



Decentralized Farmer's Network

Farmpaper V2.0/ Jan 2024



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1. Caught in the Middle: Farmers Navigate Market Fluctuations and Food Security

In the expansive fields where our food is grown, farmers who work tirelessly to sow the seeds of sustenance are often faced with a great injustice. Despite their hard work and efforts, they only receive a small portion of what they harvest. These diligent farmers face a number of challenges in navigating the complex web of our food supply, made worse by middlemen who take an unfair share of the profits. This is not just a story of economic disparity, but rather a silent struggle that is rooted deep in the soil. It is a story of resilience, where farmers are forced to overcome a system that demands more from them than it gives.

Introduction:

In the global agricultural system, an unfortunate reality exists where **farmers**, who are the unsung heroes of our food supply, are often marginalized and receive a small portion, sometimes less than 10%, of the value produced by their hard work. The experiences of farmers who work hard to sustain our crops and communities are not just statistics. Despite the global trade in goods reaching an all-time high of USD 5.6 trillion, farmers continue to struggle. This paints a stark contrast between the success of trade and the challenges faced by those who produce the goods.

The fight against lack of transparency in the current supply chain is not just about improving operational efficiency. It is a crucial effort to promote fairness, honesty, and ethical practices. The middlemen, who extract significant profits, are situated at the end of this complicated and often confusing chain, leaving farmers with meager wages despite their hard work. However, this financial inequality goes beyond monetary effects, as it undermines the trust and transparency that should be the foundation of the agricultural system.

The current supply chain system is flawed and lacks transparency, which makes it difficult for farmers and buyers to connect directly. The system is plagued by problems such as middlemen taking advantage of farmers for profit, delayed payments to farmers, and a general lack of information about the agricultural journey. Brands act as a barrier, preventing consumers from knowing the true source of their food. This disconnect between production and consumption is a significant challenge for farmers who want fair payment and for consumers who want to make informed and ethical choices about their food. To address these issues, a transformative solution is needed to tackle the systemic problems that are deeply ingrained in the existing agricultural trade landscape.

Amid numerous challenges, the agricultural supply chain is not only a place for trade but a complex network where the livelihoods of farmers, the needs of consumers, and the intricate dynamics of global trade intersect. **Farmsent** is a solution that aims to untangle the complex web, empower farmers to earn fair returns and connect consumers with the authentic stories behind their food. The journey towards a more equitable, transparent, and sustainable agricultural trade begins with acknowledging the intricacies of the current system and focusing on a future where farmers prosper, consumers make informed choices, and the global food supply chain becomes an example of fairness and transparency.



Envision a future where each farm, each trade deal, and each thread of trust is fortified by robust and decentralized technologies. Farmsent doesn't just articulate this future; it's actively engaged in making it a tangible reality. In a world where the landscape of trade is undergoing a seismic shift, Farmsent illustrates how technology, when harnessed thoughtfully, can disrupt the age-old relationship between farmers, consumers, and the intricate web of global trade.

