Seminar report

AGRI STARTUPS: STATUS AND PROSPECTS IN INDIA

By

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DECLARATION

I, Aysha Adhina M (2018-11-075) hereby declare that the seminar entitled '**Agri startups:Status and prospects in India** ' has been prepared by me, after going through various references cited at the end and has not copied from any of my fellow students.

Vellanikkara — Aysha Adhina M

25/01/2020 — 2018-11-075

CERTIFICATE

This is to certify that the seminar report entitled **'Agri startups: Status and prospects in India'** has been solely prepared by Aysha Adhina M (2018-11-075) under my guidance and has not been copied from fellow students.

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1. Introduction

The agricultural sector in India employs half of our population and yet, it is one of the most risk involved sectors to be employed in, as it is relied on several uncontrollable factors like weather, market fluctuations and topographical conditions. The problems of Indian agriculture and the plight of farmers have always been the topics for debate for quite some time. Problems like weather risk, lack of information access, land degradation, marketing issues and poor infrastructure have become routine issues with no permanent solutions on offer (Choudhary and Choudhary, 2013).

Enhancing productivity and increasing farm income are the major challenges for the policy makers. It is estimated that Indian farmers get only one third of the final price of a commodity as compared to two third for farmers in many western countries. The Union Budget for 2016-2017 had proposed an ambitious target of doubling farmers' income by 2022.This calls for multi-prolonged strategy and integrated approach.

There have been several attempts to help farmers to improve their farm output and income. However, the sheer size of the target group and the wide geographical spread make any efforts wanting. Huge resources of data and information on latest technology and methods of farming are available with various agencies, both in public and private sectors. The challenge is how to make them accessible to a large number of small farmers. There is a need to evolve cost effective models with vast and fast outreach to deliver service to farmers.

To overcome these problems we need to transform the face of agrarian sector by providing precise information, linking market and eliminating middlemen, by supplying quality inputs on time and value based agriculture (Dinesh, 2017).

Due to its unique characteristics, startups could provide viable solutions to some of the key problems of agriculture and the farming community. This would help farmers to enhance their farm output and income significantly, and could catalyse government's ambitious plan to double farm income by 2022.

Agri startups have been emerged as a 'wind of change' for addressing many of the key challenges in the agriculture sector. These startups are trying to change the landscape of Indian agriculture sector through innovative ideas equipped with modern technologies.

A startup company (startup or start-up) is an entrepreneurial venture which is typically a newly emerged, rapidly-growing business that aims to meet a market need by developing or offering an innovative and extraordinary product, process or services. A startup is usually a company such as a small business, a partnership or an organization deliberately designed to rapidly develop a commercially viable business model (Smolova *et al*., 2017).Entrepreneur Steve Blank and Bob Dorf defines a startup as an "organization formed to search for a repeatable and scalable business model"

An entity shall be considered as a "STARTUP" when it fulfills the following criteria as mentioned below:

- **The start-up must be registered as a Private Company or limited liability partnership**
- **The start-up must not be a product of restructuring**
- **The Startup must not be older than 10 years**
- **Annual turnover of the start-up must not be more Rs. 100 crores**

(Startup India, 2019)

2. Stages of the startup life cycle : (Singh and Kaur, 2017)

2.1.Idea stage**:**

Identify a potential scalable product/service idea for a big enough target market.

2.2.Pre-Seed stage :

This stage is considered to be the starting point where the founder(s) tries to convert the idea into a business opportunity. The founder and certain key personnel are the main employees of the firm. This stage requires a small funding for the research where the viability of an idea is assessed, it is determined whether similar thing has been done before, costs of the product development are determined and a business model is formulated.

2.3. Seed stage :

This stage focuses on orienting the company in the broader marketplace and developing a deeper understanding of what the customer wants and how to refine the product according to their taste. This is one of the early stage where we have a product or service which may be almost complete or be immature. The key aspect of this stage is gaining market traction.

2.4.Growth stage :

Maximizing benefits and facing problems derived from the global dimension in terms of competition that the business has achieved. By this stage the product/ company has to gain market traction. This is the stage at which the company starts exploring new markets and demography.

2.5.Maturity stage :

By this stage startup will be well established. This is the stage of expansion too i.e. both internally and externally. Internal expansion implies increasing the number of employees working for the firm and external expansion in terms of number of target audience.

