

# TRANSFORMING INDIAN AGRICULTURE THROUGH INNOVATIVE TECHNOLOGY

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## ABSTRACT

The agriculture sector of India has occupied almost 43 percent of India's geographical area. Agriculture is the main occupation in India especially in rural areas. India ranks second worldwide in farm output. Indian agriculture sector accounted for 17% of the GDP and employed 49% of the total workforce in 2015. It is the largest employment source and a significant piece of the overall economic development of India. Rural India presents a picture of mass poverty and under-employment. Therefore, the first task of the Government was to initiate growth process in Indian agriculture on modern lines. Modernization of Indian agriculture was required in terms of innovative technology. This paper deals with how innovative technology plays an important role in development of agriculture.

**KEYWORDS:** Agriculture, Innovation, Technology, India

Agriculture Sector of Indian Economy is one of the most significant part of India. 70% of the Indian population lives in rural areas, and the agriculture sector of India has occupied almost 43% of India's geographical area. Agriculture is the only means of surviving for almost 66.66% of the employed class in India. India depends heavily on the agriculture sector, especially after the 1960 crisis in food sector. Since then, India has put a lot of effort for food production and this led India to the Green Revolution. Innovation in method makes it possible. Method used in Green Revolution are Double cropping system, Seeds with superior genetics, Proper irrigation system, HYV seeds, Use of pesticides and fertilizers, Use of Modern Machineries like Tractor,

Harvester and many. It was also beneficial to the environment because it meant that less natural land needed to be converted to farmland to produce more food. As the same way, use of innovative technology maximizes the benefit in agriculture in India. Agricultural technology is the tools and machinery that are used primarily or entirely in order to support agricultural enterprise. There are some innovative technologies used for agricultural development. Some of them are,



**Image 1: Barrix Agro Science.**

Barrix Agro Sciences i.e. The Bangalore-based startup offers eco-friendly crop protection methods after much research on products that support organic farming to increase crop production and quality with minimal expenditure.



**Image 2: Mitra.**

A Nasik-based startup, MITRA (Machines, Information, Technology, Resources for Agriculture) aims to improve mechanization at horticulture farms with the use of R&D and high quality farm equipment.



**Image 3: Eruvaka Technologies.**

An organization based in Vijayawada, Andhra Pradesh, its mission is to accelerate the use of technology in aquaculture manner, where farmers face problems due to unavailability of adequate technology to measure and control water health.



**Image 4: Skymet.**

Skymet is India's largest weather monitoring and agri-risk Solutions Company. According to them, they are the experts in measuring, predicting, and limiting climate risk to agriculture, thus reducing losses incurred due to bad weather conditions.



**Image 5: Information and Communication Technology for Agriculture.**

Information and communication technology in agriculture (ICT in agriculture), also known as e-agriculture, is developing and applying innovative ways to use ICTs in the rural domain, with a primary focus on agriculture. ICT in agriculture offers a wide range of solutions to some agricultural challenges.

**CONCLUSION**

Innovative technology allows the farmer to produce crops effectively and efficiently i.e. with use of minimum resources farmers get maximum benefit. As with use of minimum natural resource, agriculture production increase, use of technology in agriculture can help to improve the health of the environment. This system represent a positive shift in agricultural consideration for the health of the surrounding environment. Today it is possible to grow crops in a desert by use of innovative agricultural biotechnology.

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