

Impact of Advanced Technology on Farmer's Welfare

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Abstract:- Technology is a system that uses human knowledge to produce, sustain, nourish and boost technological advances in the mechanical sector. Various things that are useful to us in our day-to-day routines are an offshoot of technological expansions. Researchers come up with newer, innovative ideas through progressive research and experiments. Farming plays an indispensable part in the social and economic development of India. Though the farmers face numerous challenges, some of which are arising from the climate change, but the technology and its impact help the farmers to increase the productivity, therefore, it has manifested to be fruitful for the farming sector and the farmers. This paper exemplifies the impacts of technology on e-farming, agricultural development, farmer's welfare and social security system and support services for farmers in India. India is a developed and developing country, the advanced technology and its techniques helps the country to reach zenith.

Keywords:- Technology, Innovations, Farming, Farmer's Welfare, Social Development and Economic Development.

I. INTRODUCTION

Farming is the art and science of cultivating vegetables and livestock. Farming was the key expansion in the growth of 'sedentary human civilization', by which food surpluses through farming of 'domesticated species'. In the world, India is the second largest producer of agricultural products to our 'Gross Domestic Product' (GDP). One of the oldest 'economic activities' in India is farming. There are different types and methods of farming in different areas or regions. Nevertheless, all these methods and strategies of farming are based and depends on the 'weather', 'climatic conditions', 'technological innovations' and the 'socio-cultural practices'.

Farming is the flesh and blood of the Indian economy as it plays a vital role in the economic system. So farming is considered as the back bone of Indian economy in terms of providing not only food and raw materials but also the employment opportunities to a large population of farmers. Farming is considered to be rather a complete system of 'inputs', 'processing' and 'outputs'.

Farming in India is still a wagering for rains because the Indian farmers rely on rains for 'irrigation'. Sometimes there is not enough rain and sometimes there is excess of rains, in either case the farmers and the farming sector suffers. In such cases the farmers depend on the tube-wells

and canals but they are not sufficient enough. But if the farmers follow latest 'scientific methods' they can be independent of the unpredictability of nature.

II. TECHNOLOGICAL INNOVATIONS IN FARMING

All progress of the mankind is just because of 'innovation'. "When Archimedes cried 'Eureka'! it was not just an expression of excitement on a new discovery, but a statement on the entire experience of innovation and discovery".(5) [Yojana Magazine, 2019]. Innovations like discovery of wheel, fire, weapon, agriculture, developed through an observation or idea. Today every sector needed for mankind is benefitted through innovation like space, bio-technology, education and healthcare. Another type of innovation was the 'Green Revolution'; it helps to convert India into a 'food sufficient' nation from a 'food scarce nation' during its initial years after getting independence. Over the years innovation in agriculture is for farmer's welfare and guarantees expanded productivity.

There is no doubt that innovations have made a difference to society from times immemorial. But they should not be restricted to individual efforts of scientists and researchers alone. The innovative Spirit in each one of us has to be nurtured from the very beginning and young minds taught to think out of the box rather than just get through with rote learning. This calls for a reformation in the education system as also changing the mind set of parents and the society at large. Collective efforts by all relevant stake holders can make all the difference.(5) [Yojana Magazine, 2019]

The advancement of technology for the farming sector upgrades the standard of living of farmers and also the government schemes for farmer's welfare is a practical solution for the economic growth of India. There are some innovative methods in the case of farming, they are, 'Data preserved in soil', 'Innovative agriculture moving underground', 'Greens fed on rainbow waste', 'Using the Sun to generate freshwater and 'Agriculture by aircraft'.

In modern days farming sector is far different from those at earlier ages, usually because of technological advancement including information technology, devices, msensors and machines. Today's farmer's uses many technological outputs like 'aerial images', 'robots', 'GPS technology' and 'temperature and moisture sensors'. These methods of advanced farming can improve the agricultural productions more efficient, environment friendly, profitable and safer.

III. FARMER'S WELFARE SCHEMES

The Government of India had initiated many welfare schemes for farmer's in order to improve their economic conditions and rejuvenate the farming sector. Some of the schemes that are initiated for the benefits for farmer's welfare are, 'Neem coated urea', 'Pradhan Mantri krishi sinchayee yojana (PMKSY)', 'Soil Health Card Scheme', 'Paramparagat Krishi Vikas yojana (PMFBY)' and 'National Agricultural Market (e-NAM)'.

➤ *Neem Coated Urea (NCV)*

This scheme is advocated to balance the use of urea, reduce the cost of fertilizer application and enhance the availability of nitrogen to the crop.

➤ *Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)*

This scheme is executed to enlarge the cultivated land with irrigation, improve water use efficiency and reduce wastage of water.

➤ *Soil Health Card Scheme*

This scheme provides information to the farmers about the fertility of the soil and how to apply dosage of nutrients for improving soil health.

➤ *Paramparagat Krishi Vikas Yojana (PKVY)*

This scheme is implemented to promote organic farming in the country by improving soil health in order to increase the net income of the farmer.

➤ *Pradhan Mantri Fasal Bima Yojana (PMFBY)*

This is a weather based insurance scheme for farmers who were affected by non-preventable natural risks and harvest losses.

➤ *National Agriculture Market (e-NAM)*

This scheme is an innovative method by bringing transparent and improved, remuneration for the farmers for agricultural production, by moving towards, 'One Nation One Market'.

M.S. Swaminathan, the father of economic ecology conducted a survey based on the farmer's welfare schemes, status and their income. As per the report some of them are:

- Designating the Ministry of Agriculture as Ministry of Agriculture and Farmers' welfare to stress the importance of keeping farmers' welfare as the measure of agriculture progress.
- Promoting online trade through electronic national agriculture market which helps to bring together different agriculture markets. The creation of Gramin Agriculture Markets (GrAMS) will provide scope for direct sales to consumers in both retail and bulk form.
- Conservation and sustainable use of indigenous breeds of cattle through a Rashtriya Gokul Mission. The Prime Minister also inaugurated the First International Congress on Agro-biodiversity.

- Determination of Minimum Support Price (MSP) based on the recommendation of the NCF. Assured procurement at MSP of more crops.
- Integration of protein rich pulses and nutria-rich millets into welfare programmes including Public Distribution System (PDS), mid-day meals, ICDS etc.
- While the Government has ensured in its notification that from Kharif 2018 onwards, the MSP of the notified crops would be minimum of 150 per cent of the cost of production, it is noteworthy that it ranges from 150 to even upto 200 per cent for coarse cereals which will provide an incentive to the farmers in achieving our objective of improving the nutritional intake of our population. (14-15) [M.S Swaminathan, Yojana Magazine, 2019].

IV. CONCLUSION

Agriculture is the basic structure of Indian Economy. Decades ago, there were many issues related to farming including loss in agriculture sector, post-harvest loss, weather change issues, flood, drought ; if any one of these affects, there will be a complete loss for the farming sector. We witnessed the death of many farmers owing to agricultural loss and bank debt. To avoid all these melodrama, the Government of India provides many farmers' welfare schemes for securing the life and daily needs of many farmers and also protecting the agricultural sector from a future loss.

By providing advanced hi-tech machines and equipments, the Ministry of Agriculture implemented new methods and types of farming practices to flourish our economic growth and farmer's welfare thereby improving the development and progress of our nation. History has been an observer to numerous social, cultural and economic rebellions. Emerging with agricultural, moving on to industrial and then the technological, these rebellions have changed the countenance of humanity.

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