3. Startups-Status and prospects in India (NASSCOM, 2019)

India's startup ecosystem has become a talking point for the entire world. India, today, proudly stands as the third largest startup ecosystem in the world after the United Nations and the United Kingdom with a total. of 7,700 tech startups in 2018. India currently has more than 49,000 startups, 1500 investors, 250 incubators, and 26 unicorns.

3.1.**Agri startups**

In a bid to double the farmer's income by 2022, the Government of India is continuously looking for ways to boost agricultural production, food processing and marketing avenues through the integration of latest technologies and innovations; thus creating a huge scope for food and agritech startups in the country.

Agriculture is one of the important pillars of the Indian economy. According to a report from FICCI, about 54 percent of Indian population depends directly on agriculture and it accounts for around 17.3 percent of GDP. Agriculture is a crucial sector of our economy and the demand for agricultural products is never expected to reduce.

There is a new wave of budding entrepreneurs and emerging startups in the country that are leading the way to disrupting the agriculture sector in the country. AgriTech is the idea of applying modern technologies to the agricultural sector with a view to enhance efficiency and revenue. The concept extends to any applications, practices, products and services that enhance any aspect of the agricultural process, be it an input function or the output received (Jain, 2016).

Agritech has the potential to address a number of challenges faced by the sector and, subsequently, change the face of the Indian agriculture. Upsurge in the internet usage, increase in smartphone penetration, emergence of startups and various government initiatives in rural areas are facilitating technology adoption in the farm sector (Anand and Raj, 2019).

3.2.**Agri startups : Scenario in India (NASSCOM, 2018)**

A wave of agritech startups in India has come in up last few years to address the problems of Indian agriculture such as supply chain management, use of outdated equipment, improper infrastructure, and farmers unable to access a wider range of markets with ease and enhancing the sector's marketing infrastructure has been developed in India which tackles this issue and has the potential to change the face of Indian agriculture sector and eventually raise farmers' incomes.

- India currently hosts more than 450 startups in agriculture
- Every 9th agri startup in the world is originating from India
- 1700 increase in average farmer's income