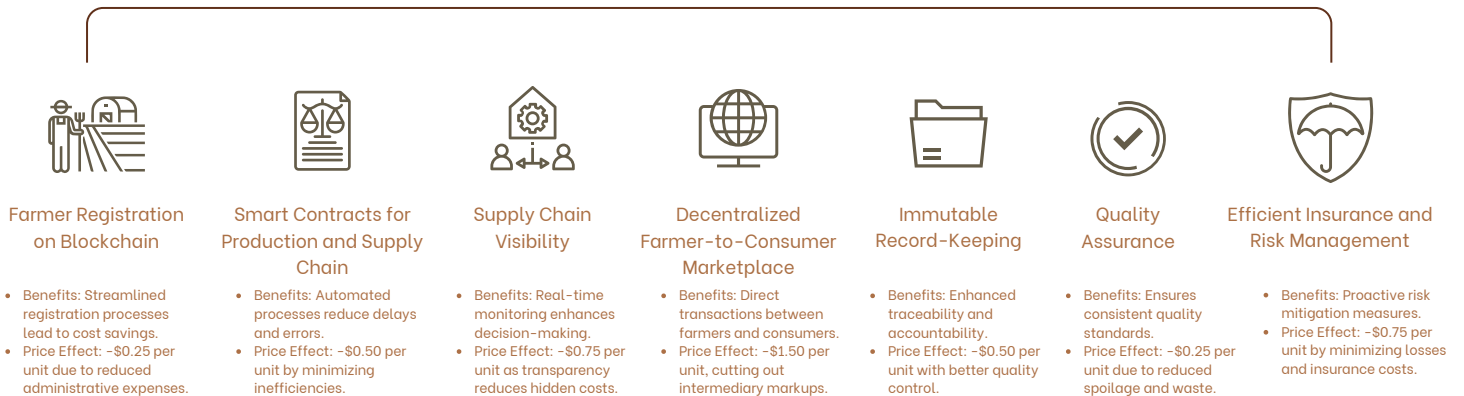
Standard Trade Journey



Farmsent Trade Journey



Farmsent Blockchain



The pricing effects presented are for illustrative purposes only and not reflective of guaranteed outcomes; they emphasize the potential efficiency gains of blockchain technology in the agricultural supply chain.



2. Quality Reigns: Beyond Brand Hype

In today's consumer landscape, the reputation of well-established brand names often takes priority over the quality of the product. Unfortunately, this trend has put farmers at a disadvantage because their hard-earned produce is often undervalued in favor of brand recognition. As a result, consumers who rely on familiar brands may miss out on the opportunity to explore the true quality and origins of their food.

This practice not only perpetuates an uneven power dynamic but also affects farmers' livelihoods. By relying on well-known brand names, consumers unknowingly contribute to a system where farmers receive only a fraction of the actual value of their produce. This disparity exacerbates the financial challenges faced by farmers who, despite their ceaseless efforts, struggle to make ends meet.

Farmsent recognizes this challenge and aims to shift the focus from brand names to product quality. By advocating for transparency and pushing back against brand-centric trust, Farmsent seeks to empower consumers to make informed decisions that benefit both the quality of their food and the livelihoods of farmers. The ultimate goal is to break the chains of opacity, fostering a more equitable and transparent future for the agricultural industry.

3. Broken Global Supply Chain

1. **Price Volatility:** Farmers often face unpredictable fluctuations in commodity prices, making it challenging to plan and budget effectively. This volatility can lead to significant financial losses for farmers who may receive lower prices for their produce during certain seasons.
2. **Quality Control:** As products move through the supply chain, maintaining consistent quality can be a challenge. Poor handling, inadequate storage, or delays in transportation can result in a degradation of product quality, impacting both farmers and consumers.
3. **Market Access:** Small-scale farmers, in particular, face barriers in accessing broader markets. Limited market access restricts their ability to reach a diverse consumer base and hinders their potential for growth and profitability.
4. **Dependency on Intermediaries:** Many farmers rely on intermediaries or middlemen to connect with buyers. However, these middlemen often exploit their position, offering farmers lower prices for their products and taking a significant share of the profit.
5. **Lack of Information:** Farmers may lack access to critical market information, such as current demand, fair pricing, or emerging trends. This information gap leaves them at a disadvantage in negotiations and decision-making.
6. **Logistical Challenges:** Inadequate infrastructure, including poor transportation and storage facilities, can lead to delays and losses in the supply chain. Farmers may struggle to get their products to market in a timely and cost-effective manner.
7. **Limited Technology Adoption:** Many farmers, especially in developing regions, may not have access to or knowledge about modern agricultural technologies. This limits their ability to optimize production, resulting in lower yields and income.
8. **Climate Change Impact:** Changing weather patterns and the increasing frequency of extreme events due to climate change pose a threat to agriculture. Crop losses due to droughts, floods, or pest infestations further disrupt the supply chain.



Farmers are facing systemic issues that are harming their livelihoods. One of the most pressing challenges is the delayed and inconsistent payment that farmers often have to endure. This creates a ripple effect that ultimately leads to higher consumer prices.

The mistreatment of farmers in trade financing, where buyers and wholesalers often refrain from paying farmers upfront. This practice is not only causing financial hardship for farmers but also making them vulnerable to exploitation.

4. Farmsent's Solution

Farmers-to-Business (F2B) Marketplace:

Farmsent will introduce a Farmers-to-Business (F2B) Marketplace that will transform how farmers and businesses connect. This platform aims to transform the conventional approach to agricultural business by providing a seamless connection between farmers and businesses. It serves as a direct link, enabling farmers to showcase their produce and businesses to procure directly, without the need for intermediaries. This eliminates unnecessary steps in the process and empowers both parties to easily connect and conduct business.

