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Agri Start-Ups: Challenges, Structural Setup, Funding Outlook and Future Projections in India

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SUMMARY

Agriculture startups are gearing up in all diverse fields whether it is technology, service or consultancy views. Today's situation of COVID19 crisis have change the scenario of startups its viability, funding, innovativeness and demand driven outlook. The article gives us encouraging picture about the challenges, structural setup, funding outlook and future projections. Agribusiness ecosystem improvement and encouraging agri-startups through Innovation vehicle i.e; Famer Producer organization's will lead to farmers economic growth and prosperity. Famer Producer organisations, Upcoming agribusiness startups knowledge partners and Agribusiness incubators must work together to come with agri-startups which are innovative, viable and lead to welfare of stakeholders i.e; the farmers. The Government must come up with schemes under RKVY-RAFTAR, as such, Farmer producer companies must be given opportunity to involve in this agri-startups scenario, and further, Viable Farmers producer companies must be treated as Agribusiness incubators. The cycle of commercial to ecological sustainability will be completed if famers will produce and market their products in innovative ways, ie; Agri-startups and leads to welfare of the farming community align with other communities too.

INTRODUCTION

By the year 2050, annual foodgrain production would need to grow to 333 million tonnes. Despite the fact that the contribution of key food grains in acreage terms in India is 15%, the production contribution is mere 8.7%. This indicates that the use of innovative technology is necessary to meet the forecasted demand in a sustainable manner and move Indian agriculture along the growth path. It's time to seek the right partnerships that add value through innovations and achieve shared goals through combined efforts. 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. 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 (FICCI 2018).

Nationally, a total of 366 agri-based start-ups have come up from 2013 to 2017 with more than 50% of the start-ups in the last 5 years started in 2015 and 2016. It is also to be noted that more than 90% of all funding is focused on seed stage and early stage start-ups.

Experts Views Regarding Agri startups (Challenges and Means)

There are five key areas where agri-startups should look to innovate. Increasing productivity, decreasing cost of production, transfer of real prices at higher rate to the producers, risk management and sustainability describing every stage of this to vast agriculture to innovative value platform. These are the areas where disruption is required at outmost by

innovator minds in agriculture fields. There must be a robust policy at the government level to nurture agri-startups and there is a need to look at policy restrictions too. Building a database related to all these aspects of agriculture and standardisation is required to encourage agribusiness start-ups (Lonkar 2019).

Neelkamal Darbari, MD, Small Farmers' Agribusiness Consortium (SFAC), Government of India, said, "The role of agri start-ups comes at the pre-harvest stage by providing value addition to the farmers." highlighting the role of farmer's producer organisations (FPO). Darbari said that FPOs were still struggling to do business in traditional ways. The country has around 5,000 FPOs and they can act as a vehicle for innovation. "The interface of technology through FPO mechanism is yet to see some kind of traction. Hemendra Mathur, Chairman, FICCI Taskforce on Agri Start-ups & Venture Partner, Bharat Innovation Fund, stressed upon the need for start-ups to provide innovative solutions to the farmers to increase their incomes. Highlighting the opportunities in agri innovations, he said, "We need to build capacity so that innovations can reach farmers. We can unlock value to the tune of US$ 10 billion through agri innovations and the value that gets unlocked goes to farmers. (Mustaquim 2019).

TR Kesavan, Chairman, FICCI National Agriculture Committee and Group President, Tractors and Farm Equipment (TAFE) said, "Past few years have witnessed some positive changes with agri start-ups and particularly secondary agribusiness models that are defining rural economics, entering the sector and introducing innovations at different stages of agriculture value chain. If India is to realise the vision of becoming a global powerhouse in agriculture sector, it needs stronger partnerships which are pivotal for rural community-based empowerment." Pravesh Sharma, Adviser, FICCI & Co-founder and CEO, Kamatan Farm Tech said that the most critical part in agri start-ups is funding. The role of government is to set rules, policies and it can become a funder of funds (Mustaquim 2019).

Many agriculture start-ups focus on technology to increase farmers income. Further providing better solutions to farmers by disseminating useful information that will facilitate the maximization of farmers profits. Currently, agri-tech business has a global market share of $1.1 billion. The figures are expected to reach $3 billion by 2025. However, their success depends on the supportive Indian government's policies. (Crop In) according to Market Report on Precision Farming (2020). A start-up, as defined by the Startup India scheme, is an entity that's registered as a private limited company, partnership firm or a limited liability partnership in India. It has a maximum vintage of 7 years, 10 years for the biotechnology sector, from the date of its incorporation. Its turnover for any of the financial years should not exceed INR 25 Crores. Lastly, it must be working towards innovation, development or improvement of products or processes or services, or should be a scalable business model with a high potential of employment generation or wealth creation. Provided an entity qualifies all the specified criteria, it opens the doorway to a host of benefits. These range from tax exemption on capital gains for investors, tax exemptions to start-ups for the initial 3 years, favourable public procurement norms, and easier access to funds. By extension of both these definitions, FPOs are akin to agri-start ups. FPOs should thus be given access to similar if not the same benefits, as specified above. The case here is not for constant handholding, but for providing support in the initial years and progressively introducing regulatory compliances as the FPO matures.