More than 50% of the agri startups offer supply chain solutions

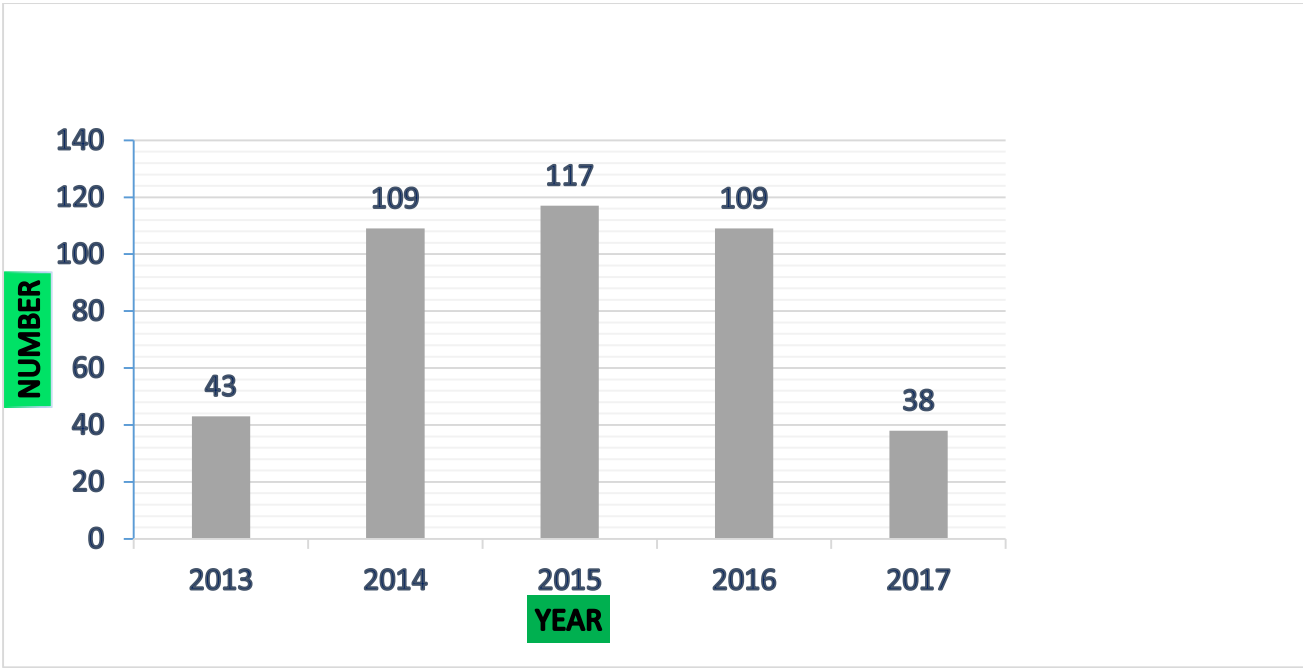

Figure 1.Number of agri startups from 2013-2017

A total of 366 agri-based startups have come up from 2013 to 2017. The perusal of data presented in the Figure revealed that the year 2015 saw the maximum number of startups (117

Nos.) getting started. It was followed by 2016 which also presented a good number of startups (109 Nos.) getting started to answer the concerns associated with Indian agriculture. It is to be noted that more than 50 percent of the startups in the last 5 years got started in year 2015 and 2016. Currently India houses around more than 450 agri startups.

3.3.**State-wise focus on agri start-ups in terms of number 2013-17**

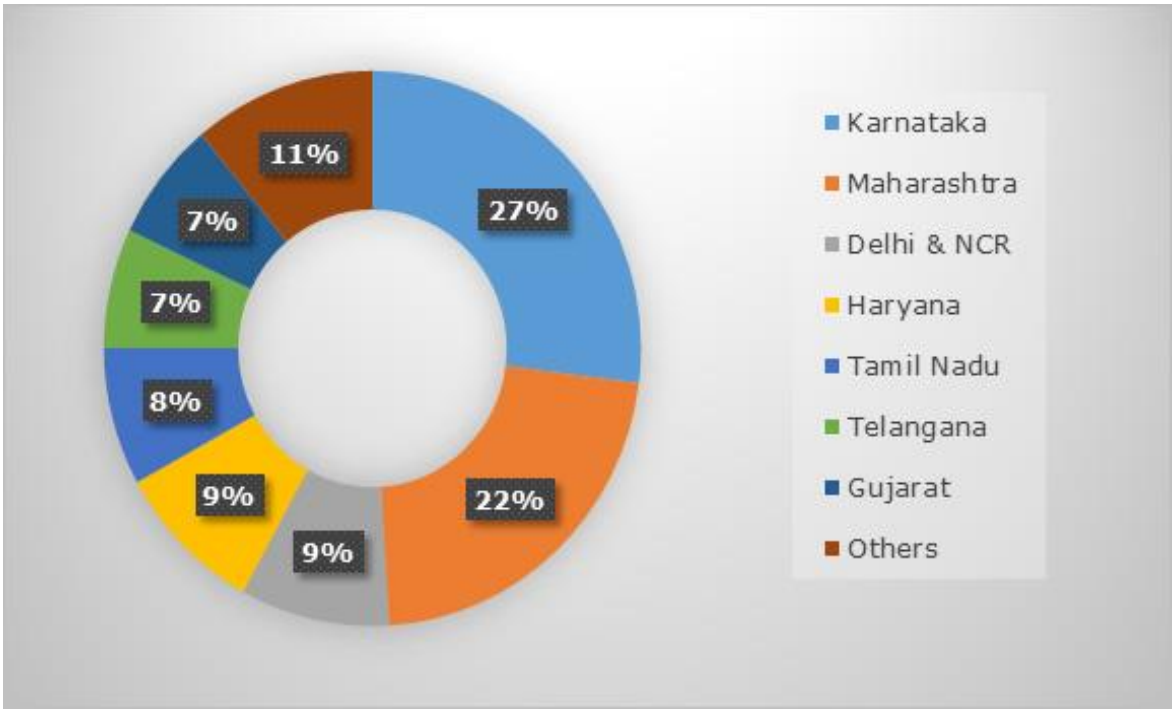

Figure 2. State-wise focus on agri start-ups in terms of number 2013-17

Karnataka is having the highest number of agri startups followed by Maharashtra. It is interesting to note that although Gujarat has only 7 percent of share in agritech startups, it is the "best performing state" in Indian startup ecosystem according to State Startup Ranking Report 2018 published by The Department of Industrial Policy & Promotion (DIPP), Ministry of Commerce, GoI.

