

THE INDIAN AGRI-TECH INDUSTRY



**Y-Accel
Report**

July 2021

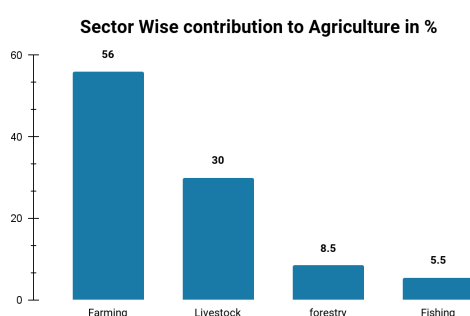
CONTENTS



	Page
01. Industry Overview	2-4
• Historical trends	
• Global Vs Domestic Trends	
• Sub-Sectors	
02. Faas: Farming as a service	4-7
• Market Segmentation	
• Market Size and Valuation	
• Investment Trends	
• Technological Trends	
• Degree of Competition	
• Market Share	
• Market Dynamics	
• Future Trends	
03. Market Linkage	7-10
• Market Segmentation	
• Market Size and Valuation	
• Investment Trends	
• Technological Trends	
• Degree of Competition	
• Market Share	
• Market Dynamics	
• Future Trends	
04. Startups in Faas	11-12
Market Trends:	
• Some of the existing players	
• Key Players	
05. Startups in Market Linkage	12-13
Market Trends:	
• Some of the existing players	
• Key Players	
06. Conclusion	14
• Summary of analysis and gathered facts	

Industry Overview

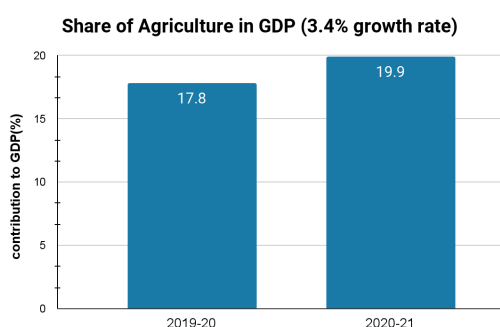
Agriculture is the backbone of the Indian economy and employs 43% of the Indian workforce. Several industries such as consumer packaged goods, retail, chemicals and e-commerce are heavily dependent on the output produced through agriculture, thereby amplifying the impact of agriculture on the country's economy.



Source: As per latest by EY (2020) Agritech: report

Current Status of the Agriculture Sector

For the first time since 2003, the share of agriculture in the gross domestic product (GDP) has almost reached 20%.



Source: As per latest by EY (2020) Agritech: report

Need for Agritech

Multiple structural challenges are preventing the Indian agricultural sector from reaching its full potential. Such as: -

1. **Lack of awareness** among farmers regarding agricultural commodity prices at markets leads to farmers' inability to negotiate and get better prices.
2. A **dearth of proper knowledge** about pesticides and fertilizers among farmers gives vendors an opportunity to misguide them and maximize their sales at the cost of the farmers' income.
3. **A large number of intermediaries** are present in the value chain. This negatively impacts farmers' revenue and pushes up the cost to consumers.
4. There is **limited access to retail markets, cheap credit and technology**. Ubiquitous adoption of the technology would enable farmers to take advantage of essential tools like Artificial Intelligence, the Internet of Things, etc.

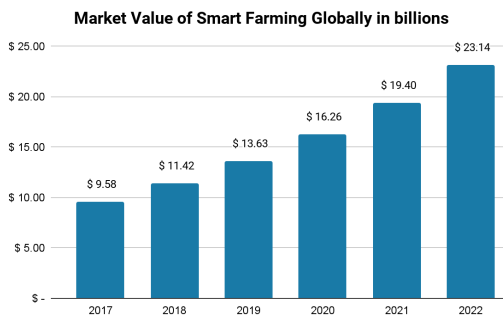
Agritech: Current Status

According to the latest report of NASSCOM, there are around 450 Agritech startups in India and their growth rate has been around 25% YoY. The Indian agri-tech market, presently valued at \$204 million, has reached just 1 per cent of its estimated potential of reaching \$24 billion by 2025, according to an EY report, dated August 2020.

