A STUDY ON STATUS OF AGRICULTURAL STARTUPS IN HARYANA STATE OF INDIA

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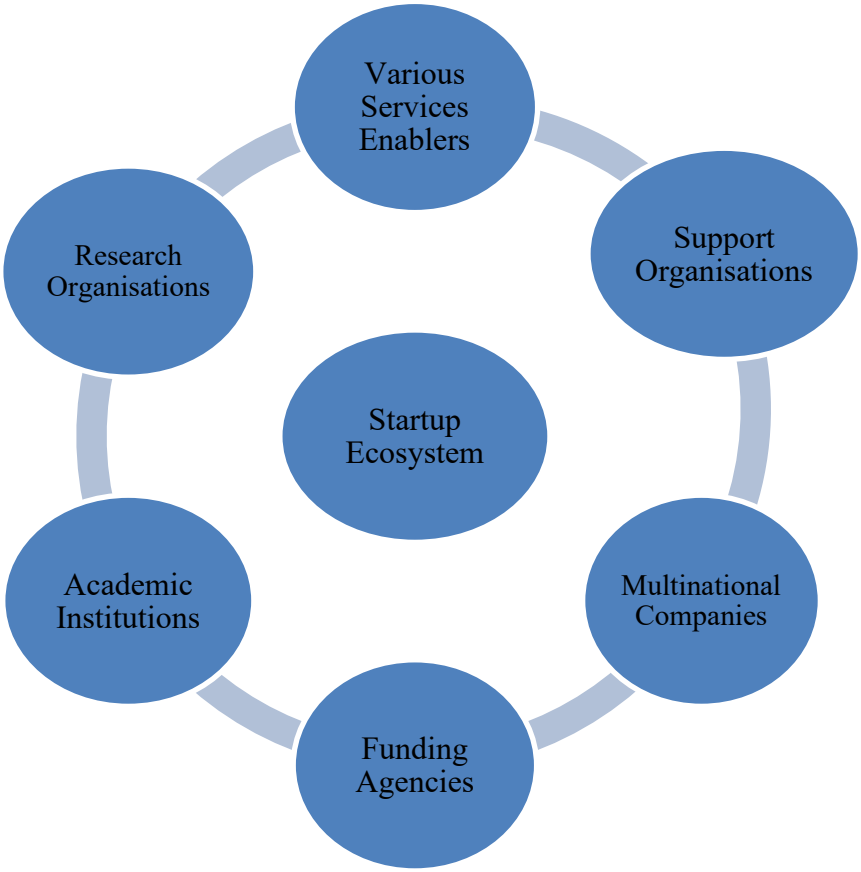
ABSTRACT
A startup is a new company or firm formed to search for a repeatable and scalable business model for uniquely solving the existing problems. In India startups are flourishing in almost all the sectors of the Indian economy. But India being an agrarian economy, the role of agricultural startups is very prominent. The present study attempts to focus on evaluating the agricultural startups in Haryana state graduated by the agriculture incubation center located at Chaudhary Charan Singh Haryana Agriculture University, Hisar. The study investigates the income and employment generation of these startups and also probes into the problems faced by them. The study is mainly based on primary data. The paper also highlights the role of incubation centers in the development of agricultural startups. The study gives an idea of different types of agricultural startups working in different fields and the opportunities and challenges faced by them. Therefore, the study is very helpful for the researchers, agriculture sector enterprises, the government and policymakers to design the state-specific policies for the growth of agricultural startups.
Keywords: Startups, Agriculture, Haryana, Incubation Center, Agri-tech, Ecosystem.

Introduction

Small businesses are very important to generate employment and income by enhancing production and reducing income equalities in the economy. Startups have played a significant role in the growth of developed economies and have proved as engines of growth, development, and industrialization. Startups are the companies that are revolutionizing in various fields with new ideas and innovations. Startups create ripples of effects on the socio-economic condition of the economy. A startup is a small innovative company that has to pass through various stages of business namely ideation, conceptualization, validation, scaling up and growth stage to become a successful organization. Figure 1, shows five stages of the growth of startup companies starting from idea formulation to achieving growth stage.

