

Chapter 10

Strategic Use of Agriculture Information System by Agripreneurs in Rural Economies: Current Role and Future Prospects

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ABSTRACT

The penetration of digital technologies has opened new avenues to integrate rural farmers into a new digitally driven agri-food system. Digitalization is fundamentally changing the way of the agricultural technologies and such new technologies help farmers, manufacturers, retailers, and customers in their daily activities. The development of digital technologies with the presence of information systems is essential in altering the mode of business processes. However, on the other hand, the differences between rural and urban technological facilities broadens due to a lack of information access. To bridge the rural and urban divide, technologies can play an important role among rural entrepreneurs. This chapter is an attempt to investigate the agricultural entrepreneurs or agripreneurs use of agricultural information systems to implement innovative approaches in dynamic market conditions.

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INTRODUCTION

Based on the current estimate of the United Nations (2018), the worldwide population is set to reach 9.3 billion by 2050. Most of the population expansion is set to occur in rural areas. The advancement of digital technology is so fast that all employment fields need to be coordinated to speed up development (United Nations, 2018). The 4th Industrial Revolution will act as a powerful to bringing-out disruption with the help of digital technologies. The development of new digital technologies with the presence of digital media is very essential in altering the mode of business processes (Mckinsey, 2019). Innovations through digital technologies will alter several sectors including the agriculture sector (World Economic Forum, 2016). Digitalization is fundamentally changing the way agricultural technology is utilized and it also helps in aiding the farmers, manufacturers, retailers, customers, and the broader agricultural sector to a greater extent. Farmers are prompting new digital and advanced technologies that are altering the way they conduct farming activities (FAO, 2019). Every intervention that aims to increase productivity, reduce costs, improve water use efficiency, disseminate information on efficient farm practices, or unify agricultural markets will demand the deployment of appropriate technology. The penetration of digital technologies has opened new avenues to integrate rural entrepreneurs into a new digitally driven agri-food system (USAID, 2018).

According to Okediran & Ganiyu (2019), agriculture is an information-intensive industry where there is a continual need for updated information about agricultural inputs, market information, and logistics. Glendenning and Ficarelli (2012) suggested that agricultural education, research, and development of extension activities are the important inputs that are possible through digital technologies. Rural entrepreneurship majorly influences various issues like economic development, employment, food, and social security (FAO, 2017). Palacios et al. (2015) emphasized that to develop rural areas and to prevent rural migration, the promotion of digital inclusion among rural entrepreneurs is sine qua non for developing countries. The access to information and technology gap between rural and urban areas broadens due to lack of information access and it affects the marginalized communities in the rural areas across developing countries (Ye & Yang, 2020).

As human beings, farmers are keen on updating what are the best practices in agriculture and they constantly seek developments in research and technology. Farmers are eager to learn expertise, in particular in the modern agricultural sector, to become mentally powerful and capable of embracing modern agriculture methods. For this, farmers need accurate and valuable information as early as possible. Growth in the ICT sector has led to the transformation of carrying out business activities. Agricultural Information Systems play a key role to fight poverty, achieving food security, and providing information that creates opportunities for poor people. According to the FAO (2019), to provide a competitive advantage for rural agricultural entrepreneurs, digitalization plays a vital role to access global markets and to have an efficient distribution of products.

This chapter emphasizes the importance of agricultural information systems for agricultural development and identifies the benefits and challenges of the current systems for the agripreneurs. This chapter also helps in finding some of the factors influencing the adoption and use of agri information systems. The strategic use and prospects of agricultural information system applications are the other objectives of the chapter. Finally, the general conclusions about agricultural information systems are emphasized and implications for better usage are suggested. In this chapter, an introduction to various information systems used in agriculture is provided. The next section in the chapter is the background of the rural entrepreneurship, the benefits and challenges of agripreneurs are discussed.

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