

Rural entrepreneurs must... for Aatm Nirbhar Bharat



The Agriculture sector provides food for 1.3 million people in India. It also supports over 60 percent of the population for their livelihood and plays a crucial role in sustainable growth of the country's economy. Traditionally, agriculture has been seen as a low-tech industry with limited dynamics, largely controlled by a huge number of small families. Over the years, more attention has been paid to improving crop yield rather than looking at it as a money-making module.

Many farmers are forced to migrate to cities for their livelihood in the wake of lower remuneration, unbearable crop losses on accounts of volatile market dynamics or unpredictable weather conditions. Creating more industries in urban areas for migrating farmers cannot be a solution to the economic problems being faced by the rural poor. There is

need to bring about transformational changes in the agriculture sector by making farmers change their outlook toward farming. They need to consider their farms to be businesses. Entrepreneurship should be encouraged in agriculture. Innovation will help farmers improve crop productivity and ensure more profit. It shall also create new avenues of employment generation for rural youth.



Dr Bajaj is a fitness enthusiast and runs marathons

Agri-tech entrepreneurship involves entrepreneurial skills, models and innovative ideas to solve problems in the farm sector. It shall increase the profitability of the farming business with sustainable, community-oriented, directly marketed farm practices. This is not simply an opportunity. It is an imperative to achieve the Modi government's target of doubling farm income by 2022 through the integration of latest technologies and innovations.

The central government has invited private entrepreneurship in farming and allied sectors while announcing mega public investment for the sector last year. There is great potential for private investment in the agriculture sector, which shall give it a boost. Over the past two decades, the corporate spectrum has seen a number of entrepreneurial activities, in which farmers were assisted to get more yield through technological

interventions and product aid. All these offerings include access to quality seeds, fertilisers, better irrigation system, farm tools and equipment. India needs innovation in the field of agriculture so that we provide the right seeds and fertilisers to the farmers to increase agricultural productivity, as pointed out by Niti Aayog CEO Amitabh Kant.

India accounts for over 450 start-ups in the agriculture space. According to a NASSCOM report, these start-ups raised nearly USD 248 million till June 2019. Agriculture entrepreneurship can help tackle the challenges related to information dissemination, farm management, capital availability, mechanisation of farm and the agriculture supply chain. There are successful examples of transformation of agriculture practices with the help of technology in the US, China, Israel. These countries have demonstrated that assortment of technology like hybrid seeds, precision farming, big data analytics, artificial intelligence, geo-tagging & satellite monitoring, mobile apps and farm management software can be applied at every stage in the agriculture process to increase productivity and farm incomes, says a report by National Institute of Agricultural Extension Management, part of the Agriculture Ministry.

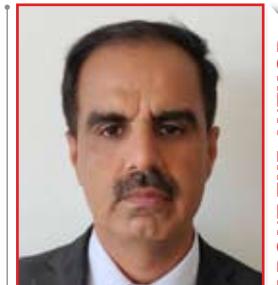
Opportunities for agri-tech start-ups
There are a number of opportunities for agri-tech start-ups to solve key farm-related challenges. These range from providing a fair price to the farmer to the creation of yield estimation models that can be used by farmers to bolster productivity by removing inefficiencies. Indian agriculture has multiple concerns. Agri-tech start-ups can provide solutions for all of them.

- We need to build systems for data-driven diagnostics for determination of soil and crop health to enhance farm productivity.
- We need to create new technology to find alternatives to pesticides and insecticides to prevent pre-harvest losses. These are concerns that call for innovations on a large scale.
- Other attractive areas for agri-tech start-ups include agriculture tools and equipment renting and easy access to

certified micronutrients, seeds through online interface.

- In north India, stubble burning is a big menace. Ways to find alternate usage of paddy straw can be one of the important solutions we are seeking urgently.
- Innovations to inform farmers about timely and accurate estimation of sowing and harvesting in accordance with the market demands
- Technology to test adulteration of fresh produce
- Automated farming techniques and development of warning system for unpredictable weather patterns and pest infestation can be used to improve the farming system
- Entrepreneurial intervention in the food processing and packaging can protect farmers hugely from price volatility of commodity markets and help earn additional money through exports.

Agriculture entrepreneurship has potential to revolutionise the food chain, benefitting small land holding poor farmers and marginalised communities in the long term.



ABOUT THE AUTHOR

Dr. Shivendra Bajaj is Executive Director of the Federation of Seed Industry of India (FSII) and Alliance for Agri Innovation (AAI). He manages the 42-member led Federation to drive public policies and advocates for adoption of seed and biotechnology policy, innovation, new technologies and breeding applications in the agriculture sector