Source: Self-generated by the researcher
Figure 1: Life Cycle of a Startup

New startup companies can flourish in a conducive ecosystem consisting of support organizations, big companies, universities, funding organizations and services providers. A favorable ecosystem helps and nurtures a startup company from ideation stage to achieving growth stage.



Source: Self-generated by the researcher
Figure 2: Startup Ecosystem

Figure 2, shows that a conducive startup ecosystem consists of academic institutions, mentors, funding organizations, MNCs, service enablers and supporting organizations.

The Indian startup ecosystem has evolved very fast in the last few years. India has one of the largest startup ecosystems in the world catering to approximately 70,000 startups spanning from the IT sector to the marketing and services sector (www.startupindia.gov.in)**.** Startups are providing innovative solutions to various problems existing in many sectors of the Indian economy.

As per the government of India (2019): "Any company which is working towards innovation, development or commercialization of the new product, services driven by technology or intellectual would be considered startup up to 10 years from the date of its incorporation as well as financial turnover should not increase more than 100 crores in any of the financial years." Startups are working almost in all sectors of the economy. The focus of this research paper is mainly to evaluate the startups in the agriculture sector. At the time of independence, agriculture was backward and was carried out for subsistence purposes only. But to make agriculture commercially viable some fundamental reforms were introduced. The new agricultural reforms included the use of high-yielding varieties of seeds, chemicals, fertilizers, and technology, which has increased agricultural production significantly. Since the introduction of the green revolution, Indian agriculture has made continuous progress. But till now the percentage contribution of the agriculture sector to the gross value added is just twenty percent whereas it employs forty-two percent of people in the country. So, the growth of the agriculture sector is a necessity because approximately half of the Indian population depends on it for their livelihood. But Indian agriculture is still facing lots of challenges.

The main challenges faced by the Indian agriculture sector are:

- In the Indian agricultural scenario, the yield per hectare of the crop is very low in comparison to global standards.
- An inefficient water management system is a major problem and agricultural production still depends on rainfall.

- The Indian agriculture sector still uses traditional means of production and lacks technology intensity in sowing and harvesting of the crop.
- The lack of organized marketing channels is a major hurdle in the marketing of agricultural products.
- The existence of middlemen between the farmer and end-users reduces agricultural profitability.
- Insufficient transportation and storage systems for food-grains lead to grain loss. New and profitable cultivations are limited and routine crop patterns are followed.
- The lack of standardization of crops is a major problem in agriculture marketing.
- Limited participation in allied activities like vermi-compost, horticulture and floriculture etc. reduces agricultural profits.

After analysing these issues in the context of Indian agriculture, it can be said that there are so many unexplored fields and unresolved problems that are yet to be addressed. In this context there lies ample opportunities for agri-business startups in the Indian economy.

Startups working in agriculture sectors are known as agri-tech startups. Agri-tech startups apply modern technologies to the agriculture sector to enhance production, efficiency, and profitability. These startups deal with new technologies, innovations and capabilities that change how food and farm products are grown, harvested, packaged, stored, transported, processed, and sold, making the agricultural process from field to the end user more efficient, sustainable and safe (Vijayan, Shiv kumar, 2020). According to Nasscom report (2019), there were more than 450 agricultural startups in the Indian economy in 2019, which are growing at a rate of twenty percent year on year. Nasscom report (2021), shows that the agri-tech startup sector has shown upward growth trends in terms of number and amount of funds. Total funding gained by these startups was 650 million dollars in the year 2021, which was 3.5 times more than funding received in 2019. According to Tracxn 2022, there are 1557 agri-tech startups in the Indian economy in the year 2022. These startups are around two percent of the total startups working in the economy. Popular startups that are emerging in the agri-tech sector are in the field of agri-financing, market linkages for farm produce, drone-based precision farming, quality management and traceability and farm automation etc. The main flourishing agri-tech startups in the Indian economy are De-haat, Fresh to Home Food, Agrostar, Absolute, Arya, Frazzo, FarMart, Otipy, etc. This paper is specifically focused on the functioning of agriculture business startups graduated by the agriculture business incubation center (ABIC) located at Chaudhary Charan Singh Haryana Agriculture University, Hisar. Problems faced by these entrepreneurs in the way of startup development are also discussed in detail.