4. Agri startups-Opportunities (Dinesh, 2017)

The four most critical links for a farmer to increase his income and productivity would be access to information, inputs, machineries and market. Hence these are actually opportunities for agri-startups.

4.1.Access to information**:**

We are living in a technological era. Modern farming techniques are available with various agencies. i.e. both in public and private sector. But how will it reach large amount of small farmers. There comes the role of agri startups.

4.2.Access to inputs :

For the timely supply of quality inputs of reasonable price. Startups are providing missing links in the agri value chain and delivering efficient products, technologies and services to the farmers on one hand and the consumers on the other hand. From ICT apps to farm automation and from weather forecasting to drone use and from inputs retailing and equipment renting to online vegetable marketing, and from smart poultry and dairy ventures to smart agriculture and from protected cultivation to innovative food processing and packaging, its proliferation of all innovations and technology driven powerful startups set to revolutionize the food and agriculture sector.

4.3.Access to machinery**:**

It is estimated that mechanisation can reduce the cost of cultivation by 20% and increase the crop yield by 20%, which translates into the net gain of 45% to the farmers. This is an opportunity for startups in agriculture.

4.4.Access to market**:**

Now india is moving towards e-NAM platform. So agri startups can link the farmers with this e-NAM platform.

5. Agritech sub-sectors (FICCI, 2018)

5.1.Big Data based Agritech Startups

Big data analytics is making a huge technological impact in the startup community to create a repeatable and scalable business model. Big Data based startups are a newly emerged technology that aims to develop a viable business model to meet a marketplace need or problem. Development of farm-specific, data-driven diagnostics to determine soil and crop health has come up as a big opportunity area. There are also a growing number of big data technologies aimed at improving the efficiency of farming and in supply chain such as drones, sensors, and other IoT technology, and data analytics to provide decision support to farmers

and other players in the supply chain. CropIn, AgRisk, AgNext, Skymet, Stellaps, and Airwood are some of the examples that are working on this theme.

5.2.IoT Enabled Agritech Startups

Smart farming, including high-precision crop control, data collection, and automated farming techniques, will remove inefficiencies and bolster productivity. Information on crop yields, rainfall patterns, pest infestation and soil nutrition can be used to improve farming techniques over time.Low capex for predominantly software based solutions is the key feature for such solutions. Fasal, Fly Bird Innovations are some of the name in this category.

5.3.Startups based on Supply Chain Model/Market Linkage Model

Innovations must be included to help farmers with timely and accurate estimation of sowing and harvesting in sync with consumer demand patterns. Such linkages operate at the two critical ends of the supply chain: input and output models. These models aim to link producers to remunerative sourcing agencies for procurement and to profitable buyers for output sales. The Supply chain model/market linkage model can be further divided into two sub models:

• Upstream (Input) Marketplace model: It matches agri input sellers to farmers upwards in the agricultural value chain. Bighat, AgroHub, Crofarm are some of the startups in this category.

• Downstream (Output) 'Farm-to-Fork' supply chain model: Matching farmers to businesses or retail customers for fresh produce, processed food. Ninjacart, Bharat Bazaar are some of the names in this category.

5.4.Farming-as-a-Service (FaaS) based Startups

Specific farm practices are being identified for provision of technological breakthrough services. Activities such as equipment renting and crop care practices are areas likely to see market traction. FaaS seeks to provide affordable technology solutions for efficient farming. It converts fixed costs into variable costs for farmers, thus making the techniques more affordable for a majority of small farmers. Its services are available on a subscription or pay-per-use basis in three broad categories, which are crucial across the agriculture value chain. "Farming as a service (FaaS)" was introduced to India by a company called EM3 Agri Services, which offers farming services and machinery rentals to farmers on a pay-for-use basis. The concept has

caught on and there are other agriculture equipment leasing and farm services startups in the space including Goldfarm, Ravgo, Oxen Farm Solutions, and FarMart.

5.5.Engineering-led Innovation Startups

Although India is the largest manufacturer of tractors globally, less than 2 percent of the country's farmers use machines. Labour shortage is a reality in rural India and farmers bear the brunt of it. Agritech startups in this category provide cost-effective and smart mechanisation solutions to small and marginal farmers to counter lack of good technology and increasing labour costs. Kamal Kisan, Kheyti, Drip Tech are some of the startups in this category.