- **Direct Connection:**
 - Farmers and businesses establish a direct, transparent connection.
 - Bypassing intermediaries ensures fairer pricing and improved profit margins for farmers.
- **Efficient Procurement:**
 - Businesses gain access to a diverse range of farm-fresh produce.
 - Streamlined procurement processes enhance efficiency and reduce costs.

Farmsent Traceability System:

At the heart of Farmsent's operations lies the Farmsent Traceability System, a robust blockchain-based solution that validates farmers and products. Smart contracts within this system provide unparalleled transparency, allowing buyers to scrutinize and verify each step in the supply chain.

- **Blockchain Validation:**
 - Farmers and their products are securely validated on the blockchain.
 - Immutable records instill trust and authenticity in the entire supply chain.
- **Smart Contract Transparency:**
 - Smart contracts ensure transparency in every transaction.
 - Buyers can trace the journey of products from cultivation to delivery, promoting accountability.



Farmsent Trade Finance:

Farmsent's Trade Finance, powered by web3 and smart contracts, is a disruptive model that challenges conventional trade financing practices. It ensures upfront payments to farmers, safeguarding them from exploitation and financial hardships.

- **Web3 Empowerment:**

- Leveraging web3 technology, Farmsent enhances trade finance practices.
- Smart contracts enable secure and upfront payments, fostering fair and equitable transactions.

Farmsent Decentralized Auction System (FDAS): For Commodities:

Farmsent introduces FDAS, featuring an English auction mechanism that guarantees fairness and transparency. Bidders participate in a competitive process where each bid must surpass the previous one until the expiration of the bidding pool to secure commodities.

- **Fair and Transparent Auctions:**

- NFT bidding ensures fairness through a competitive English auction model.
- Transparency in the bidding process creates a trustworthy environment for all participants.

Fair Future Contracts:

Fair future contracts are governed by a dynamic framework, binding both parties to predefined variations. The Farmsent DAO acts as an escrow, making impartial decisions in conflicts and ensuring fairness and transparency.

- **Dynamic Contract Framework:**

- Fair future contracts adapt to predefined variations, ensuring flexibility.
- Farmsent DAO acts as a neutral arbiter, resolving conflicts and upholding fairness.



Perimeter-Based Validation:

Farmsent DAO dynamically assesses market fluctuations through perimeter-based validation. In scenarios like a 150% price inflation, Farmsent DAO validates responsive actions, such as order cancellation or renegotiation.

- **Dynamic Market Assessment:**
 - Perimeter-based validation enables Farmsent DAO to assess market fluctuations dynamically.
 - Responsive actions in extreme scenarios ensure adaptive and fair trade practices.

Smart Contracts and Data Oracles:

Farmsent's operations are anchored in smart contracts, providing a tamper-proof and transparent execution of agreements. Data oracles verify and validate smart contracts, ensuring the integrity and accuracy of information on the Farmsent platform.

- **Tamper-Proof Execution:**
 - Smart contracts on Farmsent guarantee tamper-proof execution of agreements.
 - Data oracles enhance transparency by validating and verifying crucial information.

Yield Tokenization:

Farmsent introduces innovative yield tokenization, offering farmers additional revenue streams beyond traditional sales. This mechanism allows farmers to leverage their agricultural output in new and financially rewarding ways.

- **Diversifying Revenue Streams:**
 - Yield tokenization opens avenues for farmers to diversify revenue beyond traditional sales.
 - Empowering farmers to leverage their agricultural output for new financial opportunities.

5 Benefits of Blockchain and Web3 Integration:

Enhanced Transparency:

- Blockchain technology forms an immutable ledger, providing a transparent and verifiable record of every transaction and interaction within the Farmsent ecosystem.
- Web3 integration ensures decentralized data storage, eliminating a single point of control and enhancing transparency across the supply chain.

Immutable Traceability:

- Farmsent's Traceability System, powered by blockchain, ensures an immutable and tamper-proof record of the entire supply chain journey.
- Web3 integration further strengthens traceability by decentralizing data storage, making it resistant to alteration and fraud.

**NFT-Driven Trust:**

- NFTs in the bidding process create unique and non-fungible representations of each bid, fostering trust and authenticity in the auction mechanism.
- Farmsent's NFT-driven approach ensures a secure and verifiable bidding process, enhancing the credibility of both buyers and sellers.

