

Blooming Era of Indian Agritech Start-ups

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We are living in a digital world where technology is continuously transforming our lives. All sectors are being digitalised; agriculture is also not left behind. Agriculture and allied sector is the single largest source of livelihood in our India with 80% of marginal and small farmers. For some years Indian agriculture sector is performing less than its potential capacity. Still in this pandemic time, Indian agriculture attains a growth rate of 3.4% in quarter 1 of FY 2021 and proven its resilient nature. With the increase in internet penetration and mobile connections in rural India, technology is widely integrated into all parts of agriculture supply chain and value chain. There are many start-ups working towards easing various activities related to agriculture and for improving standard of living of farmers.

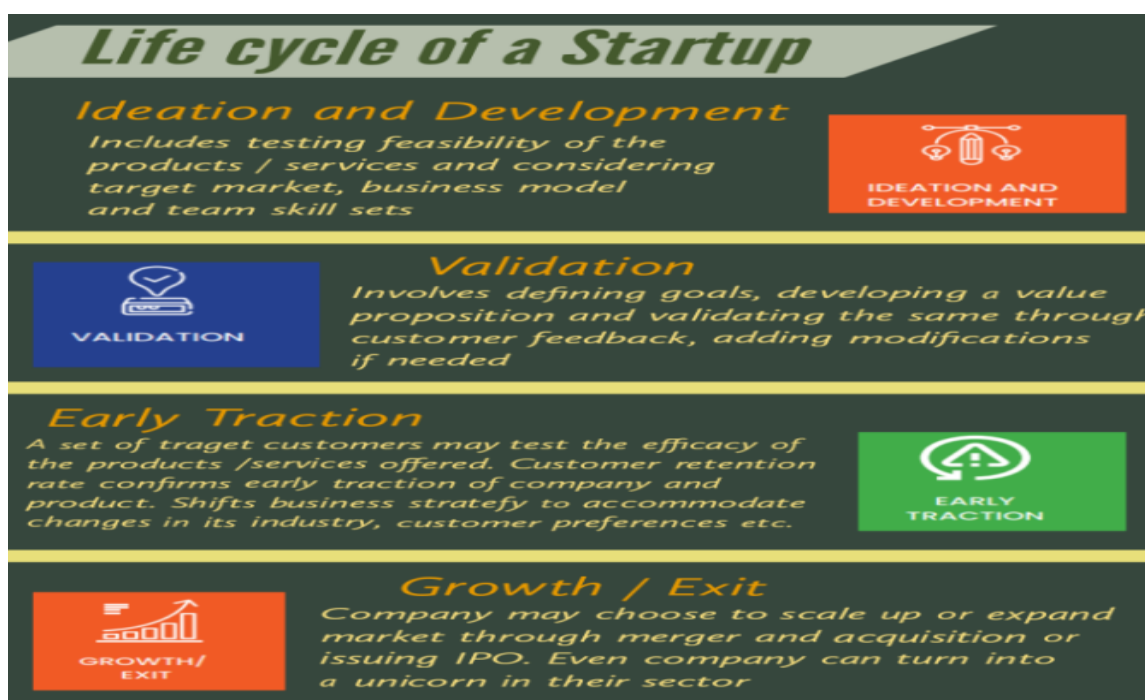
India is the 3rd largest startup ecosystem in the world and Agritech is a prominent segment among startups in India. Agritech is defined as a segment of companies using technology in the field of agriculture leading to increase in productivity, efficiency and output. Agritech can be applied across the agricultural value chain and can be in the form of a product, a service or an application.

According to Department for Promotion of Industry and Internal Trade (DPIIT), any entity fulfilling the following requirements can be considered as a Startup.

- Period of existence and operations should not be exceeding 10 years from the Date of Incorporation
- Incorporated as a Private Limited Company, a Registered Partnership Firm or a Limited Liability Partnership
- Should have an annual turnover not exceeding Rs. 100 crore for any of the financial years since its Incorporation
- Entity should not have been formed by splitting up or reconstructing an already existing business

- Should work towards development or improvement of a product, process or service and/or have scalable business model with high potential for creation of wealth & employment

Lifecycle of start-up



Unicorn

A unicorn is a term used to indicate a privately held startup company with a valuation of over \$1 billion. According Govt. of India in 2019 there are 32 unicorns in India across different sectors. But unfortunately there is no unicorn among agritech startups in India yet.

