



Agri-tech: experiential learning from the Agri-tech growth leaders

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ABSTRACT

This research study analyses the critical issues in Agri-tech start-up growth in India and explores ways to improve the process. Research methods are triangulated to understand Agri-tech entrepreneurs' opinions and experiences. After the articles and reports were reviewed, a statistical analysis of a user opinion survey of two hundred and two Agri-tech users was conducted. Post survey, three rounds of semi-structured interviews among the twenty-two Agri-tech entrepreneurs and experts helped in fine-tuning the findings. The key issues highlighted in the findings are the availability of low-interest and creative financing models; Infrastructure availability and incubation support; Cross-domain quality solutions with multiple levels of features; Supportive mindset of business customers and partners; and Skill-building and Training of farmers. This research is one of the few academic studies on Agri-tech entrepreneurship and includes the COVID-19 pandemic effect. The findings help the researchers build the knowledge base of agriculture 4.0 entrepreneurship. Suggestions may help the practitioner boost the growth of Agri-tech solutions. In addition, the study highlights innovative suggestions like setting up an open national database of core parameters, cloud computing-based agriculture 4.0 digital stack, digitalising farmer producer organisations, and monitoring plus organisational evaluation setup.

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1. Introduction

The agricultural sector is witnessing a digital revolution to increase productivity, lower costs, and reduce environmental hazards. The COVID-19 pandemic has further forced economies to improve the resiliency and security of their agricultural supply chains (Boston Consulting Group [BCG] 2020).

Several initiatives by the large corporate entities have set the stage for massive information and communications technologies (ICT) based digital transformation of the agricultural practices in India. e.g. Bayer, Cargill, IFFCO, ITC, Monsanto, and Unilever. The initiatives are supported by the ease of regulations, and the government-initiated large projects in e-trading, artificial intelligence, digital literacy, financial inclusion, and mobility.

Agri-tech start-ups are at the forefront of the changes as the growth catalyst and acceleration enablers. The subset of these innovative initiatives, such as precision agriculture and agricultural e-commerce platforms/e-marketplace, may significantly affect the Indian economy to the tune of \$32 billion and make their presence felt during a pandemic. Agri-Tech start-ups help the farming community increase the farm's produce, yield, and income generation (McKinsey 2014; Sharma and Mathur 2019).