Global vs Domestic Trends

The global funding for segments in the agricultural sector, as of April 2020 was \$4,083 million (for all countries excluding India) as compared to India's total funding of \$532

million. In terms of leading geographies, China and North America received the highest funding. As per a new market intelligence report by BIS Research, the global smart farming market is expected to grow at a CAGR of 19.3% to reach \$23.14 billion by 2022.



Source: BIS Research

Due to heavy investments in technology in agritech around the world, the 'Precision agriculture and farm management' segment leads the charge in terms of funding as well as the number of start-ups, while in India the leader is 'Supply chain tech and output market linkage'. Agricultural technology has made significant growth in the global smart farming market with a focus on solution systems, livestock and crop monitoring and precision crop farming. However, Indian farmers are unaware of such technologies. The domestic agritech sector has huge untapped potential which should be utilized as agriculture is the cardinal sector from both social and economic standpoints.

Historical Trends

Indian agriculture may have just reached its best-ever phase which is backed by unparalleled digital access to the farmers, overarching agricultural reforms and government support. The farmer is now being perceived as both a consumer and a producer. With higher internet penetration rates, across the country, farmers have started gaining access to information, farm to

fork linkages, and financing support which they didn't enjoy earlier. More than 450 active agritech startups in the country are working to solve the challenges in the agricultural sector. From 2014 to 2019, these firms raised \$1.7 billion, up from \$0.2 billion in the preceding five years. In the financial year 2019-20, Indian agrifood tech start-ups have brought in over 133 deals worth more than \$1 billion. With fresh investments in the supply chain, better storage and packaging, the industry is set to go nowhere but up.

The Future Trend

India's digital ecosystem is witnessing healthy growth due to affordability and availability of high-speed internet as well as a maturing digital content ecosystem.

The amalgamation of these factors has led to an exciting opportunity that promotes innovation in the agricultural ecosystem, wherein market players are now leveraging next-generation technology like data digitization and analytics, AI, ML, the IoT and Software as a Service (SaaS) to upend the status quo.

In order to absorb the demands of a growing population in our country, the agricultural output needs to grow at 60% by 2030 and Agri-tech has to play a leading role in this transformation.

Sub sectors

Market Linkage: Due to a fragmented supply chain, farmers are unable to get good quality inputs, which decreases their produce's productivity and poses challenges to effectively market the produce. Startups operating in the market linkage sector are working on improving the supply chain so that farmers can sell their produce directly to

the end customers. They provide digital platforms that connect farmers to retail markets, farm inputs, and rental equipment. Startups like Agrostar and BigHaat are working towards providing quality inputs to farmers, by leveraging technology. Whereas startups like FarmTaaza and Crofarm are reducing the inefficiencies of the market by directly linking farmers to the outlets, which eventually increases the revenue a farmer would usually get for his yield.

Farming as a service: The average size of land held by a farm household in India has declined to 1.08 hectares. In comparison, the average landholding of a US-based farmer would be 179.68 hectares. This implies that Indian farmers operate at an extremely small scale and in order to expand, there is a massive need for FaaS. FaaS seeks to make farming efficient by using computer science and modern technology. To reach a majority of Indian farmers, who operate at a small scale, FaaS techniques are being provided on a pay-per-use/ subscription basis, which makes them more affordable. The three main categories of FaaS are: -

- Farm Management Solutions
- Production Assistance
- Access to Markets

Agri-Fintech: To improve the state of agriculture and the plight of the farmers in India, improving the state of agriculture financing is of utmost importance. Agri-Fintech is a prudent way to tackle agricultural problems since it allows the targeting of loans and helps diversify the risks of farming. The use of the latest technology and various risk-management mechanisms helps these startups to provide cheaper loans quickly and efficiently.

Others: Other startups are mainly focusing on:

- **Big Data Analytics-** Using farm data to determine opportunities and key areas.
- **IoT-** Using IoT devices for remote monitoring and tracking.
- **Engineering-Led Innovation-** Using engineering methods to promote low-cost farming solutions.
- **Miscellaneous-** Using other solutions like biotech, increased spending on R&D, etc to increase farmers' income.