Smart Contract Automation:

- Smart contracts automate various processes, reducing the need for manual intervention and streamlining transactions.
- This integration minimizes delays, errors, and disputes, ensuring a more efficient and reliable platform for farmers and businesses alike.
- These integrations collectively contribute to Farmsent's mission of revolutionizing agricultural trade practices and fostering trust, efficiency, and fairness in the global food supply chain.

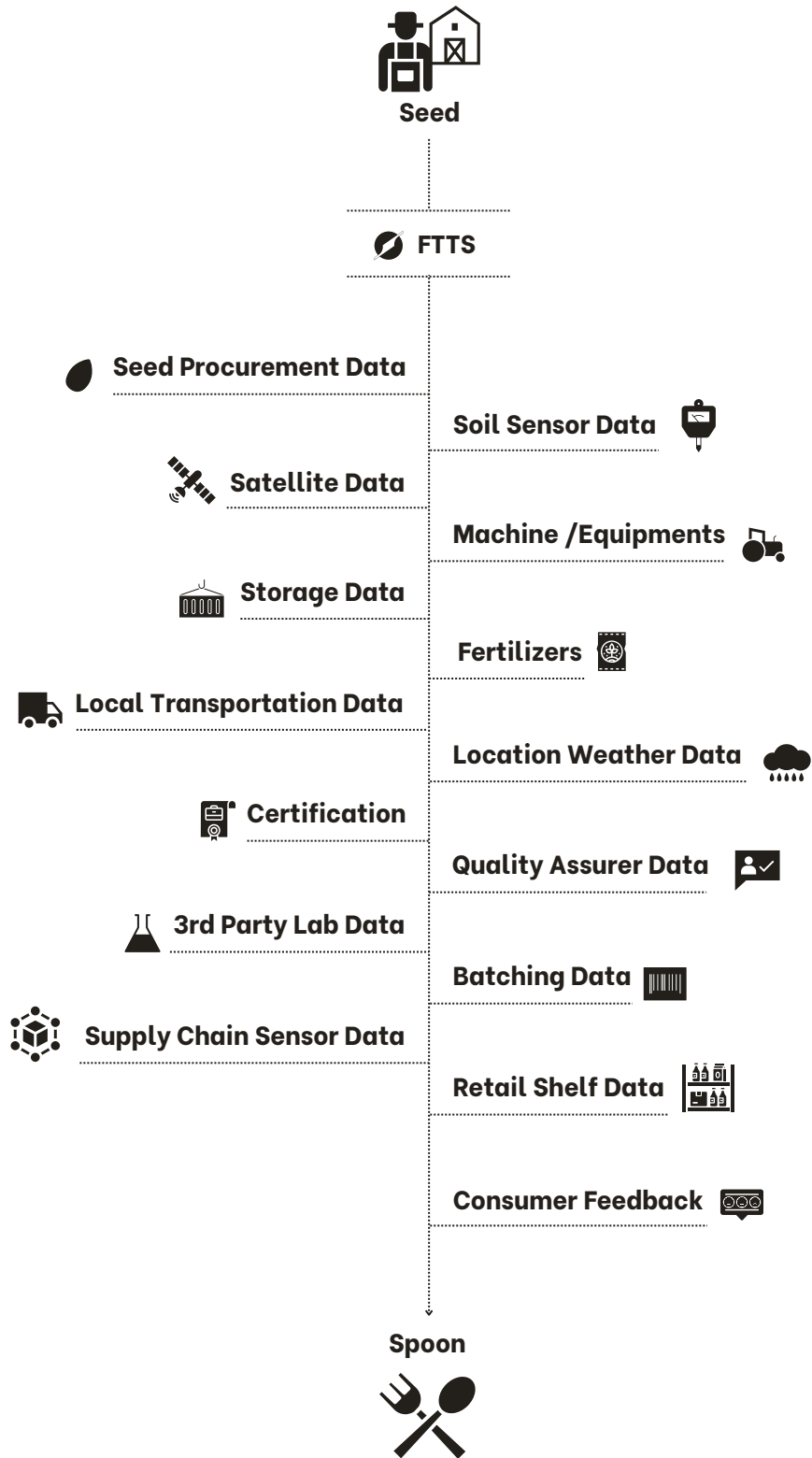
6 Farmsent TradeTraceability System In Details:

Envision enjoying a fresh apple while having a complete understanding of its journey from the orchard to your table. This level of transparency, once considered unattainable, is now within reach with the help of the Farmsent Traceability System.

