

Agripreneurship and Farm Prosperity

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It is the beginning of a new era in agriculture with the meteoric rise of Agricultural Entrepreneurship or Agripreneurship promising to pump adrenalin into farming and usher in prosperity. Agripreneurship is considered as a one-stop solution for many economic problems like poverty, urbanisation, unemployment and economic development. Agriculture with its diversity is now seen as an enterprise with good profit which is possible by changing the way it has been practiced. The major concern is proper utilisation of the existing resources. Women farmers need to be made aware, motivated, and trained about these diverse agripreneurial opportunities to adopt them as their alternate livelihood options.

Winds of transition are sweeping India's agriculture sector. Once seen as a low-tech industry with limited dynamics, the agriculture sector is today adapting to the market enhanced ecological regulations, new necessities for product quality, chain management, food security, sustainability, and so on. These alterations have cleared the way for new participants, innovations, and portfolio entrepreneurs—in short a different rhythm is being played out in India's agriculture sector once known for its traditional biases amidst a laid back fervour. It is the beginning of a new era in agriculture with the meteoric rise of

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Agripreneurship plays various roles in the growth and development of the national economy. Entrepreneurship development increases the income level and employment opportunities in rural as well as urban areas. Most importantly, agripreneurship helps induce productivity gains of smallholder farmers while integrating them into local, national and international markets. Finally, agripreneurship is not only an opportunity but



also a necessity for improving the production and profitability of the agriculture sector. Increasing Indian farmers' income wouldn't be possible without an innovative and vibrant food and agriculture industrial complex. Entrepreneurs solving issues that both farmers and consumers face are critical in realising India's potential as a dominant food and agri player globally.

Scope of Agripreneurship

In India, these days a combination of excess technology, emergence of micro financing, liberalised government rules, awareness and training programmes on agri and allied sectors and a growing tribe of open minded qualified professionals who are looking for independent and self-employment opportunities are a sure shot recipe for the rise of agripreneurs. The country offers an enviable array of choices for such entrepreneurs that include: dairying, sericulture, goat and rabbit rearing, floriculture, fisheries, shrimp farming, sheep rearing, vegetable cultivation, nursery farming, farm forestry and so on. Other areas where opportunities exist include setting up of Agro Produce Processing Units or mills that process agriculture produces like rice and pulses; Agro Produce Manufacturing Units that produce products based on agricultural produce from raw materials or byproducts of sugar factories, bakery, straw board units etc; Agro-Inputs Manufacturing Units—that produces goods either for mechanisation like agricultural implements; Agro Service Centres—these include workshops and service centre for repairing and serving the agricultural implement used in agriculture; establishing of Agri-Enterprises like apiaries, feed processing units, seed processing units, mushroom production units, commercial vermi compost units, goat rearing farms, organic vegetable and fruits retail outlet, bamboo plantation and jatropha cultivation. For small entrepreneurs at the village level there are several opportunities in areas like biopesticides, soil amendments, biofertilisers, vermicompost, growing exotic species of vegetables, fruits, ornamentals, production of cattle feed concentrate, etc.

Rise of Agri-startups

Also, it is pertinent to include here a new breed of entrepreneurs who are changing the complexion of entrepreneurship in India—the Agri-startups. India, with around 118.7 million

farmers, which accounts for more than half of its population, depends on agriculture as its primary source of income. However, the use of technology in the agricultural industry has been limited in India. As a result, the agriculture industry in India contributes merely 17-18 percent to its GDP. However, in the last couple of years, India has seen a rise in the number of agritech start-ups that are not only making technology more accessible but also helping farmers improve their lives. Some of the top agritech startups helping Indian farmers are: Ninjacart—solves the fresh agricultural produce supply chain problem for the farmers and the retailers; WayCool—uses technology to control end-to-end agriculture supply chain right from farming inputs to last-mile distribution to help the farmers to sell their produce through multiple distribution channels; AgroStar—helps farmers by providing real-time advice from experts on how to manage their crops and boost their yield; DeHaat—offers agricultural services like access to agricultural inputs like seeds and fertilisers at affordable prices, personalised assistance, soil testing, weather reports, micro-finance, and insurance; Stellapps—helps dairy farmers and cooperatives to maximise their profits by digitising and optimising milk procurement and coldchain management through its IoT-based SmartMoo platform; Bijak—enables traders and wholesalers to discover new suppliers, maintain ledgers, make payments, and access working capital through its app to scale their business; CropIn Technology—offers real-time weather updates, ability to manage farm activities, and predicts crop yields to minimise risk and yield better produce; EM3 AgriServices— helps small farmers who can't afford to buy expensive farming technology to rent specialisation machines to boost productivity at cheaper costs; Intello Labs— uses technologies like computer vision and deep learning to help farmers, retailers and exporters to assess the quality of their fruits and vegetables. Aibono— uses soil sensors, IoT devices and imaging drones to collect farm data and transfers it onto their cloud platform which uses predictive analytics to help the farmers make smart agriculture decisions in order to increase their produce.

Some Success Stories of Agripreneurs

- Soibam S. Singh, a post graduate diploma holder in fisheries science opted for self-

employment through integrated organic fish farming instead of settling down in a job. He has done tremendous work in integrating fish farming with Piggery and Dairy farming, through which he enhanced fish production by adopting the latest scientific techniques of pisciculture. Soibam is also the Secretary of High Tech Integrated Fish Farming Society of Manipur. He has chosen conserving the rare species of Pengba fish as his Goal.