5.6.Miscellaneous Agritech Startups (Innovation in Agri Products, Dairy Farming, etc.)

Startups based under this category are providing innovative and unique solutions in developing agro-based products, better dairy, poultry or fish farming methods, providing advisory services, creating one stop solutions for farmers involved in secondary agriculture, etc. Suma Agro, La Veda,Cattle Mettle, Happy Farmer Labs are some of the successful startups in this category.

6. Impact of agri startups on farmers (Reddy, 2019)

Majority of the beneficiary farmers (Almost 54 per cent) had high favorable perception about activities carried out by agricultural digital startups. Around 14 per cent of the beneficiary farmers had less favorable perception whereas around 32 per cent of the beneficiary farmers were having moderate perception levels.

7. Government policies and schemes (Singh and Kaur, 2018)

Government of India under the Startup India initiative is collaborating with various ecosystem stakeholders across different parts of the country to ensure that all the above components are available for entrepreneurs and startups to engage with and utilize to its full potential. The Department of Industrial Policy and Promotion has been actively taking requisite measures to encourage entrepreneurship and promote innovation.

Multiple enabling policies have been implemented to support agri start-ups, their early take off and successful operations. The salient features of important policy interventions are provided below:

7.1.Startup India:

Startup India is a flagship initiative of the Government of India, which aims to build a strong ecosystem for nurturing innovation and start-ups in the country, to drive sustainable economic growth and generate large-scale employment opportunities.

Through this initiative, the government aims to empower start-ups to grow through innovation and design. The Startup India initiative is based on the following three pillars:

•Simplification and handholding

•Funding support and incentives

•Industry-academia partnership and incubation

- Agriculture grand challenge:

A joint initiative by Ministry of Agriculture and Startup India Hub, the programme is designed for budding agri entrepreneurs as well as existing agri startup founders. Early-stage startups can apply for the idea stage whereas others can apply for ready-market stage. Twelve startups from each of the early stage, and ready-market stages (24 in total) would be selected to address the 12 themes (key problems) at the programme. These would be organised across the country to provide networking and mentoring opportunity to agritech startups**.**

7.2.Atal Innovation Mission (AIM):

Atal Innovation Mission (AIM) including Self-Employment and Talent Utilization (SETU) is the Government of India's endeavour to promote a culture of innovation and entrepreneurship. Its objective is to serve as a platform for the promotion of world class innovation hubs, grand challenges, start-up businesses and other self-employment activities, particularly in technology driven areas. It has two core components:

•Entrepreneurship promotion through Self-Employment and Talent Utilization (SETU)

•Innovation promotion: to provide a platform where innovative ideas are generated

AIM provides a grant-in-aid of 10 crore INR to each Atal Incubation Centre for a maximum of five years to cover the capital and operational expenditure cost in running the centre.

7.3.Aspire (MSME):

Aspire has been launched by the Indian government to set up a network of technology and, incubation centres, and to promote start-ups for innovation and entrepreneurship in rural and agriculture-based industry.

7.4.RKVY-RAFTAAR:

During 2017, Rashtriya Krishi Vikas Yojana (RKVY) scheme has been approved for continuation for three years as Remunerative Approaches for Agriculture & Allied Sector Rejuvenation i.e. (RKVY-RAFTAAR) which aims at making the farming as a remunerative economic activity through multi-pronged approach along with holistic development of agriculture and allied sector. This extension aims at making farming a remunerative economic activity through strengthening the farmer's effort, risk mitigation and promoting agri-business entrepreneurship.

7.5. Venture Capital Assistance Scheme:

Venture Capital Finance Assistance (VCA) Scheme promoted by Small Farmers'Agri-Business Consortium**.** Venture Capital Assistance is financial support in the form of an interest free loan provided by SFAC to qualifying projects to meet shortfall in the capital requirement for implementation of the project. This scheme helps in assisting agripreneurs to make investments in setting up agribusiness projects through financial participation.

8. Institutional ecosystem for agri startups (Sharma, 2019)

Startup companies are particularly vulnerable in their early stages of growth since the business environment is generally risk averse and there is no option for testing one's idea due to lack of funds, technical support, networks and infrastructure (Rao, 2018).

