.

API

The GrainChain API is designed for interoperability with various endpoint software and hardware solutions. Initially, GrainChain will be implemented immediately wherever Silosys or Silosys-compatible software systems are installed in silos and grain purchasers. However, the GrainChain will API allow for integration quickly and easily with any third-party software solutions on the market. We aim to allow all software system for measurement and recording of commodities delivery to be used as the entry point to GrainChain, and provide easy access for anyone in the system. Even in cases where individual farmers are selling to silos outside the system, GrainChain will be accessible using means such as mobile apps with verified signature capacities. This design allows for minimal software switching requirements and reduces friction for rollout and adoption.

SAFETY AND PROTECTION:

The GrainChain REST API will be available on HTTP SSL channels to avoid hacking. The API is protected by OAuth2 Authentication to comply with API Security Best Practices. Data will be presented As JSON to be friendly with JavaScript clients allowing an easy implementation, as this is the most often used data representation format. We are making our API explorable by adopting HAL, which will make the API easy to work with and therefore attractive to client developers.

BUSINESS MODEL

Global Implementation

Rollout will begin simultaneously on two separate fronts. With the blessing of the Mexican government and assistance of Silosys, GrainChain will begin a pilot program in Tamaulipas and install its patent-pending system in silos and warehouses throughout the state. At the same time, GrainChain will implement its system on over 17 silos that are currently working with Silosys throughout Texas. These pilot programs are crucial and GrainChain believes that it will scale rapidly as the soft commodities industry witnesses the benefits. As silo and warehouse software solutions continue to spread globally across commodities markets, GrainChain is uniquely positioned for straightforward and rapid integration with these systems.

Revenue Streams

Initially, GrainChain will have a license to use Silosys as its first governance system and Silosys will add GrainChain smart contracts and payment platform on all software used by its silo and farming customers. This process will begin as a pilot program prior to expansion. GrainChain cannot assure and makes no guarantees that all silos and farmers that use Silosys will also use GrainChain. GrainChain will sustain itself long term through Buyer Transactions Fees and API Subscription Fees.

Buyer Transactions Fees: Each time a smart contract is initiated, a small transaction fee will be charged to the buyer. This fee will be charged at the initiation of a contract and each time money is moved to any wallet. Part of this transaction fee will be used to pay the miners on the Ethereum network.

API Subscription Fees: System integrators (i.e. Silosys and other third-party companies) will pay a subscription to the GrainChain API based on their use of the system—per transaction, yearly, and custom sidechain requirements.

Web Interface Fees: GrainChain will also allow companies to use the GrainChain platform through a web interface, without using the GrainChain API. Similar to GrainChain's API, customers will pay a subscription—per transaction, yearly, and custom sidechain requirements

PLATFORM BENEFITS

Benefits to Farmers

- ◆ Instant payment processing for farmers
- ◆ Reduce use of credit lines and cash reserves saving the farmer money
- ◆ Blockchain audit trails for every grain going into the system and how its paid
- ◆ Conversion of utility tokens to FIAT or Cryptocurrency to avoid devaluation or lack of appreciation
- ◆ Reduces fraud and corruption at intake and payment levels
- ◆ Utility Token Conversion available 24 hours a day via app and web - no banking hours
- ◆ Ability to sell to ANY buyer without the risk of not getting paid or slow pay (expands marketability of commodity)
- ◆ Keeps farmer in regulatory compliance with traditional banks and government authorities.

Benefits to Commodities Buyers

- ◆ Instant payment processing
- ◆ Reduced staff and workload
- ◆ Instant access to commodities for sale and drop ship
- ◆ Blockchain would reduce fraud of “Disappearing” commodities
- ◆ Blockchain live audit trail would keep buyer in regulatory compliance with traditional banks and government authorities.
- ◆ Web and App based live reporting of all inventory at multiple locations
- ◆ Lower payment fees
- ◆ Ability to write smart contracts with all commodity variables for perfect deliverables

Benefits to Governing Bodies

- ◆ Transparency
- ◆ Easy Auditing
- ◆ Real-Time statistics
- ◆ Employee fraud reduction
- ◆ Accountability of all parties

Cross-Sector Benefits

- ◆ Real, systematic trust is established between the buyers, farmers and elevators
- ◆ A fluid financial system empowers everyone—farmers with financial freedom and ability to confidently expand and grow their business, and buyers gain the ability to streamline staff and focus on end product gains.
- ◆ Corruption is reduced in all levels of the transaction.
- ◆ Allows farmers and elevators to do their job and not be bankers

GRAINCHAIN'S TOKEN ECONOMY

Two Tokens, Two Functions

GRAINPAY (GPAY) TOKENS

GRAINPAY Tokens are pure utility tokens. Their sole reason is to confer digital access to the GrainChain platform and they will be used in this way at the time of issuance. Each utility token in circulation is fully fiat backed by fiat currency held in escrow at a bank and are used solely to pay commodity sellers. Commodities purchasers may purchase these tokens once the GrainChain platform is live.

