

AWARENESS OF FARMERS ABOUT AGRICULTURAL TECHNOLOGIES THROUGH EDUCATION

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ABSTRACT

“The agricultural sector is one of the main contributors to GDP (18%) of India and has potential to play a key role in reducing poverty and unemployment (50% employment) in the country. It is declining in terms of production and productivity. Transfer of technologies is main obstacle in developing agricultural potential in India. Agricultural Extension Services contributed to agricultural development. Studies revealed that ATMA and KVKs cover less than one percent of villages, other government departments viz. Department of Agriculture, Department of Education, Department of Information and Broadcasting etc should also be responsible for awareness and implementation of agricultural developments and technologies. Only about 24% farmers use modern high yield seeds, about 50% farmers use technological and scientific methods of horticultural crops and 12% farmers use advanced equipments related to agriculture. Organization for Economic Cooperation and Development (OECD) countries, FAO promotes policies to contribute to the expansion of world trade, work on agriculture and environment. Societal and technological changes are opening new arena for agriculture oriented education and information. Education plays a pivotal role in social transformation and awareness. The aim should be to improve the productivity of farmers by enhancing their agricultural education and awareness, promoting access to modern technologies, Information and Communication Technologies (ICT) and financial assistance. This study will be useful in formulating, modifying and implementing the efforts and planning for better use of resources by the farmers. The findings of the study will assist the thinkers, administrators, planners and policy makers to help the farmers achieving high yields which will result in enhancing farmers’ economy and thus increase in GDP of India and national building.”

KEYWORDS: Agriculture, Sources of Information and Communication Technology (ICT), Rural Development, Modern Agricultural Technology, Education

Agriculture, which is the age old occupation in India, is still the primary occupation of the larger part of Indian population. Rural population is in majority. 65-70 % of Indian population is dependent on agriculture for their livings. Illiterate farmers or farmers with weak educational backgrounds are mostly ignorant of the modern technological advances in this field. The outcome of a survey (agricultural field survey, diseased plant sampling, soil analysis and interview of farmers) performed in selected rural areas of India implicates the extent of awareness of farmers and agricultural progresses. Traditional methods still dominate over modern technologies as a large section of farmers are not aware due to illiteracy or less education and are ignorant.

EDUCATION OF FARMERS IN IMPROVING ECONOMY

Farmers require education and training to stay aware of fast-moving developments in agricultural technologies, globalization, sciences, business and other skills that affect agricultural operations that are profitable, environment friendly, and contribute to quality of life and

national GDP. Education and training helps farmers to incorporate the latest scientific advances, judicious use of fertilizers, biodegradable manures and technological equipments into their agricultural processes. Farmers are in need of continuing education to make them aware of the fast moving changes taking place around the globe in this field. Awareness sessions like lectures and demonstration to the farmers should be organized for underprivileged farmers to bring them in the main stream of agriculture for enhancing their economy. The results of enhancing their education and operations with these equipments and techniques increase their Efficiency, Economy; Expansibility, Engagement; Employability, E- farming, Efficacy, Especiality, Effectiveness, E- agricultural solutions and services (10 e’s for farmers)and can also lead to:

- Less harm to the environment
- Increased yield
- Reduced food contamination

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- Reduction of the need for water and chemicals for crops
- Increased profits
- Make sound financial management decisions and discover new economic opportunities
- Apply scientific knowledge to enhance stewardship of the land, water, and ecosystems
- Understand the implications of public policy on their operations
- Use new tools and technologies to enhance operations and profit
- Apply scientific discoveries to improve production and marketing methods
- Education at least up to secondary level motivates the students to improve by working in agriculture industry using modern procedures and technologies.
- Adopting improved technology for farming by educated farmers can result in great saving in money and time.
- With the help of GPS and GIS crop production can be effectively monitored by the farmer.