Impact of the pandemic on agritech startups

The pandemic disrupted the entire agricultural supply chain, which led to the shutdown of markets and delayed procurement and other on-ground operations. B2B platforms and Agri marketplace startups like Ninjacart, Agrostar, DeHaat that have already achieved massive scale in the past few years, stepped in to fill the space and witnessed high engagement. With people preferring ordering online due to covid-19, this has proven to be a significant moment for F2C (Farm to Consumer) brands as they had always looked to disrupt the traditional distribution channels. Technology advancements and an increase in adoption rates helped F2C brands unlock the arena to win trust by maintaining safe and reliable delivery of products. There was a shift in distribution channels from retail to consumer doorstep delivery.

FaaS: Farming as a Service

FaaS Startups provide farm management solutions that allow stakeholders to make decisions after carefully analyzing data to boost productivity and efficiency. The data,

collected through drones, satellites, IoT devices and government organizations is processed and broken down to discover what works well in the sector. The collected information is then utilized by the farmers to adopt a data-driven precision farming practice that will boost their productivity. The government needs to empower field officers to provide timely support. Corporations can optimize input application and real-time monitoring of the sown output to bolster farming efficiency. FaaS can convert fixed upfront costs into variable ongoing costs for farmers, thus making these techniques more accessible and affordable for small landholders.

FaaS can potentially turn farming into a profitable and sustainable occupation by providing real-time access to the services required. This would ensure a good crop yield in the harvest season. Farming as a Service can be categorized as: -

1. **Farm management solutions** like Information sharing, analytics, and precision farming tools. This involves the management of information between all the stakeholders—farmers, government, corporates, financial institutions and advisory bodies.
2. **Production assistance:** Providing on-the-field resources to aid production activities, such as equipment rentals.
3. **Access to markets:** Connecting farmers to suppliers of basic raw materials like seeds, fertilizers and other agrochemicals through virtual platforms.

Pain points addressed by FaaS

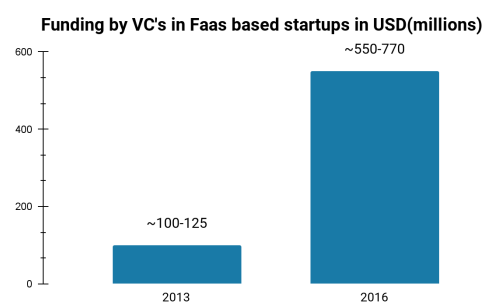
1. Lack of farm mechanization and infrastructure;
2. Absence of crop advisory;
3. A dearth of real-time information

FaaS essentially delivers value for farmers, technology companies, and original equipment manufacturers(OEMs).

Market Size and Valuation

The FaaS sector in India has been growing at a rapid speed. The total investor funding in India in the sector currently stands at \$105 million to \$115 million, with more than 40% of funding rounds at the “series stages”. This highlights a high level of investor confidence in investing their money in the growth stage but a lack of adequate capital for budding startups at the seed stage.

Major investors in the sector of FaaS are Accel Partners, IDG Ventures, Aavishkaar, Ankur Capital, Aspada, Global Innovation Fund, IvyCap Ventures, Sophia Investment ApS, Infuse Ventures, etc.



Source: As per latest by Bain's FaaS report

There has been an increased interest among VCs in FaaS-based startups globally. Top investing VCs in this sector are Scale Venture Capitals, GV, Bloomberg Beta, Osmington and Monsanto. The funding in 2013 has increased fivefold by 2016.

How is FaaS improving productivity and supply chain economics?

- Data is not only of use to the farmers but also to financial institutions who use data on soil, weather, crops, planting area to better manage risk on loans and crop insurance.
- FaaS connects farmers to start-ups and rural entrepreneurs, who can potentially offer farm machinery, equipment and labour on-demand.
- Tech-based companies employ market information, data on the weather forecasts, soil health and nutrients to help improve productivity by suggesting best farm practices apt for the forecasted weather, soil conditions, etc.

FaaS can potentially respond to the inefficiencies in the Indian agriculture

Pre-production

- **Land:** Preventing soil degradation by adopting farming practices suitable to the soil.
- **Consumable supplies:** Ensuring that good-quality inputs, including seeds, fertilizers, etc are accessible to farmers.
- **Information:** Training farmers to select crops, inputs, and a suitable cropping pattern based on information collated on market demand, weather forecast, soil condition, etc.