GRAINSHARE TOKENS

GRAINSHARE Tokens are tokenized shares, which means these tokens are securities that grant investors the right to a portion of company assets and combines the best in shares and tokens.

	GrainPay (GPAY)	GrainShare (GST)
ERC-20	Yes	Yes
Private Placement Sale	No	Yes
Ownership Equity in GrainChain	No	Yes
For Profit	No	Yes
Limited Supply	No	Yes
Closed Ecosystem	Yes	No
Purchased on Platform	Yes	No
Confers Access to Platform	Yes	No

GrainPay Token:

GrainPay Tokens are not meant to convey any economic interest in GrainChain and will only be purchased and used on GrainChain's platform once the platform is functional. GrainPay Tokens will initially be created on the Ethereum network (ERC20). The token will be a smart contract and will be backed 100% in the GrainChain reserve, meaning that a bank will hold fiat currency backing each token in escrow. Each smart contract is specific to the specific owner of the token.

When a buyer commits to a smart contract, they put the amount of money associated with that contract, in the agreed-upon fiat currency, into GrainChain's reserve, which is held in escrow by a bank. The tokens are held in escrow in a wallet associated with the buyer. At the moment of delivery of the commodity and verification, the tokens are moved from the escrow wallet to the farmer or recipient's wallet. If, for example, the delivery date is missed and a fine is imposed, the tokens are released from escrow and the buyer can use those tokens to buy back currency, or he or she can place them in escrow in a different contract.

The farmer specifies the fiat currency that he or she wants to back the token. GrainChain makes the currency exchange, and deposits the reserves in the currency of the farmer's choosing in a bank escrow account. The farmer can, at any time, obtain those funds by cashing in tokens. When a token is cashed in by a farmer, it is burned.

The GrainPay token is meant to generate a token economy in which farmers have equal financial power as compared to buyers, brokers, and sellers of agricultural equipment. The token economy and GrainChain's Transaction Platform will be immediately utilized for the purposes outlined in this paper.

GrainShare (GST) Token and Distribution

GrainChain is a US-based corporation that will raise capital through a private placement offer to accredited investors. GrainChain anticipates issuing the GrainShare tokens as common stock that confers equity on the security holder, does not include voting rights and may pay dividends to all token holders. GrainChain reserves the right to cancel the sale and return investment capital to each investor unless the minimum dollar amount of \$5M USD is raised during this offering. The company will provide further information on the terms of the private placement in the appropriate disclosure documents before issuance which can be downloaded from <https://grainchain.io>. Please get whitelisted for updates on document distribution.

MARKETING

Target markets

FARMERS

Farmers are one of the biggest benefactors to the system and therefore one of our biggest target markets. Individual farmers we have spoken to have indicated interest in selling their crop at a discounted price if buyers are willing to use this system, because GrainChain offers benefits that directly impact their quality of life. Their primary benefits are outlined below, and it should be noted that secondary benefits to farmers, such as more evenings spent out on the playing field with their kids, are innumerable.

GRAIN ELEVATOR SILO INDUSTRY

The second target market to receive enormous benefit from using GrainChain is the grain elevator silo industry. These businesses are under heavy regulatory scrutiny by different government bodies regarding what they hold in storage, so our solution greatly enhances and streamlines their inventory and accountability process. In addition, many storage warehouses opt to pay farmers (who can't afford to wait) for their commodity, before receiving money from the buyer. In fact, the buyer may take a long time to pay or even back out on the deal entirely. This system in effect turns warehouses into intermediary banks, which is extremely risky and a difficult system to maintain. GrainChain's instant payment system takes away this need to be an intermediary bank to the farmers.

BUYERS AND BROKERS

Our third market is the buyers and brokers who benefit tremendously by receiving real-time data of how much inventory they receive and its quality, in addition to being able to trade it in the markets as a financial instrument. Buyers cannot hold title to the commodity until payment is made, and this was not possible in a timely fashion due to the manual nature of how business has been conducted in the past. Buyers were sometimes forced to wait weeks to know what and how much commodity they received. During this wait period, buyers could not effectively participate and respond to the price fluctuation in the market and regularly lost profit opportunities.

The GrainChain solution provides buyers with all the data they need on their holdings instantly, providing an efficient and immediate eagle's eye view of their entire business, allowing them to manage operations more effectively. They will be able to sell their product, move it, and drop ship it faster than has ever been possible before. In addition, farmers and buyers currently spend years building a relationship of trust to be comfortable doing business together. Now buyers will be able to buy from farmers they have never worked with before, because through smart contracts, everyone can trust the system.