Review of Literature

India is mainly an agrarian economy and most of the population is directly dependent on agriculture for their livelihood. Agricultural startups are creating innovations in Indian agriculture and are generating income and employment. So, it becomes important to study the impact of agricultural startups on the lives of the people of the country. The review of literature reveals that several studies are conducted on the contribution of agricultural startups working at national as well international level. Different studies are conducted on agricultural startups in various states of India also but these studies are mainly based on the secondary data sources. Yadav, Sharma (2017) explored the innovations by government or private-run startups which solved the various issues related to agricultural productivity. The results of the study revealed that the innovation by the agricultural startups made a drastic change in Indian agriculture. Nasscom (2018) explored the agricultural startup scenario of the Indian economy from 2013-2017. The study found that agricultural startups are unevenly spread across the country and funding is also unevenly distributed across agricultural startups. It was also found that 50% of agri-tech startups were working in Karnataka and Maharashtra states in India. Karnataka was the only state which attracted 67% of total funding.

Ohlan, Raj (2020) conducted the primary data based study in Maharashtra state and found that agriculture startups were solving the issues of the agriculture sector and were generating employment. Surliya, Beniwa & Maan (2021) examined the issues and challenges faced by the agriculture startups in India. Study found that main problems faced by the startups were lack of funds, lack of subject matter experts and lack of technological knowledge among India farmers. Wadwa (2022) highlighted that agri-startups with novel technologies such as Artificial Intelligence (AI), Machine Learning (ML) and data analytics are significantly improving their farming methods. After reviewing the literature on agriculture startups it is found that mainly studies are based on secondary data sources and in Haryana there is no comprehensive primary data based study which analyzed the different aspects of agricultural startups. Therefore, to fill the research gap the present study is mainly focused on varied aspects of working of agricultural startups in Haryana.

Objectives of the Study

The main objectives of this study are as follows:

- To know the status of agriculture startups in India.
- To analyse the income and employment generation of agri-business startups in Haryana.
- To know the role played by the incubation centers in the growth of agricultural startups.
- To highlight the problems faced by agri-business startups.

Research Methodology

The study is based on both primary as well as on secondary data sources. The secondary data has been collected from various government reports, NEDO report, reports of department for the promotion of industrial trade, startup Haryana site, etc.

The primary data has been collected from the startups working in agriculture and allied activities in various cities of Haryana. The agricultural startups of the agri-business incubation center located at Chaudhary Charan Singh Haryana Agriculture University, Hisar, has been selected for this study. It is one of Asia's biggest agricultural universities. A sample of thirty startups using a simple random sampling method was selected for the study. As per the need of the study, the descriptive research method has been adopted.

For the study, a semi-structured questionnaire was prepared with closed and open-ended questions. To gain overall knowledge of the working of startups, a semi-structured questionnaire was filled out from the mentors working in the incubation centers also. Data was collected during the time period of January 2022 to February 2022.

Secondary Data Analysis

Status of Agricultural Startups in India

The Indian agriculture sector is on the development path. New startups are entering the agricultural sector and contributing to the growth. Table 3, represents the status of agricultural startups in the Indian economy.

Number of Startups in Agriculture sector (2013)	43
Number of Startups in Agriculture Sector (2020)	1000
Compound Annual Growth Rate of Agricultural Startups	56.75%
Number of Agricultural Startups getting benefits through Government Schemes	64
Total Funds raised by Startups (2013-2020)	$566mn
Soonicorns (companies which have potential to become unicorn)	1

Source: NEDO (2021), https://inc42.com/reports/the-state-of-indian-startup-ecosystem-report-2021

Table 1: Number of Agricultural Startups in India

Table 1, shows that startups in the agriculture sector have grown manifolds. There were only forty-three startups in the country in 2013 and this number increased to one thousand in 2020. The compound annual growth rate has been calculated for 7 years, which shows that agricultural startups are growing more than fifty-six percent per annum. Agri-tech startups are working on the development of various farm-related activities. Startups have raised $566mn funds in the time period of 2013-2022.