Production:

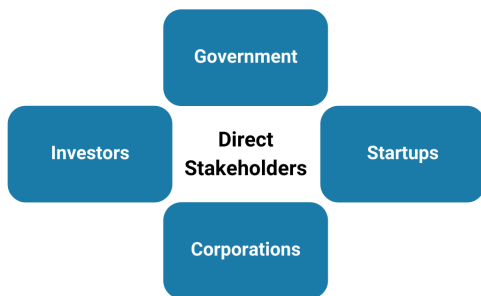
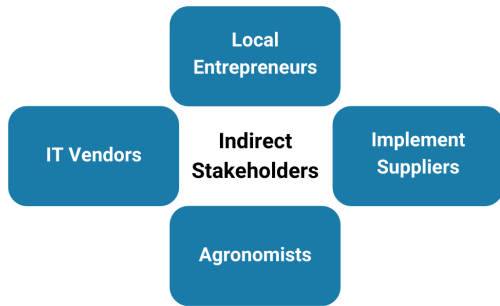
- **Equipment:** Helping farmers mechanize their farms for increased productivity.
- **Labour:** Helping farmers find a skilled workforce.
- **Utilities:** Offering irrigation infrastructure and power facilities.

Post-production:

- **Storage and transportation:** Reducing post-harvest food wastage.
- **Supply chain:** Eliminating middlemen from the value chain and ensuring higher returns to farmers.
- **Marketing:** Wiping out inefficiencies and diluting the channels to lower costs associated with sales and distribution.

Future of FaaS

- With the rapid growth in technology, FaaS can better address multiple problems across the agricultural supply chain, whether it be low productivity, absence of farm mechanization, access to markets or even data asymmetry. Given the level of vulnerability around marketing and commodity rates, FaaS will be of great aid to the farmers who are looking to establish fixed costs and goals upfront.
- It will promote product developments such as multipurpose agricultural equipment, real-time data capture and analysis systems.
- FaaS can cause an economic and social revolution by uplifting small and marginal farmers.
- However, if the benefits of FaaS have to be maximized then issues like lack of proper infrastructure, access to technology and financing, the headwinds from ground level, and regional differences, have to be tackled. The whole model depends on strong coordination between all the direct and indirect stakeholders, which needs to be ensured.



Market Linkage

Indian agriculture has been in a state of trouble for many decades. It is believed that increasing the farmer's income provides a resolute solution to the agricultural problems of India. Startups will play a pivotal role in this process, more so after the pandemic, which proved to be a catalyst for the agritech sector.

Average farmers' landholding in India is 1 to 3 acres, which makes it difficult for farmers to have a sustainable income. Also, input costs of farming (costs incurred on pesticides, fertilizers, seeds, fuel for tubewell and tractor) are ever-increasing, which leaves less or even no profits for the farmers. Arable land in our country is a humongous 156 million hectares. Therefore, the agri-food supply chain is mostly supply-driven. The supply chain has many intermediaries that negatively affect the farmers' income. Agritech can facilitate direct market linkage between the farmers

and the end consumer and at the same time enable cross-linkages among different players of the supply chain. Small farmers should be encouraged to form FPOs so that they are able to market their products better, adopt crop diversification and get access to credit. By organizing themselves into farmer producer organizations, farmers can get the benefits of economies of scale, avoiding high input transaction costs incurred by an individual farmer.

The farm inputs segment has a market potential of \$1.7 billion.

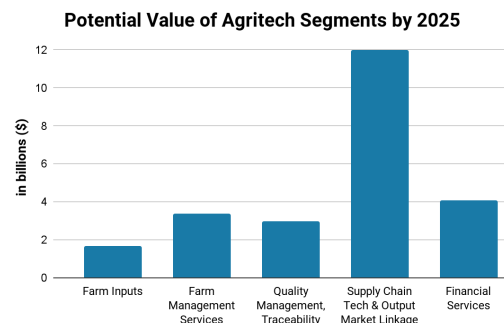
Problems with farm input-

- The volatility of prices,
- Sub-optimal input selection

Output market linkage and supply chain technology have a market potential of \$12 billion.