At the heart of Farmsent's traceability system lies immutability, which ensures tamper-proof records. Each phase of the process, from seed planting to crop harvesting, is meticulously documented using satellites, sensors, and blockchain technology. These sensors collect data on various variables such as soil health, temperature, water usage, and pest control. The data is then intricately woven into a blockchain, forming a public, unalterable ledger of the food's journey.

Imagine it as a digital passport for your food. By simply scanning a QR code or accessing a platform, consumers can easily access details such as the farm's location, cultivation practices, and even photos of the dedicated farmers. This transparency gives consumers the power to make informed decisions, promoting sustainability and ethical practices.

Farmsent's impact goes beyond just consumer satisfaction. The system helps farmers optimize their practices by providing real-time data on crop health and environmental conditions. This leads to increased yields, reduced waste, and enhanced resource management. It's a mutually beneficial solution that aligns the interests of farmers and everyone involved.



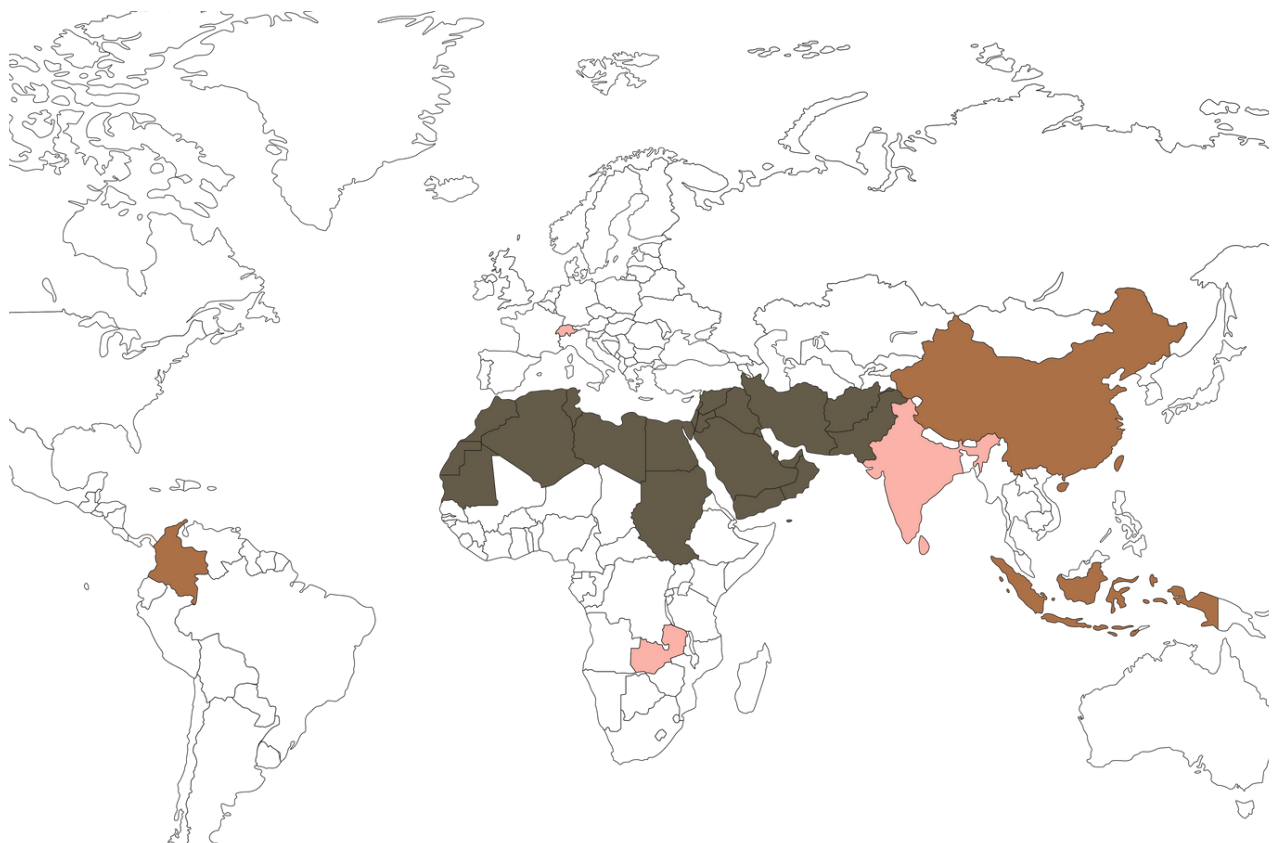


7 Phase 1: Region focus

In operational strategy, Farmsent strategically categorizes target markets into distinct export and import zones. By aligning our products with these zones, we anticipate organic growth in our target markets. This segmentation allows us to tailor our approach to the unique needs and dynamics of each region, ensuring a more focused and effective expansion strategy.