In India agricultural startups are mainly working in five sectors namely Supply chain, Infrastructural Development, Financial Sectors, Farm data and Analytics, and Information platforms (Nasscom 2018, Ohlan & Raj 2020, Wadhwa 2022**).** Table 2, defines the different working models and functioning of agricultural startups in the Indian agriculture sector.

Types of Startups	**Working Models of Startups**	**Functions of Startups**	**Names of Startups**
Supply Chain	E-Distributor Listing Platforms Marketplace	Bringing improvement in crop procurement. Effective storage. Direct connectivity to the customer. Transfer and delivery for better market linkage.	FarmerFZ, Crofarm, NinjaCart, KrishiHub
Infrastructural Development	Growing Systems and Components Aquaponics Hydroponics	Growing residue and pesticides free crops. Implementation of scientific techniques by providing critical information at appropriate times and	Ecozen Solution, Rise Hydroponics, Saptkrish, Barton Breeze

	Drip Irrigation	regular monitoring.	
Financial Sector	Payments Lending Revenue Sharing	Peer to peer lending platforms between the farmer. Providing credits and removing informal dependency.	Samunity, Jai Kissan, Farmart
Farm Data and Analytics	Integrated Platforms Remote Sensing Farm Mapping Farm Management Field Operation	Using technology like AI, ML to improve yields. Improve resilience and production. Give updates on whether a fruit and vegetable is under-ripe or ready to consume.	Fasal, Intellolabs, Aqgromalin, Agdhi
Information Platforms	Information Dissemination	Providing an end to end platform for farmers to source information on weather, soil, crops, buy farm inputs and sell products.	Farmlead
Miscellaneous	Dairy farming Fish farming	These are traditional businesses which are registering themselves as startups.	Country Delight, Stellapps, Milk Mantra FreshR

Source: Self-generated by the researcher by using different reports and research studies

Table 2: Working Models of Agricultural Startups in India

The government of India is also promoting agri-tech startups or innovation in agriculture by giving incentives through different schemes. Table 3, represents the various schemes that are providing finance to agricultural startups.

Name of the Scheme	Department	Funds Provided	Purpose of the Grant
Rastriya Krishi Vikas Yojna	Department of Agriculture and Farmers Welfare	Assistance up to Rs 25 lakh	Revival and development of agri-entrepreneurship
Nidhi Prayas Scheme	Department of Science and technology	Assistance up to Rs 10 lakh	To support agri-entrepreneurs
Biotechnology Ignition Grant	Department of Biotechnology	Assistance up to Rs 50 lakh	Research projects funded in biotechnology sector
Venture Capital Assistance Scheme	Small Farmers Agri-Business Consortium	Interest free loans to qualifying projects	Agricultural development loans
Startup India Seed Fund Scheme	Department for Promotion of Industry and Internal Trade	Assistance up to Rs 20-50 lakh	Proof of concept, prototype development, product trials, market entry and commercialization

Source: Surliya (2021)

Table 3: Government Schemes to Support Agricultural Startups

The government is mainly promoting agri-startups to create a non-farm source of income, processing farm waste, ensuring profitable prices, and reducing cultivation costs (Nasscom, 2018). Therefore, the government of India is making efforts to promote startups in the agriculture sector. Table 4, shows the geographical distribution of agricultural startups and total funding received by them in the time period of 2013-2017.

State	Agri-Startups (%)	Total funding received (%)
Karnataka	27	67
Maharashtra	22	7
NCR	9	11
Telangana	7	7
Other	35*	8

* includes Haryana 9%, Tamil Nadu 8%, Gujarat 7% and other states 11% Source: Nasscom, (2018), https://nasscom.in/product/111

Table 4: State-wise Split and Funds Received by Agri-Startups for the Period 2013-2017

Table 4, represents that Maharashtra and Karnataka states alone account for approximately fifty percent of the total agri-tech startups initiated during the period 2013-2017. It is also shown that during this period two third of the total funding was received by Karnataka state only. So the growth of agricultural startups is regionally biased in India. Distribution of funds is also skewed. Haryana state had only 9% of total agricultural startups during this time period.