Agribusiness Startups Structural Organisation under RKVY-RAFTAR in India

The Rashtriya Krishi Vikas Yojna (RKVY) is an important scheme of the Government of India, Ministry of Agriculture and Farmers' Welfare (MoA&FW), aimed at strengthening infrastructure in agriculture and allied areas. RKVY-RAFTAAR supports agribusiness incubation by tapping innovations and technologies for venture creation in agriculture. In this process, incubation facilities and expertise already available with participating academic,

technical, management and R&D institutions in the country shall be utilized on an individual or collective basis to harness synergies. The existing institutional agribusiness incubators would be strengthened on a need basis by providing grants-in-aid.

Innovation and Agri-Entrepreneurship programme under, Rashtriya Krishi Vikas Yojana - Remunerative Approaches for Agriculture allied sector Rejuvenation (RKVY-RAFTAR) under Department of Agriculture and Cooperation &Farmers Welfare have framed an organizational structure of agribusiness startups in India. At, highest level, five eminent agricultural based organizations are selected as knowledge partners/ Implementation support mechanism, which work out with selected Pan India agribusiness incubator's selected in this programme by the DC &FW. The five knowledge partners are as follows,

1.National Institute of Agricultural Marketing, NIAM, Jaipur
2.National Institute of Extension and Management, MANAGE, Hyderabad
3.Indian Agriculture Research Instiute, IARI, Pusa, New Delhi
4.University of Agricultural Sciences, UAS, Dharwad
5.Assam Agricultural University, AAU, Assam.

The Knowledge partners act as autonomous organizations which support, mentor, train and direct the other 24 agricultural organizations (Regional-Agribusiness Incubators) institutions all over India for the startups in Agriculture.

Programmes and Funding under this Agribusiness Incubators

Knowledge Partners Agribusiness Incubators and Handholding Agribusiness Incubators run two agri-stratups programmes those are, Agripreneurship Orientation Programme" and "Startup Agri-Business Incubation Programme" under Rashtriya Krishi Vikas Yojana- Remunerative Approaches for Agriculture and Allied sector Rejuvenation (RKVY-RAFTAAR) sponsored by DC&FW.

1.Agri-preneurship Orientation Program (Idea Stage) (Free Training program of 2 months, Rs.10, 000 stipend per month + Grant-in-aid up to Rs. 5 lakhs)
2.Start-up Agri-Business Incubation Program (Prototype, MVP (Marginal value product stage)) (Free Training program of 2 months + Grant-in-aid up to Rs. 25 lakhs)

Future Projections for Startups from Commercially Sustainable to Ecologically Sustainable

There are some ways and means of Pre-Production, Production and Post-Production stages for innovation and start-ups in Agriculture and environment sector

1.Pre-production stage business innovation and start-ups

- Input Supply-bio fertilizers, fertilizers, seeds, bio- pesticides, bio-stimulants, pesticides, PGPRs
- Quality Control
- Innovate new efficient inputs
- Assist Supply Chain
- Production of bio-agents
- App development

2.Production Stage Businesses Innovation and start-ups

- Field monitoring- Image based monitoring and prediction-camera and drones.
- Innovate new diagnostic techniques for nutrient deficiency and disease detection-Image, ELISA, Chip based molecular techniques.
- Sensors for applications of inputs based on physiological conditions of the plant, i.e; plant stress.
- Vertical production systems
- Robotic farming

- Pest and disease forecasting models
- Green house/poly house Smart Horticulture and climate resilient technologies/practisces
- Apiculture
- Organic farming
- Agro-tourism
- New food sources

3. Post- Production Stage Businesses Opportunities

- Supply chain management
- Low cost storage structure including cold chain
- Shelf life enhancement
- Value addition
- Product quality monitoring
- Low calorie food
- Food fortification
- New food ingredients

4. Environment friendly innovation and start-ups

- Valorization of industrial waste
- Reducing pollution techno serves
- Clean and Green technologies
- Creating ways to create environment awareness
- Biodegradable materials
- Smart eco-friendly materials

CONCLUSION

The above challenges and ways to determine the crucial steps towards Agribusiness ecosystem improvement and encouraging agri-startups through Innovation vehicle i.e; Famer Producer organization's will lead to farmers economic growth and prosperity. The agribusiness ecosystem can be made unique by strengthening the knowledge partners selected by Government under RKVY-RAFTAR programme.

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