Agritech Start-ups

According to Nasscom 2019 Report, in India there are around 450 agritech startup working in various sub segments and showing 25% year on year growth. Every 9th agritech startup in the world is from India. This increase showing farmers in India are accepting agri tech solutions and there is an increasing digital penetration with 200+ million active users helping farmers access to technology. There is a 1.7 times increase in average farmer income in last decade enabling farmers to trying new tech solutions. They are working with different focus area like improving market linkage and supply chain efficiency, financing various agricultural activities, improving traceability and real time information dissemination to farmers, giving better access to farmers, farming as a service providing a cyclic business

model for farmers etc. Now a day apart from B2C segments, B2B is also emerging as a key revenue generating segment.

Focus areas

Different startups are focusing on different areas in the agri value chain. Majorly they are prevalent in the sectors like using big data, IoT etc to give farm management solution through crop monitoring, Market linkage model and Supply chain solutions, Farming as a Service providing affordable technology solutions for efficient farming etc.

In farm input sector, companies are working on providing a digital market place and physical linkage to farm inputs. There are startups who are recommending proper amount of farm inputs to be used according to soil health and plant requirement. Another segment is Farming as a Service category, which includes renting of farm equipments, precision agriculture and farm management using geospatial/weather data, IOT, sensors, robotics etc. to improve productivity, also farm mechanization and automation using machinery, tools and robots in seeding, material handling, harvesting, etc. and building farm infrastructures such as greenhouse systems, indoor/outdoor farming, drip irrigation, environmental control such as heating and ventilation etc. In the post production handling and processing stage, quality management and traceability in storage and transportation is very important functions. There are many emerging agri food tech startups also. The current most focused segment in is supply chain technology and output market linkage.

More than 50% of agritech startups offer supply chain solutions like market linkage, better access to inputs etc and more than 50% of funding goes to supply chain start-ups like Ninjacart etc. This business segment helps in reducing post-harvest losses with stand at 4% to 16% of total output. Raising fund is always a challenging task for Indian farmers. Generally farmers do not have good credit history which makes it difficult for them to raise funds through traditional channels. There are some startups who are offering innovative financial products and services for farmers for buying agricultural equipment, farm management etc.