Phase 1: Catchment area:

Farmsent will operate in hotspots for non-perishables, such as Indonesia, China and Colombia. We are expected to grow both vertically (inclusion of more products) and horizontally (expansion to more countries).



■ Sellers area:
Colombia, China Indonesia

■ Buyers area:
MENA Region and China

■ Under discussion: India, Sri Lanka,
Zambia, Switzerland



In addition to offering a platform for businesses to buy from farmers, we have also observed that bidding for certain products, such as coffee, is prevalent in certain countries. Taking a cue from such situations we have decided to include the bidding mechanism in Farmsent ecosystem as this can provide a better return to the farmers.

Market Region and territories:

Farmsent will operate in hotspots for non-perishables, such as Indonesia, China, and Colombia. By leveraging our connections with small-scale farmers who grow rice, cardamom, vanilla, barley, cinnamon, and other crops including coffee beans and tea, we can facilitate and connect them to buyers in the MENA region on Farmsent's blockchain-based platform.

8 Current Challenges Faced by Farmers:

Farmers are tasked with navigating the dynamic landscape of our planet, striving to meet the evolving demands of regulators, consumers, food processors, and retailers. Environmental challenges, including climate change, soil erosion, loss of biodiversity, and crop pests and diseases, loom large with each passing season. Concurrently, staying abreast of customer preferences and addressing concerns related to crop treatment and production intensify the pressure on farmers.

Despite the array of solutions offered by modern agriculture, the outcomes are often variable due to the unique nature of each farm. Factors such as diverse landscapes, soil conditions, available technology, and potential yields contribute to the distinct challenges faced by individual farmers. Meeting the escalating demand for higher-quality food compounds the complexity of these challenges.

In recent years, there has been a perceptible shift in agricultural focus from merely ensuring 'enough food' to the pursuit of 'good food'. Farmers are now not only expected to increase production but also to do so sustainably, adhering to quality standards and addressing environmental concerns. Farmsent recognizes these challenges and endeavors to empower farmers through technology-driven solutions, ensuring sustainable and efficient agricultural practices that align with the changing landscape of global agriculture.



While agritech holds the promise of boosting crop productivity, its adoption requires financial investment, ranging from treated seeds and crop protection products to data-analysis apps and precision spraying. Large-scale farmers may afford these investments, but small-scale farmers often lack access to affordable credit sources. Moreover, farmers must undergo the learning curve of effectively utilizing these technologies to enhance their business operations.

Farmers' decision-making is further complicated by global economic factors like fluctuating commodity prices, trade uncertainties, and the unpredictability of harvests due to weather, insects, or diseases. The future of farming faces challenges as rural-to-urban migration depletes farming populations, necessitating efforts to inspire individuals to pursue and build careers in agriculture.

Traditionally, traded goods pass through numerous hands in the supply chain, from cultivation to the final consumer. However, each exchange in this chain contributes to a substantial increase in the price of goods. Globally, farmers confront unfair trade systems where powerful corporations exploit them, leading to land loss and abandonment of farming. Climate change compounds these challenges, making farming increasingly difficult with temperature rises, precipitation shifts, and unpredictable weather patterns.

We propose to reduce the number of parties entering the supply chain by implementing blockchain technology. In addition to lowering the prices, as it will be more environmentally sustainable, highly secure, and transparent for all those involved in the trade.



9 Current Challenges Faced by buyers:

Buyers in the agricultural industry operate within a framework built on established trust forged over time with all involved parties. While trust is a cornerstone, its presence alone does not guarantee timely product deliveries. A myriad of factors, initially rooted in trust, can erode buyer confidence. These challenges encompass issues such as overpricing, price volatility, quality concerns, payment uncertainties, delivery delays, and a lack of transparency. Obtaining timely quotes itself becomes a cumbersome process, entailing multiple emails, phone calls, and follow-ups, contributing to stress and time-consuming efforts required to maintain and nurture these crucial business relationships.