Table 5, shows the top ten agricultural startups in India for the time period Jan. 2020 - Jan. 2022. These startups have sound business models and are earning good profits.

Startups	Business Model	Funding (in $Mn)	Revenue Generation (in Rs crore)
NinjaCart	B2B Supply Chain	145	755
Waycool	B2B Supply Chain	117	382
Dehaat	Farm Services and Product	115	358
Absolute	Agri-bioscience	100	28.4
Agrostar	Farm Advisory	70	Not disclosed
Arya	Farm Gate Storage	60	196
Fraazo	D2C Grocery Delivery	50	20.95
Farmart	Saas-Sood supply	32	0.99
Otipy	Farm to Fork	32	26.16
Reshamandi	B2B Silk Marketplace	30	20.5

Source: Upadhyay, Pathak (2022)

Table 5: Top Ten Agricultural Startups in India from January 2020 to January 2022

Table 5, shows the funding and revenue generation of the top ten agricultural startups running in the different agriculture sectors. Perusal of the table shows that these agricultural startups are generating huge revenue and the NinjaCart startup involved in the B2B supply chain has earned seven hundred fifty-five crores in the time period of two years from 2020 to 2022. The other startups namely Waycool, Dehaat, Absolute etc. are also flourishing well and generating good revenue. Correlation coefficient between funding and revenue generation is 0.8. It implies that total funding in the form of investment and revenue generation are highly positively correlated.

Primary Data Analysis

Study of Agri-Business Startups of ABIC, Chaudhary Charan Singh Haryana Agriculture University, Hisar

Startups are innovative businesses therefore need technical, infrastructural, and financial support in the initial phases of growth to develop a basic idea into a business model. Incubation centers play a crucial role in the development and nurturing of startups. Incubation centers are the supporting organizations and help in the growth of startups at various stages of development. These incubators are playing an important role in the growth of the Indian startup ecosystem. The main facilities given by the incubation center are linkages between research institutions, inventors, innovators, capital investors and promotes the techno-entrepreneurial culture amongst the incubate startups. Startups are guided in design and development of the products. Infrastructure facilities like electricity, water, and internet services are provided at a highly subsidized rate. Professional services and hands-on management is provided.

The study found that the Agri-Business Incubation center situated at Chaudhary Charan Singh Haryana Agriculture University, Hisar was established on 25th May 2019 in a public-private partnership mode. There were eighty-nine mentors in the incubation center. The incubation center was also connected with two accelerators Villgro and Pusa Krishi.

Primary data is collected from 30 startups of this incubation center and results of the primary study are discussed below. Table 6, shows the demographic characteristics of these agricultural startup respondents.

Variables	Categories	Number of Respondents
Gender	Male	22 (73.3)
	Female	8(26.35)
Age	Below 20 years	1(3.3)
	20-30	9 (30)
	30-40	12(40)
	40-50	6(20)
	Above 50	2(6.6)
Education	Up to Diploma	1(3.3)
	Graduation	17 (56)
	Post-Graduation	10(33.3)
	Above Post- Graduation	2(6)
Awareness about the Startup India Scheme	Aware	16(53.3)
	Not Aware	14 (46.7)

Note: The figures given in parentheses indicate percentages of respondents
Source: Field Survey (2022)

Table 6: Demographic Characteristics of the Respondents

Table 6, shows the socio-economic and personal profile of the respondents. The table revealed that majority of the respondents are males. It is shown that forty percent of the respondents are in 30-40 years of age group. Startup entrepreneurs are well educated and approximately ninety-five percent of them are at least graduates. It is also found that fifty percent of the respondents are aware of startup India scheme run by the government of India. But still, approximately forty-six percent of respondents are unaware of the scheme. Therefore, there is a need to spread awareness of the Startup India Programme among the people. These startups are working in different agricultural sectors. These agricultural activities carried out by agricultural startups are shown in Table

Sectors	Activities carried out by the Agricultural Startups
Organic fish farming	Doing business in organic fishing.
	Fish stocking and breeding.
	Organic inputs for fish feeding.
Collective Farming	Food processing units formed at village level.
	Opening of organic Agro-Food industry.
Organic Farming	Production of amla ladoo, amla chutney, mushroom production, organic precision farming, organic input product.
Natural Products Production	Making natural honey and producing cordecyp militaris.
Bio-Waste Management	Recycling the waste products.
	Making an eco-friendly pencil/pen.
	Manufacturing cloth bags and making natural products.
Technology Development	Technology development to enhance the shelf life of food, Establishment of cold pressed wooden ghani, technology web application, IOT, mobile applications.