Problems with output linkages –

- The post-harvest supply chain is not efficient.
- Supply chain Post-harvest loss in India amounts to \$13 billion.
- Farmers are not able to get fair prices due to limited sales channels.



Source: As per the latest EY Report

The adoption of technology in agriculture (agritech) has a market potential of \$24 billion. More than half of the Agritech Startups

provide supply chain solutions like market linkage, better access to inputs, etc. Market linkages also support growing businesses like farm to fork, farmer to **HoReCa** (hotels, restaurants and cafes). Of all the sub-sectors present in agritech, the market linkage has an immense potential to reach the threshold of \$12 Billion by 2025. The Agritech sector thus has the potential to alter the way agriculture is traditionally being done across all stages of the value chain.

Agritech players in market linkages, farm inputs segments are leveraging technology and physical infrastructure to offer farm inputs at a fair price. Also, this price is predetermined, therefore reducing uncertainty. Players operating in the supply chain technology and output market linkages segment are eliminating inefficiencies by reducing intermediaries. This reduces the high wastage of farm produce, which is a win-win for both farmers as well as consumers.

Business models in the agritech space

- **Margin-based models:** Agritech players in the input area normally earn a margin of 8% on the price value of agri-inputs. Firms create market linkages and earn while supplying inputs to farmers and selling the produce to retailers.
- **Subscription-based models:** Corporations offer software, equipment and other services required to improve crop yields. This also ensures traceability of produce across the entire value chain.

Agritech startups operating in India have received an investment funding of \$532 million collectively as of April 2020. Investment

in India is essentially dominated by supply chain and output market linkage AgTech.

The startups are expanding horizontally i.e., growing by purchasing new facilities, other assets to increase the volume of the product it makes. The horizontal expansion allows a company to make more of the existing product, but it does not diversify its product offering or the company's position in the supply chain. There is also an opportunity for the large retailers and e-commerce players to expand their grocery presence through backward integration into the agritech space. Finally, food processing companies (FPC) could also acquire agritech companies to keep a tight check on their quality and operations.

The agribusiness ecosystem comprises all the activities performed right from the farm to the end till fork, covering the entire value chain. It covers every small activity of the value chain from basic inputs to production and transformation to its final distribution. Propelled by rapid urbanization, diet diversification i.e., a healthier diet, evolving consumer preferences and expansion of food markets in urban areas, the agribusiness ecosystem has been expanding to segments like e-commerce, and the online presence has grown on the back of agritech.

Value Chain

Source > Produce > Processing > Retail

Farming Inputs	Farming cultivation, harvesting	Distributions, post-production processing	Retailing and selling
Seeds, soil health	Soil enrichment, seed planting	Transportation, warehousing, processing and refining	Trade, grocery, foodservice, e-com
Moderate penetration	Low penetration	Moderate penetration	Low penetration

Financial services, small-scale traders, FPOs, mandis, farmer cooperatives, wholesalers are the intermediaries in the supply chain

Reforms in the Agriculture sector

1. Amendments to the Essential Commodities Act (ECA), 2020

This act would induce private investment in warehousing, post-harvest cold storage infrastructure.

2. The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020

This provision aims to provide alternative options of selling to farmers, increase their engagement with private players and other agritech startups.

3. The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Ordinance, 2020

This act would potentially increase contract farming, and the number of transactions between private players and farmers may also increase.

How do data and digital platforms support market linkage?

Startups like DeHaat, BigHaat operate in farm inputs, supply chain technology and output market linkage domain. Farmers can get a better return through higher transparency and price discovery of both inputs and outputs facilitated by online platforms.

Platforms for producing traceability help provide data to players in emergencies, like during a natural calamity, pest attack.

SourceTrace, Frontalrain are two startups in this field.

More than 40 % of produce gets wasted before reaching the end consumer due to supply chain intermediaries. Establishing market linkages can lead to an increase of 8%-10% in farmers' income as this loss can be avoided.

Benefits of Market Linkages and an efficient Supply Chain

- Agritech procures directly from the manufacturer or first level distributor of pesticides and leverages its own network to offer the product at a nominally cheaper price point to the farmers.
- Likewise, farm produce can be directly procured from farmers and provided to the end consumer at a cheaper rate. This also ensures that the farmer gets an assured market to sell his produce, even at a better price.
- Agritech players can make decisions based on data to accurately predict the supply and demand of inputs and offer inputs at prices with lower uncertainty than traditional models.