Competitive Landscape

GrainChain is uniquely positioned to be at the forefront of applying blockchain technology to provide the solutions illustrated in global commodities market, and is therefore in position to generate an enormous amount of attention and support for this innovation. GrainChain has several patents pending to protect its system. GrainChain will be marketing specifically to the key players in the industry—farmers and producers, the silo and warehouse community, and commodity buyers and brokers. Because every human being on the planet is tied to agriculture, relevant marketing and media can be applied across sectors and include, essentially, everyone who eats.

Commodities Market Strategy

GrainChain is forming alliances in the small commodities industry with governments, large corporations, and farmers alike. GrainChain is a member of the following associations:

- ◆ National Conference of Weights and Measurements
- ◆ Grain Elevator and Processing Society
- ◆ Texas Farm Bureau



TEXAS FARM BUREAU®



Ongoing marketing plan

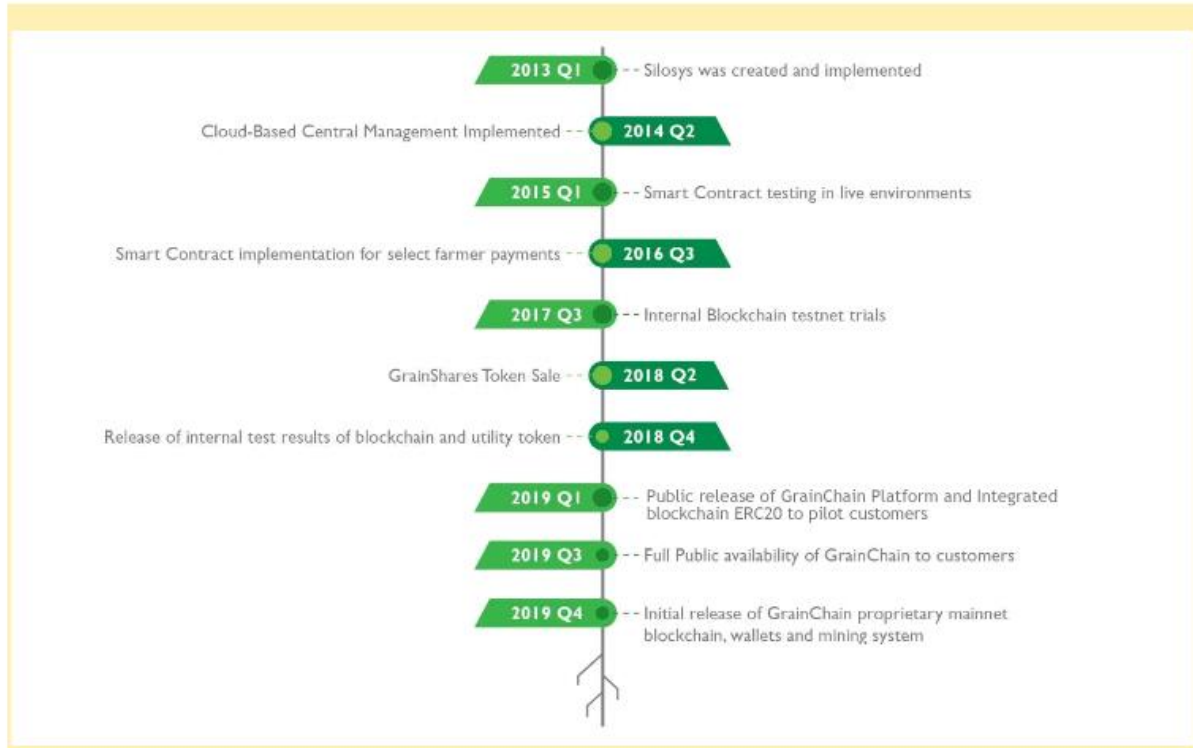
Through strategic alliances, GrainChain will bolster widespread support of its ecosystem. GrainChain will start with Silosys Software, which is already functioning and has a global marketing plan. GrainChain's goal is to function with other pre-existing software companies in the soft commodities industry and have them using one blockchain and one utility token worldwide.

GrainChain's core team, along with our advisors, have decades of combined experience marketing in the international soft commodities market. Because of our contacts and partners, the team is uniquely situated to execute this project in the soft commodities industry. At the proper time, GrainChain will advertise in all agricultural platforms and handle all PR and communications with customers and potential customers.

Our ongoing communications strategy is as follows:

- ◆ Press and Marketing: We will launch an active media presence across all relevant media platforms to generate knowledge and excitement about GrainChain, drawing on the intense cultural excitement for increased fairness and social justice within food production. Solutions to end corruption in developing countries and eradicate exploitation of the weakest players in the system have global appeal, across sectors. We plan on leveraging this appeal using social media and other media outlets to popularize our revolutionary systems.
- ◆ Community Engagement: We actively work in communities through our associations.
- ◆ Direct Education: GrainChain will host educational events at silos and warehouses to invite business owners onto its blockchain. We will also educate farmers and producers directly in the places they live and work on how to utilize GrainChain.
- ◆ Global Initiative: GrainChain will launch a global initiative to focus on international partnerships for quick implementation and mass adoption on a worldwide scale, specifically focusing on developing countries where this technology is needed the most. GrainChain will also attend worldwide conferences and meet with government officials to secure key alliances and support for the adoption of the system.