The discord between buyers and suppliers is exacerbated by communication gaps, conflicts over contracts, and unpredictable fluctuations in commodity prices. Modern buyers face an intricate web of challenges that demand innovative solutions. Farmsent aims to address these issues head-on by leveraging blockchain, smart contracts, and transparent traceability. By infusing technology into the agricultural supply chain, Farmsent seeks to streamline communication, ensure transparency, and provide a reliable platform where trust is not just established but fortified through a seamless and efficient trading experience.

Mission:

Our mission is to establish a secure platform, powered by a blockchain ecosystem, for farmers and producers. We are dedicated to simplifying the supply chain, promoting fair compensation, and creating a direct link between those who grow our food and those who consume it.

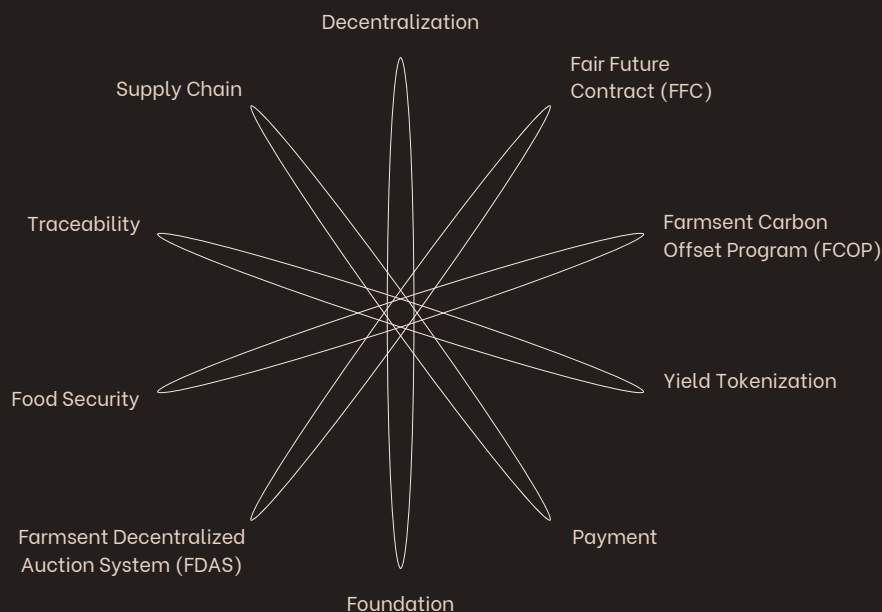
Vision:

To focus on connecting farmers directly to consumers, ensuring traceability throughout the supply chain. This commitment to blockchain-based traceability enhances transparency, fosters trust, and contributes to reshaping the global landscape of food trade.

10 Farmsent Foundation:

Farmsent aims to address issues facing farmers such as crops insurance, access to fertilizers, Agritech, and volunteerism during harvest seasons. Farmsent foundation will contribute to these causes to ensure our farmers' well-being.

The Farmsent foundation will receive a portion of the earnings, which will be used to improve and develop farms in various parts of the world.



11. Farmsent is optimizing the supply chain with blockchain.

Through Farmsent's platform, farmers gain unprecedented ownership of their produce, selling directly to consumers without the interference of intermediaries. This streamlined supply chain not only boosts farmers' profits but also ensures consumers access fresher ingredients directly from the source.

The Farmsent supply chain integrates farmers/producers, on-the-ground associations/partners for quality verification, and shipping partners. Our dedicated team, strategically stationed at product origins, meticulously oversees the supply chain, guaranteeing the highest quality standards. Every product undergoes rigorous testing and verification, and through the use of smart contracts, the entire process is automated. Once verified, products are efficiently packed and exported to buyers, maintaining an exceptionally lean and transparent supply chain that significantly reduces costs and carbon footprints.

This innovative approach ensures farmers regain rightful ownership of their products, local communities flourish, and lives are positively impacted. By choosing to buy directly from farmers through Farmsent, consumers not only enjoy fresher produce but also contribute to the resurgence of farming communities that may have previously abandoned their fields.

Farmsent addresses the longstanding issue of fair compensation by providing farmers with control over their products up to the point of sale. The proximity of farmers to consumers is directly linked to increased rewards, and the entire process is transparent through Farmsent's traceability system. This system utilizes blockchain technology, creating an immutable and tamper-proof record of the entire supply chain. Smart contracts further enhance transparency, automating and securing transactions. Products under farmers' direct supervision are globally marketed through Farmsent, enabling farmers to intimately understand consumer needs, resulting in higher rewards and significant advancements for the entire industry.