Source: Field Survey, (2022)

Table 7: Agricultural Activities carried out by the Agricultural Startups

Table 7, shows that fisheries, collective farming, natural product production, bio-waste management and technology development are major businesses run by startups in the agriculture sector. Table 8, represents the economic analysis of agricultural startups in Haryana. The level of investment, income, and employment generation by the startups have been elaborated.

Nature of the Activities	Number of Startups	Total Investments	Annual Income	Employment (Number)	Income Investment Ratio
Production of cordyceps militaris	2	2 Cr	25 lakh	5	1:8
Fish farming	4	90 lakh	15 lakh	25	1:6
Marketing and availability of finance	2	90 lakh	10 lakh	18	1:9
Organic agro-food industry	1	60 lakh	1.5 Cr	16	1: 0.4
Feed processing	1	30 lakh	15 lakh	10`	1:0.5
Mushroom production	3	25 lakh	70 lakh	7	1: 0.35
Green technology	1	15 lakh	8 lakh	5	1:1.8
Organic precision farming	3	10 lakh	16 lakh	7	1: 0.6
Technology cold pressed, wooden ghani	1	5 lakh	1 lakh	1	1:5
Technology, web application, IOT, mobile application	1	5 lakh	9 lakh	2	1:0.5
Automation sales	2	4 lakh	9 lakh	1	1: 0.4
Drip irrigation, sprinkler	1	3 lakh	5 lakh	1	1: 0.6
Organic farm input	2	3 lakh	6 lakh	11	1: 0.5
Beekeeping and honey processing	1	58,000	7 lakh	8	1:0.08
Marketing and trading the organic food	1	55,000	2 lakh	1	1:0.2
Food tech unit	1	80, 000	10 lakh	11	1: 0.8
Sports and clinical nutrition sale	1	30,000	Not yet	1	-
Marketing the nutritional food online	1	5,000	3 lakh	2	1: 0.016
Naturopathy products	1	25,000	1.25 lakh	5	1: 0.2

Sources: Field Survey (2022)

Table 8: Economic Analysis of Agricultural Startups

Table 8, reveals the economic analysis of agricultural startups. The thirty startups are involved in nineteen different agricultural and allied activities with investment ranging between 1 lakh to 2 crores per startup. It is found that fish farming, marketing, organic agro-food industry, feed processing and mushroom production are some of the high-income and employment-generating activities. Income and Investment ratios of all these startups are calculated and it is found that the startups who were selling the agricultural products through online platforms like marketing the nutritional food online and marketing and trading the organic food were earning high incomes with limited amount of the investments but employment generation is very less in these type of ventures because of the more technology intermediation. Whereas startups working in allied activities like bee keeping, mushroom production, feed processing and organic agro food industries were also generating more income in comparison to investments and employment generation is very high in these startups. Startups working in production of cordyceps militaris, fish farming, marketing and availability of finance, green technology and technology cold pressed, wooden ghani have invested huge funds in the initial phases of the startups development. In the initial phases of these businesses revenue generation is less but there are high prospects of income generation in the long term. Only the startups with sound financial position can invest in these types of ventures due to the high business set-up costs. Funds play a pivotal role in the growth of a business. Table 9, shows the various sources of funds of agricultural startups.