Incubators/Accelerators are important partners in the overall startup ecosystem which supports and accelerates successful development of businesses. It provides array of business services, technology and infrastructure support including office space, mentoring and funding (equity or debt) through grants or investor networking opportunities. Accelerators, incubators and mentors identified for the agritech startup 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. Apart from the existing knowledge, digital and financial gaps

in the target segment (i.e. farmers), agritech startups are also marred related to people, process and technology.

8.1.AGRI UDAAN :

AGRI UDAAN is India's 1st food & agribusiness accelerator organised by NAARM, a-IDEA and IIM-A, CIIE in partnership with Caspian Impact Investment and supported by DST. The program focuses on catalysing scale-up stage Food & Agribusiness startups through rigorous mentoring, industry networking and Investor pitching. The impact of AGRI UDAAN includes that 200 agribusiness startups have applied for the accelerator program, 40 startups mentored, end to end capacity for 8 startups in their value chain and 3 out of 8 startups mentored received a total of funding worth ~2.5 Cr INR. Focus Areas includes: Sustainable Inputs, Precision/ Smart Agriculture, Innovative Food Technology, Supply Chain Technology etc. Some shortlisted incubatees from this cohort are Gen Agritech; Delmos Research Pvt Ltd; Agricx; Intello Labs; Smoodies; Jivabhumi; Yukti Harvest; RF Wave technologies; Odaku; Growy.

8.1.**Centre for Innovation Incubation and Entrepreneurship (CIIE):**

CIIE is a collective of interventions in the space of innovation-driven entrepreneurship in India. It has its genesis at the Centre for Innovation Incubation and Entrepreneurship ("Centre"), IIM Ahmedabad - an academic center focused on research in innovation and entrepreneurship. CIIE continues to support the research and learning undertaken by the Centre. The impact of CIIE includes 500 ventures trained, incubate or accelerated, 3000 jobs generated, 100 startups seed funded and many more. It has launched a food and agri-business accelerator in partnership with a-IDEA - the business incubator at National Academy of Agricultural Research Management (NAARM).

8.3.International Crops Research Institute for the Semi-Arid Tropics (ICRISAT):

In december 2002, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), a non-profit organization, joined forces with the Department of Science & Technology (DST), an Indian government agency, to develop an agribusiness incubator (ABI) at ICRISAT. The incubator is supported by DST's National Science and Technology and commercialization of indigenous technologies by providing financial assistance through public-private partnerships. ICRISAT launched Innovation Hub (iHub) to support agricultural

tech entrepreneurs, scientists and technology experts can collaborate to innovate cutting edge ideas across the whole agriculture value chain

8.2.**Agri-Tech Startup Accelerator CIE, Hyderabad:**

IIIT-Hyderabad and National Institute of Agricultural Extension Management (MANAGE) have signed an MOU to start an Agri tech startup accelerator programme. The Agri Tech Startup Accelerator Programme will identify,support and facilitate idea-stage enterprises using latest technologies and innovations to solve agriculture specific issues faced in India.

8.5. Kerala Startup Mission (KSUM)

Kerala Startup Mission (KSUM, formerly known as Technopark TBI) is the central agency of the Government of Kerala for entrepreneurship development and incubation activities in Kerala, India. KSUM was primarily founded to undertake the planning, establishment, and management of the Technology Business Incubator (TBI), a startup accelerator in Kerala, to promote technology-based entrepreneurship activities, and to create the infrastructure and environment required to support high-technology-based businesses.

9. Case study in India (Anand and Raj, 2019)

Case study1 : Ninjacart

Founded : 2015

Founders : Ashok Prakash, Ashutosh Vikram, Kartheeswaran K, Sharath Loganathan, Thirukumaran Nagarajan, Vasu Devan

Headquarters : Bengaluru, Karnataka

Product Name : Ninjacart Mobile App

Startup Description

Ninjacart is a B2B agri-marketing platform that connects farmers to businesses. Ninjacart is India's largest agri marketing platform, solving one of the toughest supply chain problems through technology. It connects vegetables and fruits farmers directly with businesses. At one end, Ninjacart helps farmers get better prices and deal with consistent demand and on another end, It helps retailers to source fresh vegetables at competitive prices directly from farmers. Ninjacart does this effectively at lower cost, better speed and larger scale using integrated supply chain powered by technology, data science, and infrastructure and logistics network. The Ninjacart supplychain operation involves the following major stages: Forecasting, Pricing, Farmer Harvesting, Collection Centers, Fulfillment Centre, Distribution Centers and Delivery to Retailers.