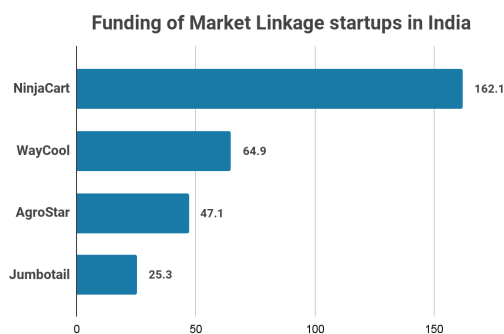
Scalability

Scalability in this segment depends on the startups' ability to offer credit to farmers for their working capital management and in a way earn the trust of farmers they deal with. Scalability would also depend on the agritech player's ability to consistently maintain the quality of produce through quality management and the player's strength to offer counselling on choosing the right inputs.

Startups

Startup	Funding (in millions)	Segment
Ninjacart	\$162.1	Supply chain tech and output market linkage
WayCool	\$64.9	Supply chain tech and output market linkage
AgroStar	\$47.1	Market linkage –farm inputs
Jumbotail	\$25.3	Supply chain tech and output market linkage

The Indian startups that received the highest fundings as of April 2020 in the Market Linkage segment.



Source: As per Nasscom report

Startups in FaaS



It is a digital platform focused on improving the lives of farmers across India. The main aim of this startup is to link farmers to the marketplace whether it is farm-to-mill, farm-to-fork and farm-to-warehouse models. It provides farmers with recent weather updates, best farm practices, professional advice on soil health and nutrition, crop prices, a range of seeds, and optimal fertiliser usage recommendations. Agribolo, a venture that started in 2015, has involved over 2.5 lakh farmers in India. It aims to break the current agricultural trend, which is usually controlled by moneylenders and middlemen. It also provides a marketplace to buy/rent/sell agricultural products & services named "Agri Mart" & "Agro Services" - which also provide e-mandi services. Currently, it is operating in 4 states, 24400 villages, and 61 franchises. Each franchise of the 'Agribolo Kissan Seva Kendra', helps farmers to earn an average of Rs 2 lakh per month by providing advisory and other allied services.

Value Additive Measures

- Empowers farmers with the latest technologies.
- Creates a decentralized ecosystem and looks at the farmer as an opportunity instead of a customer.
- Farmers get varied services annually through almost all channels like on-ground presence, toll-free no, SMS

services, mobile-based applications, and Agribolo Kisan Seva Kendra.

- Hoping to create a sustainable value chain in the upcoming years.
- Tie-ups with various companies for seeds, nutrients, crop protection like Tata, Privi.



Gold Farm

GoldFarm enables farmers to access farm equipment through a mobile phone app or contact the firm's call centre. Founded in 2016, it connects around 250 booking agents and over 500 tractor owners to farmers through its mobile phone app. The company's equipment booking platform offers clean technology for rural Indian power grid systems and farming equipment, allowing farmers to access low-cost farming resources. In 2017, it raised \$2 million in seed funding from Mahindra and Mahindra Infuse Ventures. Gold Farm's objective is to help a million Indian farmers double their farm income by 2022. Gold Farm's annual income is \$4 million.

Value Additive Measures

- It provides farmers with a place to order any farm equipment as per their need via a click on their app or through call service.
- Gold Farm has been successful in transforming 7,500 hectares of barren land and 25,000 hectares of land have been ploughed and harvested in the districts of Kolar and Chikkaballapur.

- Provision of solar water pumps for farmers working in power deficit regions in India.



Trringo is a FaaS startup launched by Mahindra & Mahindra Ltd in 2016 and aims to rent farming equipment to farmers at affordable rates. It describes it as India's foremost tractor and farm equipment rental service. So far, it has registered 1.5 lakh farmers in 5 states. It aims to mechanize farms through technology and a strong franchisee network, which will make farm mechanization easily accessible, affordable, and reachable to farmers across India.