- Vijay Bharath, founder of 'Mobile Agricultural School and Services'(MASS), provides a platform to farmers of remote villages in Jharkhand and Bihar to access, understand and adopt modern methods of agriculture and use inputs which will take them one rung above on the ladder of agro-economic development. All this is done by providing services to farmers at their doorsteps in their villages, thanks to the conceptualisation and efforts put in by Bharath, an agripeneur trained at the "Society for Rural Industrialisation" Ranchi.
- Dr. Gajendrakumar Kantilal Bamania, a 33-year old Veterinary Doctor from Ahmedabad provides Cattle Artificial Insemination (AI) Programme which includes: herd testing services; supply of AI accessories like tags, sheath, gloves and other farm products; advises in selection of dairy bulls, heifers and cows; offers complete consultancy on establishment of scientific dairy farms.
- K.N. Sharma, an Agriculture Post Graduate engaged in contract farming of Gherkin crop that enables contract farmers access to technology, credit and marketing.
- Innasimuthu's Green Madurai firm is raising a wide variety of plant saplings and selling suitable bio-manure. The firm also provides consultancy on landscaping and gardening and is equipped with a soil testing lab for testing soil fertility and water quality standards.
- Haritam Horti Agri-Clinic established in Vijayawada city by R. Suresh Kumar in 2003 provides technical support to farmers of Krishna, Guntur and West Godavari districts in soil and water testing and agronomical practices besides promoting bio-pesticides at a reasonable cost.

Women in Agripeneurship

Agriculture, which provides employment to nearly 50 percent of the total population has a whopping 70 percent as women farmers. These women farmers act as primary food producers, dedicate maximum time to agriculture but remain unreported in statistics and to channelise and empower them women agripeneurship is a medium to make them self-sufficient, economically stable, independent, and socio-culturally more active. "They need to be motivated—one of the ways is by organising them into cooperatives, Self Help Groups (SHGs), providing them land ownership, attracting them towards Micro, Small and Medium sized enterprises (MSMEs) and a proactive policy to make agriculture more attractive and remunerative for them", says Dr. P. Chandra Shekara, Director General, MANAGE [National Institute of Agricultural Extension Management (MANAGE), Hyderabad—an autonomous organisation under the Ministry of Agriculture & Farmers Welfare].

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Role of Agripeneurs and Prosperity of the Farmers

Agriculture used to be treated as just an activity of land tilling and crop harvesting but spread of waste

land, depleting natural resources, ever increasing migration to urban areas, have necessitated redesigning of agricultural activities. Applying the thought and practice of entrepreneurship in the field of agriculture generates a wide range of economic benefits like – increased agri productivity, creation of new business ventures, new Jobs, innovative products and services, development of rural areas and increased wealth. Traditional farmers who are unaware of scientific agriculture and effective agri management systems are unable to cope up with delaying monsoons, drought, crop debts, fake seeds and shortage of fertiliser, as a result resort to committing suicide. The managerial, technical and innovative skills of entrepreneurship applied in the field of agriculture may yield positive results and such well-trained agripreneurs may become role models to all such disheartened farmers. Agripreneurship notable helps :

- in inducing productivity gains of smallholder farmers and integrating them into local, national and international markets.
- in reducing food costs, supply uncertainties and improving the diets of the rural and urban poor in the country.
- in generating growth, increasing and diversifying income, and providing entrepreneurial opportunities in both rural and urban areas.

In recent years, there has been a considerable emphasis on crop diversification towards horticulture (fruits, vegetables, ornamental crops, medicinal and aromatic plants, and spices), plantation crops (coconut,

cashew nuts, and cocoa) and allied activities. Creation of critical infrastructure for cold storage, refrigerated transportation, rapid transit, grading, processing, packaging and quality control measures open major opportunities for investment. India is the second highest fruits and vegetables producer in the world with cold storage facilities available only for a small portion of the produce. The country is also the second highest producer of milk with a smaller cold storage and sixth largest producer of fish and fifth largest producer of eggs in the world. Investments in cold chains requiring storing surplus of meat and poultry products throws huge opportunities for investors and entrepreneurs. Thus, Indian agriculture needs to propel its agribusiness through agripreneurship development.



GOOD NEWS

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Agri drones & payload-carrying drones are the fund's primary focus



India needs agripreneurship to generate innovative solutions to some of the critical agricultural issues such as precision farming techniques to increase crops productivity. Secondly, the input costs can be minimised by incorporating data-driven decision making and streamlining efficiency in the farm supply chain. Thirdly, the colossal crop wastages must be reduced through new entrepreneurial ventures that can improve the supply chain infrastructure and bring in innovative storage facilities as mentioned earlier. Presently, crops worth USD14 billion are wasted each year in India.

Indian agripreneurs could adopt some of the successful tech ventures in agriculture like integrated Remote Sensing (that can provide bio-geophysical data for agricultural crop monitoring and agromet advisory services), Geographic Information System (GIS), Internet of Things. IoT-based smart farming is a system built for monitoring crop field with the help of sensors that provide data on temperature, soil moisture, light and humidity. Such measures will help in monitoring crop health, automating

irrigation systems, etc., and applying analytics can improve farm productivity, minimise farm wastage and thereby increase farmers' income. These technologies can also be used to map the cropping pattern, cropping intensity, drought assessment and better understand the agronomics of crops.

Agripreneurship thus transforms agriculture into an attractive and profitable venture as it is evident that there is a tremendous scope for agripreneurship in India. It can be tapped via effective management of agri elements such as – soil, seed, water and market needs. The agriculture sector has a large potential to contribute to the national income while at the same time providing direct employment and income to the numerically larger and vulnerable section of the society—in this regard agripreneurship is not only an opportunity but also a necessity for improving the production and profitability in agriculture and allied sector.

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