Active Regions: Bengaluru, Chennai and Hyderabad

Impact : 3000 farmers, distribution to 4000 retailers, movement of 300 tonnes of fresh produce on a daily basis in less than 12 hours

10.Way forward

With more than 350 start-ups and over 300 million USD in funding in 2016, the Indian agri start-up sector is witnessing sustained growth. Technologies in the field of supply chain, farm data analytics, and infrastructure and information platforms are preferred by investors. AI-based smart solutions, advanced farm analytics, and increased usage of new technologies like drones would define the next growth phase of the sector.

This is an opportune time to integrate different domains of knowledge and skills in agri-innovation. In addition to fresh farm produce, there are lucrative opportunities in processed products such as pickles, freeze drying, IQF as well as traditional processing methods. This calls for effective post-harvest management infrastructure such as storage, preservation, cold

chain and refrigerated transportation clubbed with efficient technology solutions across the agri-value chains.

Smartphones powered by affordable mobile broadband networks are helping to improve the workflow of farms and dairies. This opens the door to new pay-per-use business models and innovation stacks, connecting the farm to the fridge and fork. More than 25% of farmers in India today have access to smartphones. There is a need to develop create mobile training programmes to educate farmers and help them adapt to and adopt new technological advancements.

10.1.Favourable policy environment: Other Indian states need to come up with favorable policies to attract start-ups and investors similar to Karnataka (home to 70% of agritech startups).

10.2.Increased and timely support to early stage startups: Globally, agri start-ups have come a long way both in terms of investment and technology. Increased and timely support to early stage start-ups will boost the sector further in India.

10.3.Capacity building: More than 25% of farmers in India today have access to smartphones. There is a need to develop mobile training programmes to educate farmers and help them adapt and adopt to new technological advancements.

10.4.Funding and collaboration support: Funding in the Indian agritech sector is 10% of global funding but start-ups struggle to scale up. There is a need for large companies to effectively collaborate with startups.

10.5.Agritech-focused incubators and grants: There is a need for the government to help set up agritech-focused incubators and grants. Also, academia should encourage more entrepreneurs to focus on this growing sector.

10.6.Emphasis on corporate and government accelerators: Only 9% of all funding in the last 5 years was focused on growth-stage start-ups. This emphasises the need for corporate and government accelerators to help agritech start-ups grow to the next level.

11. Conclusion

Contributing over 58% of the rural population, agriculture forms the backbone of Indian economy. Agriculture development is an overriding priority in India’s development strategy. This clearly indicates why agri startups have to be encouraged. Agri start-ups are potential

human capital in the Indian agricultural economy and certainly the right partners for innovation -led agriculture growth. It's an opportune time to bring them together and inspire them to devise appropriate solutions for agribusiness issues. By equipping modern technologies agri startup can compensate many of the limitations faced by the agriculture sector.

Innovations by agri start-ups in form of products, services or applications can be a meaningful solution across the agricultural value chain. Therefore, the efficient use of this talent pool will be a key driver for improving competitiveness in the sector. Measures by the Government of India to develop start-ups have yielded impressive results; however, to realise their true potential, concentrated efforts by the right mix of partners and with clear objectives will help in achieving faster results

In order to make agri start-ups successful, it is crucial to enable seamless hybridisation of relevant technology by building a promising 'new-age distribution model'. We need to develop a new way for the farmer to buy products and get information as well as credit on one unified platform. Merely providing content on an app is not going to solve the issues of the farming community.

India has already built a strong name for itself in the global start-up community. It's time to make agri start-ups successful and propel India forward as a leader in the agri technology sector too.

12.Discussion:

1. Any examples of Kerala based agri-startups?

   The growth of agri startups in kerala is still in its nascent stage. Seed agritech, neighbourhood Agri Business Solutions Pvt. Ltd. (NABS) are some of the examples for agri startups in Kerala.