ROADMAP AND MILESTONES



TEAM



LUIS MACIAS, CO-FOUNDER AND CEO

Luis is a serial inventor and entrepreneur who brings 17 years of experience designing and implementing technological solutions in the government, agriculture and insurance sectors. He has spent the last four years focusing on viable agricultural solutions, where he founded and implemented Silosys and developed the GrainChain smart contracts system. He brings an experienced, relentless commitment to enhancing the performance of business processes and mission-critical deployments to the team, and his pioneering leadership in the technology and agriculture sectors ensures that GrainChain becomes the leader in its market space.



FERNANDO CAMPOS, CO-FOUNDER AND PRESIDENT

Fernando is one of the world's leading innovators in blockchain technology. A humanitarian and early advocate of the value of blockchain, Fernando is passionate about developing applications of blockchain technology that improve quality of life and working conditions for all people. He brings this passion, as well as over 16 years of experience in entrepreneurship, startup management, and real estate investment to the GrainChain team.



CARLOS HUGGINS, VP OF RESEARCH AND DEVELOPMENT

A founder of Silosys, Carlos has built his career on developing and implementing innovative, cost-effective software solutions for businesses. He has worked with over 50 firms worldwide and brings over 20 years of experience as a full-stack developer and systems architect to the GrainChain team. He has spent the last four years focusing on the agricultural world, and his work through Silosys has improved conditions for thousands of people across the commodities markets. He serves as the leading software developer for the GrainChain smart contract system, and is an invaluable driver of implementing the GrainChain solution on the ground.



GEORGE CULBERSON, CTO

Bringing over 20 years of technical and executive experience in the education space, George has spent his career designing, securing and deploying enterprise datacenters, virtual environments, and many other technologies. George is also a cyber-security researcher and an active member of the information security community. He has a lifelong thirst for learning and brings his unique passions for information security and blockchain technologies to the GrainChain team.



VICTOR HADDAD, CHIEF FINANCIAL OFFICER

With the combination of a computer information systems degree from St. Edward's University and over 12 years in commercial banking as a Senior Vice President at Lone Star National Bank, Victor brings with him both the technical knowledge and financial expertise required to manage and grow this unique venture. Victor has served as President and managing partner of various small and successful local partnerships serving the hospitality, real estate, and IT industry.



AMIN, VP OF BUSINESS STRATEGY AND OPERATIONS

Amin has spearheaded many projects from the ground level and offers GrainChain a proven track record of outside the box management and creativity. His passion for the innovative application of technology and his unique ability to bring out the passionate side of every team member that works with him makes Amin a vital member of the GrainChain team. His presence guarantees that GrainChain maintains the agility and energy needed to become the leader in its sector, and his creative drive ensures the continuation of GrainChain's track record of visionary innovation.



KATHRYN GROVER, VP OF MEDIA RELATIONS

Kathryn is an entrepreneur, writer and media relations consultant who has worked with numerous successful technology firms. She specializes in telling the story of innovation to the world, across media platforms, in a way that inspires. She brings her passions for writing, humanitarianism via technology and innovation, and ten years of experience as a creative entrepreneur to the GrainChain team.

PARTNERS

Our partnerships with industry leaders throughout the commodities markets puts GrainChain in position for fast implementation and ensures adoption by key players.



Garcia Grain
Trading Inc.

Hi-Starr Grain Corp.

State of Tamaulipas, Mexico



DISCLAIMERS

Any offer of securities will be made in accordance with specific disclosure documents, which may be obtained from GrainChain at info@grainchain.io. The Tokenized Securities described in this white paper, if offered and sold, will not be registered under the US Securities Act of 1933 (the “Securities Act”), the securities laws of any state, or any other jurisdiction, nor is such registration contemplated. Tokenized Securities will be offered and sold pursuant to one or more exemptions from the registration requirements of the Securities Act and any other applicable jurisdiction. In all jurisdictions, the offer to sell and solicitation to buy Token Securities is directed solely to qualified institutional investors, qualified professional investors, and those other sophisticated persons to whom offers and solicitation may be made without any licensing, registration, qualification, or approval under applicable law (Qualified Person). This website does not constitute an offer, distribution, solicitation, or marketing to any non-Qualified Person (and is not an offering to the retail public in any jurisdiction where such offering is unlawful). You should disregard this if you are a non-Qualified Person. If you are in doubt as to your status as a Qualified Person, contact us for additional information.