In essence, Farmsent empowers farmers, enhances supply chain efficiency, and bridges the gap between producers and consumers, fostering a more equitable, sustainable, and transparent agricultural ecosystem.



12 Introducing carbon emission:

The majority of carbon dioxide comes from burning fossil fuels, such as coal, oil, and natural gas. Coal companies and large oil and gas companies are major emitters of carbon dioxide. Human activity has caused atmospheric CO₂ to increase by about 50% over pre-industrial levels.

The long-term impact of global trade on carbon dioxide (CO₂) emissions has been largely ignored.

As trade grows, emissions will increase substantially unless special measures are taken. In spite of technological development and efficiency improvements over the next three-and-a-half decades, the CO₂ emissions from international trade-related freight transport will rise by 290% by 2050.

As a result of living in the modern world, we all leave a carbon footprint. The food we eat, the things we shop for, and the travel we do all contribute to carbon emissions. In the case of companies, business activities such as shipping, electricity generation, industrial processes, and farming can contribute to our carbon footprint.

The only way to avoid climate catastrophe and achieve the climate targets outlined in the Paris Agreement is to drastically reduce carbon emissions.

Globalization has reduced the world into small villages, although it has made our lives easier it has played an accelerated role in carbon emission. Most of the supply chain entities have not recognized the carbon emission caused by the supply chain and logistics network.

Farmsent Carbon Offset Program (FCOP):

Farmsent is conscious about carbon emission and is working with organizations that are providing verifiable carbon units to offset carbon footprints caused by trade conducted in Farmsent ecosystem. For each trade happening in Farmsent the equivalent carbon footprint will be offset, making Farmsent the greenest trade platform in the world.



13. Road Map:

2024





14. Reference:

<https://www.itf-oecd.org/sites/default/files/docs/cop-pdf-06.pdf>

<https://earthhero.com/carbon-emissions/>

https://www.compensate.com/articles/new-to-carbon-offsetting-start-here?gclid=CjwKCAiAx8KQBhAGEiwAD3EiPwdeWgK4oW2CorN2Mp9hdqw16RBt5Z8VOZGTiwu4zaIJdx6-VJU2RoC2kQQA_vD_BwE

https://en.wikipedia.org/wiki/Greenhouse_gas_emissions

<https://academic.oup.com/fqs/article/4/4/167/5896496>

<https://blockheadtechnologies.com/how-blockchain-is-revolutionising-food-supply-chains/#:~:text=Blockchain%20technology%20provides%20traceability%2C%20security,have%20access%20to%20the%20information.>

<https://www.sciencedirect.com/science/article/pii/S0739885921001384>

<https://www.investopedia.com/terms/f/futurescontract.asp#:~:text=A%20futures%20contract%20is%20a, trading%20on%20a%20futures%20exchange>

https://en.wikipedia.org/wiki/Non-fungible_token

<https://coinmarketcap.com/alexandria/article/what-is-a-node>

https://en.wikipedia.org/wiki/Paris_Agreement



15.

Glossaries:

Future Contract:

As a legal instrument, a future contract is a commitment to buy or sell a commodity asset, or security, at a predetermined price at a specific future time. The purpose of futures contracts is to facilitate trading on futures exchanges by standardizing their quality and quantity.

Blockchain:

Central to the appeal and functionality of Bitcoin and other cryptocurrencies is blockchain technology. As its name indicates, blockchain is essentially a set of connected blocks or an online ledger. Each block contains a set of transactions that have been independently verified by each member of the network. Every new block generated must be verified by each node before being confirmed, making it almost impossible to forge transaction histories. The contents of the online ledger must be agreed upon by the entire network of an individual node, or computer maintaining a copy of the ledger.

Blockchain Node:

Blockchain nodes refer to a network's stakeholders and/or their devices, which are designated to keep a copy of the distributed ledger and serve as communication points that execute various essential network functions. A blockchain node's main purpose is to verify the validity of each succeeding batch of network transactions, called blocks. Each node has a unique identifier attached to its device that allows it to be distinguished from others in the network.

NFT:

A non-fungible token (NFT) is a non-interchangeable unit of data stored on a blockchain, a form of digital ledger, that can be sold and traded. Types of NFT data units may be associated with digital files such as photos, videos, and audio. Because each token is uniquely identifiable, NFTs differ from blockchain cryptocurrencies, such as Bitcoin.



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