Value Additive Measures

- Franchisee-based, asset-light model, hence lesser cost.
- Revenue is generated in two ways: royalty paid by the franchisee and a commission fee on each tractor let out by the franchise.
- The business idea is based on the premise that tractors and other farm equipment aren't available when they are needed the most. The tech-based model will hence help optimize tractor usage.



Founded in 2013, EM3 enables farmers who can't afford to buy expensive farming machines and technologies to rent them instead. It provides them with the equipment through a network of farm centres known as Samadhan Kendras. Each centre is managed

through IT-enabled systems by agri-professionals and is equipped to handle a wide range of basic to precision farm operations throughout the season. It helps farmers in land preparation, post-harvest farm management, harvesting, crop management and sowing of crops. So far it has raised around \$13.3 million from renowned investors like the Global innovation fund and Soros economic development fund.

Value Additive Measures

- The model used by EM3 is Pay-for-Use for providing tech and mechanization services to the farming community, that is, renting equipment.
- The firm is harnessing the ability of knowledge technology, mobile telecom services, financial services, etc. to integrate and strengthen the entire value proposition.
- EM3 provides a solution to the problem of farmers relying on manual labour and not being able to afford capital equipment by offering an entire range of assistance, from soil preparation to harvesting, where farmers pay a service fee on a per hour or per acre basis, which is cheaper than hiring manual labour, with service levels guaranteed by the company.

Startups in Market Linkage

ninjacart

The startup is based in the silicon valley of India, Bengaluru and was founded in 2015. It

provides an efficient channel to the farmers to sell fresh fruits and vegetables directly to retailers and restaurants in under 12 hours. Currently, Ninjacart provides supplies to businesses and end consumers in Chennai, Delhi, Mumbai, Pune, Bangalore, and other urban cities and towns. It has disrupted the Indian agriculture sector by leveraging technology to remove supply chain inefficiencies and providing consumers with good quality fruits and vegetables at competitive prices.

Ninjacart is backed by firms like Accel, Qualcomm Ventures, Walmart, Flipkart, Tiger Global, etc. It has raised \$162 million as funding to operate effectively in output market linkages and supply chain sectors.

Value Additive Measures

- Built an efficient and reliable supply chain infrastructure which is highly fragmented in the Indian agriculture sector.
- The entire value chain is backed by technology. From forecasting to the delivery of products, technology is involved at each level.
- The startup uses RFID (radio frequency identification) to know the exact location of the product as it moves through various centres to the retailers. This ensures traceability.
- Effective supply chain reduces uncertainty related to demand and supply and increases the farmers' incomes by eliminating middlemen.
- Faster services and fresh fruits and vegetables have helped the startup retain and expand its customer base.



The Gurgaon-based startup works to provide agricultural inputs, customized advisory and weather updates to the farmers. DeHaat was founded in 2012 and since then has collaborated with 3,60,000 farmers in Jharkhand, Bihar, Uttar Pradesh, and Odisha. They deliver inputs via call centres. The venture has also established a platform that aggregates produce like corn, bajra, rice and directly supplies to bulk buyers, FMCG giants like ITC, etc.

DeHaat has raised funding of \$30 million from Prosus Ventures, Sequoia Capital India, FMO, Omnivore in January 2021. They had also raised \$12 million in April 2020 from FMO Entrepreneurial Development Bank, Sequoia Capital India, AgFunder, etc.

Value Additive Measures

- The company has offered a farm-level query system to farmers that help them to get technical assistance on a real-time basis.
- It has managed to transact with a large number of farmers by offering customized advisory services and providing quality inputs at low prices.
- DeHaat gives frequent crop reminders to farmers in the form of voice calls in their local languages. Thus the farmer stays well informed in regards to which input to use and in what quantity. These unique techniques have reduced the frequency of pest attacks and increased farm yield's productivity.



WayCool Food and Products is a Chennai based food supply chain startup working on the farm to fork, B2B model. It was founded in 2015. It effectively utilizes technology to control the end to end agriculture supply chain from the farm input linkages to the distribution of output.

WayCool is backed by prominent investors like Lightbox Ventures, Samunnati Value Chain Finance, Aspada, FMO Entrepreneurial Development Bank, etc and recently raised \$20 million in a Series C round of funding.