2. What are the sources of startup funding?

   - ❖ Personal Investment & FFF (Family, Friends & Fools) : A founder will often invest personal cash balances into a startup. This is a cheap form of finance and it is readily available. Investing personal savings maximizes the control of the founder over the business.
   - ❖ Angel investors : An angel investor is an affluent individual who provides capital for a business startup, usually in exchange for convertible debt or ownership equity. Angel investors typically use their own money, unlike venture capitalists who take care of pooled money from many other investors and place them in a strategically managed fund.
   - ❖ Crowdfunding : Crowfunding is a method of raising small amounts of capital from a large number of individuals to finance a new business venture. This approach taps into the collective efforts of a large pool of individuals primarily online via social media and crowdfunding platforms and leverages their networks for greater reach and exposure.
   - ❖ Venture Capital Firms : Venture capital is financing that investors provide to startup companies and small businesses that are believed to have long-term growth potential. Venture capital generally comes from well-off investors, investment banks and any other financial institutions. However, it does not always take just a monetary form; it can be provided in the form of technical or managerial expertise.
   - ❖ Private Equity Firms : A private equity firm is an investment management company that provides financial backing and makes investments in the private equity of startup or operating companies through a variety of loosely affiliated investment strategies including leveraged buyout, venture capital, and growth capital. Firms can keep the holdings, or sell these stakes to private investors, institutional investors (government and pension funds), and hedge funds.

3. Who is an angel investor?

   An angel investor is an affluent individual who provides capital for a business startup, usually in exchange for convertible debt or ownership equity. Angel investors typically use their own money, unlike venture capitalists who take care of pooled money from many other investors and place them in a strategically managed fund.

4. What is the difference between incubators and accelerators?

   Incubators support startups entering the beginning stages of building their company. The startups possess an idea to bring to the marketplace, but no business model and direction for transition from innovative idea to reality. While accelerators advance the growth of existing companies with an idea and business model.

5. What is meant by ‘limited liability’?

   The condition by which shareholders are legally responsible for the debts of a company only to the extent of the nominal value of their shares.

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Department of Agricultural Extension

EXTN 591: Master's Seminar

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Agri startups: Status and prospects in India

Abstract

Agriculture forms one of the most risk prone sectors of Indian economy as it relies on several unpredictable factors like weather, market fluctuations and undulated topography. One of the important ways to boost up this sector is through the incorporation of location specific technologies and suitable business models. A stream of educated youth with innovative ideas can transform agriculture into sustainable business enterprises.

In this context, agri startups have emerged as a crucial intervention to address the key challenges. The startups are trying to change the landscape of Indian agriculture sector through innovative ideas equipped with modern technologies. India currently hosts more than 450 startups in the agriculture sector. While taking the state wise contribution, Karnataka is having the highest number of agri startups in India (NASSCOM, 2018).

Based on the solutions offered in the value chain, agri startups can be broadly categorized into those based on Big Data, IoT (Internet of Things), Farming as a Service, Supply chain/Market linkage model, Engineering led innovation and Miscellaneous startups (FICCI, 2018).

There is enormous potential waiting for startups to find out innovative ideas to build business models, thereby addressing the critical gaps among farmers to access information, quality inputs, farm machinery and markets (Dinesh, 2017). It is reported that 54% of the beneficiary farmers had high favorable perception, followed by 32% of the respondents with moderately favorable perception and 14% of the farmers had less favorable perception towards the performance of agricultural digital startups (Reddy, 2019).

In promoting agri startups both the central and state Governments play a vital role. Government of India has launched several schemes and policies to promote startups in India such as Startup India, Atal Innovation Mission, Venture Capital Assistance Scheme (Singh and Kaur, 2017). Such schemes along with well recognized accelerators, incubators and mentors have been working in tandem to provide the best technical support and reduce the gestation period of agri startups.

Recently Kerala Startup Mission in collaboration with TiE (The Indus Entrepreneurs) Kerala, organized a conference on 'Agripreneur 2019' to foster agripreneurship among educated unemployed youth. Its slogan "Run your Farm as an Enterprise" caught the imagination of many young small and medium level farmers.

However, there exists many constraints in taking the gained momentum forward. The major inherent constraints reported include low land holding size, long gestation period, low return on investment, low affordability of target groups, skill and knowledge gap among farmers. With timely, precise and effective interventions from the Government the available entrepreneurial ecosystem can be improved (FICCI, 2018).

References

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