Sources of Funds	Number of Startups
Bootstrapping	18 (60)
Startup India Seed Funding	2 (6.6)
Angel Funding	2 (6.6)
Venture Capital	0
Rashtriya Krishi Vikas Yojna	4 (13)
Grant Through other Scheme	4 (13)
Total	30

Note: The figures given in parentheses indicate percentages of respondents.
Sources: Field Survey, (2022)

Table 9: Sources of Funds of Agricultural Startups

Table 9, shows the funding sources of agricultural startups and it is found that bootstrapping (self-funds or funds from family and friends) is the main source of funding for the startups. Whereas only two firms out of thirty were getting startup India seed funding. Twenty-six percent of the agricultural startups are getting funds assistance from other government schemes like Rashtriya Krishi Vikas Yojna, Nidhi Prayas Scheme and Udaan etc. Therefore, funding through the startup India scheme is limited.

Problems faced by Agricultural Startups of Agri-Business Incubation Center, Hisar

The discussion with the agri-tech startups and the mentors presented a large number of problems faced by agricultural startups.

- The main problem is that farmers working in the agriculture sector don't have a clear vision of business scaling. They don't know how to design and develop the product.
- Marketing the product is the biggest challenge for agricultural entrepreneurs working especially in rural backgrounds. The product marketing startups are running in big cities and they are out of reach of small farmers.
- The study found that it was very difficult to obtain funding from the government schemes because it requires so many formalities which are very difficult to comply with.
- Some respondents are not aware of the startup India programme.
- Some farmers are producing organic products like amla and honey but because of the use of organic inputs cost of production and prices increase.
- Some agricultural products are very low priced like organic amla, ladoo and chutneys etc. but the online selling expenses increase the cost of these products. Some businesses in the agriculture sectors have failed due to this cost hiking.
- Incubation centers provide deep knowledge to the people as the mentors are experts in their field. So, catching up with them for knowledge grasping is the biggest problem for grass root level farmers.
- Due to Covid-pandemic, almost all the educational sessions by the mentors were run online. So there was a lack of field training.
- Mainly all the benefits of the startup India program are reaped by educated people, who already have a business background.
- Small farmers or domesticated ladies are facing a lot of challenges related to knowledge, finance, technology, marketing, and skilled personnel etc.
- The discussion with the mentors highlighted that the process of registering a startup on startup India portal is very cumbersome and needs simplification.
- The discussion with the startups revealed that the incubation center was helping them in the growth of their business at various stages of business and the field knowledge given by the incubation center was extremely helpful in the business establishment. But the duration of training given by the incubation center was of two months only, which is a very short period to learn new knowledge. So this period of incubation must be increased as per the need of the incubates.

Findings of the Study

The main findings of the study are as follows:

- Around fifty percent of the total startups are concentrated in Karnataka and Maharashtra states. So the government should focus on promoting agricultural startups in all parts of the country.
- The study found that startups are mainly run by people with sound academic background. More than 95% of startup entrepreneurs in the study are graduates in different disciplines. But the benefits of the scheme must reach the less educated people also.
- Just fifty percent of the respondents were aware of the Startup India Scheme. So there is a need for awareness programmes and boot camps in the society.

- Startups in the agriculture sector were mainly dominated by male members. Around seventy-three percent of the startup owners are males. Females must be made aware of the agricultural businesses.
- It is found that startups are positively contributing to the state economy and generating income and employment.
- It is revealed that fish farming, marketing, organic agro-food industry, feed processing and mushroom production are some of the high-income and employment-generating activities.
- It is found that marketing startups in the agricultural sector are generating high incomes in comparison to total investments but their contribution in employment generation is limited.
- Bootstrapping was the main source of funding for the startups. Sixty percent of the total respondents were using bootstrapping as a source of finance. Government must extend financial support to the agri-entrepreneurs.
- The study found that very few farmers were getting funds through the startup India scheme. The financial support under the startup India scheme must be improved.
- It was found that training provided by incubation centers is of very short duration. Training period must be extended to provide thorough knowledge of the production process.

Conclusions

The study concludes that startups are the engines of economic growth. Agricultural startups are applying modern technologies and promoting indigenous innovations to enhance production, efficiency, and profitability in the agriculture sector. These startups are positively contributing to income and employment generation. But the study highlights that the Indian agriculture sector is facing numerous problems. There are so many unexplored fields and unresolved problems that are yet to be addressed. In this context there lies ample opportunities for agri-business startups in the Indian economy.

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