Value Additive Measures

- The startup is focused on increasing farmer income by providing mentorship and guaranteed purchase of produce harvested by small and marginal farmers.
- WayCool's software employs data to forecast consumers' demand.
- It enters into contracts with farmers and directs them to the nearest collection centre, thus, minimizing waste and transportation costs.
- A host of technologies are used to measure soil health, yield strength, and inputs quality to reduce risks for farmers.
- Based on testing the soil, WayCool provides advisory services to farmers and FPOs on the kinds of inputs required for optimal production.
- It also connects farmers with the seed suppliers to assist them in the right sourcing.

CONCLUSION



The Agritech sector is forecasted to have a booming future ahead in India with only 1% of the projected market potential of \$24 billion currently tapped by active businesses. The sector can attain its full potential if all stakeholders, including the government, start-ups, private companies, investors, and farmers, work together to drive change. Indian farmers are vulnerable in comparison to other countries' farmers. However, this situation can be overturned with government assistance and private-sector participation. Investors can play their role by funding young agritech incubatees.

New ventures in the field of Agritech must prioritize gaining farmers' trust, assuring stability and coherence in old and modern techniques. Startups must channel their resources, form meaningful alliances with FPOs, distributors, and major supply chain participants, and demonstrate scalability in their operations while increasing unit economics.

Segments such as precision agriculture, farm management services, etc. are underfunded in India when compared to other parts of the globe. Investment firms, accelerators can provide much-needed support to startups working in these domains.

The demand for agricultural produce in a highly populated country, like India, encourages investments in agriculture and its allied sectors, such as Agritech. With improvements to the supply chain and the introduction of technology, emerging startups have the potential to lift the hitherto stagnant and fragmented agriculture sector in India. Covid-19 has proved to be a catalyst for Agritech startups and with positive policy developments, the sector will only continue to grow from its current status.



REFERENCES

- NASSCOM. (2018). Agritech in India: Maxing India Farm Output. Presentación de PowerPoint (nasscom.in)
- Wizikey. (2020). Buzz Word Analysis 2020: Before COVID-19(BC) to After COVID-19(AC). <https://s3.amazonaws.com/wizikey-files/reportfile-agritech-report-by-wizikeypdf-10307-0jm0v5.pdf>
- NASSCOM. (2019). Report on Agritech In India: Emerging Trends in 2019. <https://nasscom.in/knowledge-center/publications/agritech-india-emerging-trends-2019>
- EY. (2020). Agritech: towards transforming Indian agriculture. https://assets.ey.com/content/dam/ey-sites/ey-com/en_in/topics/start-ups/2020/09/ey-agritech-towards-transforming-indian-agriculture.pdf?download
- Cropin. (2019). Can Agritech Be The Most Potent Driver Of Supply Chain Profitability. <https://www.cropin.com/blogs/can-agritech-be-the-most-potent-driver-of-supply-chain-profitability/>
- Puneet Sethi. (2020, October 22). Can AgriTech startups offering market linkage benefit smaller farmers?. The NewsMinute. Can AgriTech startups offering market linkage benefit smaller farmers? | The News Minute
- Sindhu Kashyap. (2021, January 19). [Funding alert] DeHaat raises \$30M Series C investment led by Prosus Ventures, RTP Global. Yourstory. <https://yourstory.com/2021/01/funding-alert-dehaat-series-c-investment-prosus-rtp-agritech-startups>
- Saurab Kumar. (2020, January 26). Agritech Start-Up DeHaat Helps Farmers Grow and Earn Better. Entrepreneur. <https://www.entrepreneur.com/article/351089>
- Aparajita Choudhury. (2016, August 21). [Startup of the day] How this Patna-based startup is helping farmers save 10-15 pc on agri inputs. Yourstory.<https://yourstory.com/2016/08/green-agrevolution-dehaat>
- Indian farming next big thing: Farming as a service.. PowerPoint Presentation (bain.com)
- Sindhu Kashyap. (2021, February 21): DeHaat acquires B2B SaaS platform FarmGuide DeHaat acquires B2B SaaS platform FarmGuide (yourstory.com)
- Ashok. (2019, March 21.) Five farming-as-a-service startups that are empowering farmers, and making the sector more profitable: <https://yourstory.com/2019/03/faas-agritech-startup-farmers-profitable-6zmc83lyci>