Major Players in each sub segments



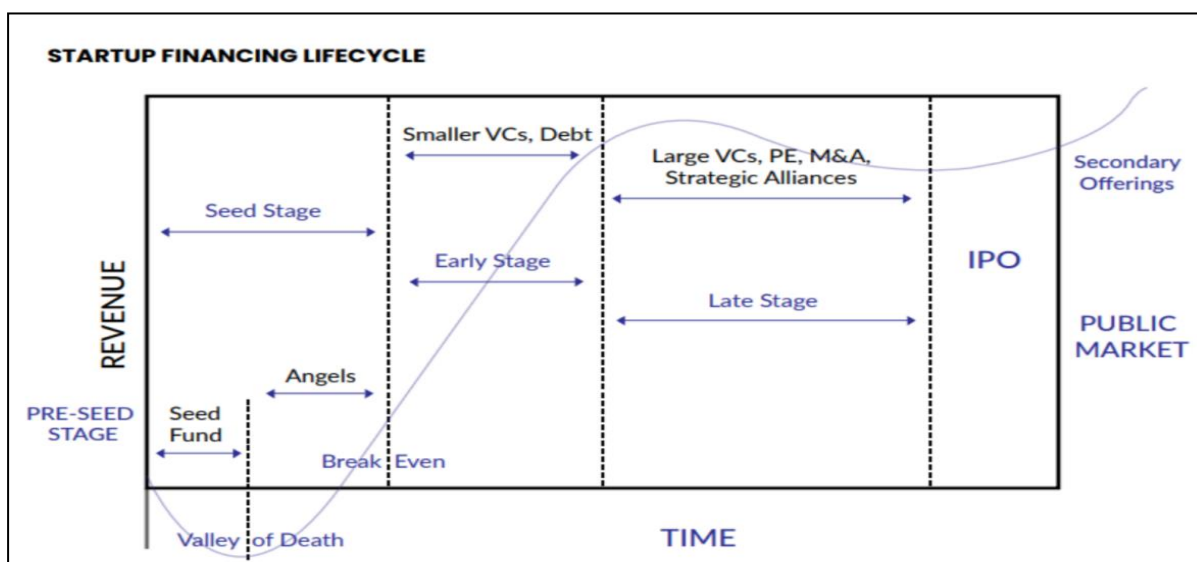
Agritech start-up ecosystem

This includes Startups, Mentors, Investors, Incubators, Accelerators and Government body. Government is making various policies and initiatives through different schemes like Start Up India, Atal Innovation Mission (AIM), Aspire (MSME) Venture Capital Finance Assistance (VCA) Scheme promoted by Small Farmers' Agri-Business Consortium etc. for supporting and promoting agritech startups in our country. Apart from the available schemes and policies, an institutional mechanism has been created for smoother take off and successful implementation. For the proper mentorship and managerial support there are accelerators and incubators working like AGRI UDAAN – Food and Agribusiness Accelerator 2.0, Agri-Tech Startup Accelerator CIE, Hyderabad, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) Food Processing Business Incubator/ Agribusiness Incubator (ABIO), Centre For Innovation, Incubation & Entrepreneurship (CIIE) etc. Accelerators, incubators and mentors identified for the agritech start-up ecosystem, along with the pronounced policy and schemes, need to work in tandem with the start-ups to provide the best technical support and reduce their gestation period.

Funding

Funding is very essential for the growth and well-functioning of a startup. According to Nasscom 2019 Indian agritech startup received USD approximately 248 million funding received till June 2019; a growth of 300% as compared to the previous year. Agritech in India is still in infancy stages with just 1% penetration of the addressable market potential of US\$24b. Increased investment activity in the last few years has helped accelerate growth in the sector. Investment activity in India is dominated by supply chain tech and output market

linkage segment. Key segments that have attracted investor funding include: Supply chain tech and output market linkage, financial services, Market linkage – farm inputs, and Precision agriculture and farm management and the major investors are Aavishkaar, Accel, Ankur Capital, Beenext and Omnivore was the Nexus, Sequoia, Tiger Global etc.



Source: GoI

Top funded Agritech start-ups as of April 2020 (in US \$ million)

Start up	Funding	Segment	Investors
Ninjacart	162.1	Supply chain tech and output market linkage	Tiger Global Management, ABG Capital, Steadview Capital
Sammunati	74.8	Financial services	Elevar Equity, responsAbility, Accel Partners, Nuveen
Waycool	64.9	Supply chain tech and output market linkage	Lightbox, LGT Lightstone Aspada, FMO bank
Agrostar	47.1	Market linkage –farm inputs	Bertelsmann India Investments, Accel, Chiratae Ventures
Jumbotail	25.3	Supply chain tech and output market linkage	Heron Rock, William R Jarvis, Cristina Berta Jones

Source: EY Report August 2020

Way Ahead

According to EY Report 2020, Indian agritech market potential is estimated at approximately US \$ 24 billion with total current market penetration almost 1% with market linkages (output) and financial services contributing approximately 65% of the market potential. So there is huge untapped potential in the coming years. Financial services,

precision agriculture and farm management, and quality management and traceability could drive the next leg of growth in India's agritech. But there are many challenges to address.

Challenges include cost of this technology enabled product and services are sometimes high for large number of users (small and marginal farmers). Some startup is having longer gestation period that affect the return and interest of investors; players should focus on the capacity building across the segments to realize the full potential. Indian government announced several reforms in past few months which are expected to boost private investment in strengthening infrastructure, logistics, processing of agricultural commodities like The Farming Produce Trade and Commerce (Promotion and Facilitation) Ordinance, 2020, Essential Commodities Amendment Act, The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Ordinance, 2020. Proper implementation of these reforms along with public private partnership in this segment can bring out more innovative one stop solution points for farmers. Increasing rate of funding year after year indicates an upcoming unicorn in agritech sector soon in the coming years. Apart from supporting farmers to get high productivity with less cost and higher price realisation for their produce, this segment also creating a large number of job opportunities and helping to achieve the goal of Doubling Farmers Income also.

Hope in the upcoming years, agritech startups transforms our agricultural practices and provides cost effective technology enabled solutions to solve problems faced by Indian farmers and further empower them.