PROCEDURE ADOPTED TO CARRY OUT THE STUDY

To effectively capitalize the global competitive advantage, Indian agricultural institutes have to work out policy with regards to technology, more market access opportunities, and more transparency. In the process of field survey farmers of different age groups (20-70 years), varying years of farming experience (2-40 years) and with different socio- economic backgrounds were interviewed and requested to fill survey questionnaire forms. The disparities between poor and rich farmers reflected in their method of agriculture and the agricultural produce obtained. Mostly farmers sow the seeds directly without giving any protective pretreatment. Majority of the farmers were unaware of the ill effects of chemical pesticides due to ignorance and illiteracy and showed a tendency to use them indiscriminately beyond prescribed limits overlooking necessary precautions. The interview also revealed that farmers were unaware of the schemes and programmes

declared by the state and central government for improving agriculture and their effective implementations

EFFORTS MADE BY GOVERNMENT

Modern agriculture practices are increasingly turning out to be knowledge-based and hence gaining expertise in them. Education at all levels is required so that India farmers are better equipped to handle the challenges of globalization. These days with the entry of Foreign Direct Investment (FDI) in the sector, many MNCs have forayed into the segment with dozens of agro-products; subsequently this has resulted as a boon to Indian farmers who lack professional expertise to better deal with the issue. Despite rapid strides by the agriculture sector, still there exist many grey areas which require immediate attention. Keeping into account of the fact that increased productivity must be the sole objective of agricultural research, our scientific community is leaving no stone unturned for bringing about paradigm changes in agriculture education in the country. Government of India facilitates for better education in agriculture sector. Efforts are being made to create favorable economic conditions to promote participation of the private enterprises. National Bank for Agriculture and Rural Development (NABARD) is very much instrumental in channelizing investment from private sector to the agriculture sector. Kisan Credit Cards and Crop Insurance Schemes with lower premium can be of great help in this regard. In India 70 % of the water resources are used for agriculture,. Due to many factors like increased urbanization and industrialization and also intensive use of agricultural chemicals and fertilizers, problems of Water Pollution, Ground water depletion, Water logging, salinity and Desertification is on the rise. Ministry of Water Resources provides education on the issues. Education focused on the effective marketing infrastructure and techniques of preservation, storage, and transportation etc. with a view to reduce the post harvest losses and ensuring better returns is provided to farmers. Institutions like Indian Council of Agricultural Research are working for the cause of up gradation for the rural community by establishing the organizations like Krishi Vigyan Kendras. Education on various tools and techniques to better combat calamities like Flood and Drought and other natural disasters will surely help the agricultural output. National Disaster Management (Ministry of Home Affairs) and Ministry of Water Resources also provide

education on the issues. Testing Labs spreads across the country educate the farmers about various scientific tools for identifying superb soil and water for agricultural purposes. They analyze the soil and water samples from different farms and regions and assess the quality of irrigation water which resulted in increased agricultural output. Many major structural transformations such as better input facilities and technological changes with regards to irrigation, high yielding seeds and changes in cropping pattern etc. are available in India for enhancing farmers' economy. E-agriculture referred as ICT in agriculture, Global Positioning System (GPS), Organic Farming and Geographical Information System (GIS) are recent terms in the field of agriculture and rural development practices.

CONCLUSION AND SUGGESTIONS

Scientists and research organizations throughout the world have made immense advances in agricultural research. It is necessary to communicate these advances to the farmers through awareness programmes. A joint effort on a national and international level like the use of biological control methods, seeds of resistant varieties and crop rotation being some of the methods, Insurance schemes for crop failure due to climatic disasters such as floods and droughts, is important for a fruitful result. Organization of training programmes by developed countries in developing and underdeveloped countries is one such method. As the educational level increases, output increases. Extension service has a greater impact on agricultural productivity than formal education. The study concluded that education is important to the improvement of agricultural productivity such that formal education

opens the mind of the farmers, non-formal education gives the farmers hands-on training and better methods of farming and informal education keeps the farmer abreast with changing innovations and ideas and allows farmers to share experiences gained. It is recommended that the government should improve the quality of formal education, extension services and adult literacy programmes in the country. Farmers' education and experiences are critical to creating rural prosperity in India. Farmers face unique challenges and require education and training to ensure their success and enhance economy. Hence the need of the hour is to give agricultural education a high priority.

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