

STRATEGIES FOR MANAGEMENT OF CHANGE IN AGRICULTURAL EXTENSION

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To improve is to change; to be perfect is to change often
— Winston Churchill

Change is the only constant in our lives. The end product of managing change in agriculture is to increase the capacity of extension education clientele to respond to the changes impacting them and their businesses and organizations.

The changes in the working environment within which an organization functions, force the organization to make necessary adjustments if it wants to continue functioning efficiently. Without such adjustments, the organization will either collapse or will keep working inefficiently, moving gradually towards eventual obsolescence. The changes in the working environment, which may be called forces of change, vary in nature and scope. They could be political, technical, economic or social. They could be location specific, regional, national or global. The effect of these forces of change may be immediate, medium term, or long term and they may be direct or indirect. In response, the organization makes adjustments internally, externally or both. National agricultural extension systems are no exception to this rule. They are also directly or indirectly affected by the changes and must make internal and external adjustments in order to keep functioning at the same or at higher level of efficiency (Qamar,2002)

The challenges before Indian agriculture are immense. This sector needs to grow at a faster rate than in the past to allow for higher per capita income and consumption. Calculations show that if the economy of the country is to grow at 8 percent per annum, and if the export base is to expand, the value of agricultural output must increase at an annual rate of 4.5 percent

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during the next five years. It is an accepted fact that sound agricultural development is essential for overall economic progress. About two thirds of work force are directly or indirectly dependent on agriculture. This sector generates about 28 percent of its GDP and over 15 percent of exports. Food grain production rose from 51 million tones in 1950-51 to a record 209 million tones in 1999-2000. Rising consumer prosperity and the search by farmers for higher incomes will simultaneously drive crop diversification. Export opportunities for agricultural products are also expected to continue to grow, provided India could meet the stability, quality and presentation standards demanded by foreign trade and consumers and maintain its comparative advantage as a relatively low cost producer.

Given its range of agro-ecological setting and producers, Indian agriculture is faced with a great diversity of needs, opportunities and prospects. The well endowed irrigated areas, which account for 37 percent of the country's cultivated land currently contribute about 55 percent of agricultural production, whereas, rainfed agriculture which covers 63 percent accounts for only 45 percent of agricultural production. In these less favorable areas, yields are not only low but also highly unstable and technology transfer gaps are much wider as compared to those in irrigated areas.

Public research and extension played a major role in bringing about the green revolution. In the post-green revolution era, however, extension faces important challenges in the areas of relevance, accountability and sustainability. As a result of the changing economic scenario, there is a need for appropriate agricultural technologies and agro-management practices to respond to food and nutritional security. Poverty alleviation, diversifying market demands, export opportunities and environmental concerns are posing new challenges to the technology dissemination systems. It is expected that future agricultural growth would largely accrue from improvements in productivity of diversified farming systems with regional specialization and sustainable management of natural resources. Effective linkages of production systems with marketing, agro-processing and other value added activities would play an increasingly important role in the diversification of agriculture. Public extension system requires a paradigm shift from top-down, blanket

dissemination of technological packages towards providing producers with the knowledge and understanding with which they solve their own location - specific problems.

Growth of Extension

The Govt. of India had, in the past, sponsored a number of Agricultural Development Programmes like National Extension Service Blocks in 1953, Intensive Agri. Dist. programmes in 1961-62, the Intensive Agril. Area programme in 1964-65, the High Yielding Varieties Programme in 1966-67 and the Small and Marginal Farmers Development Programme in 1969-70. Though these programmes had a perceptible impact, however, the efforts were not replicated on a wider scale covering various categories of farmers in different areas.

Recognizing the need for systematic transfer of technology from the research system to the farmers on a regular basis, the Govt. of India, with World Bank assistance, introduced the Training and Visit system (T&V) of extension in 17 states of the country.

The ICAR extension efforts have mainly involved front-line extension for technology assessment and refinement that evolved through National Demonstration Project, lab-to-land programmes and Krishi Vigyan Kendras. There are now 311 KVKs in the country. One of the very recent innovations, which is being successfully tested on a pilot scale, relates to Institute-Village-Linkage Programme (IVLP) for technology assessment, refinement and transfer.

In addition to the above, some of the SAUs also made an effort to reach the farmers directly through their own extension system such as District Agricultural Advisory and Transfer of Technology (DAATT) centres in Andhra Pradesh and Farm Advisory Service Scheme (FASS) in Punjab and Extension Education units of respective Zonal Research Stations.

Over the last five decades, in the name of agriculture and rural development, extension education has been put to serve some production oriented programmes, area development ventures, target group service schemes, and of late as a

technology delivery mechanism. However, it has been hardly put to serve, in any one of these ventures, the simple purpose for which it is designed, “helping people to help themselves” by relating alternative technologies to the needs and opportunities of farmers.

The administrative setup for agricultural development in India is the outcome of several reforms and efforts made over years. In spite of all these, Indian farmers have not only shown resilience in adversity but also tremendous opportunism in making the most of favourable conditions. Agricultural production has shown a very positive growth rate over the long term and brought India close to self-sufficiency in food grain and considerable marketable surplus in most other commodities. This has been largely due to the phenomenal efforts of our agricultural scientists and extension officers who helped the farmers to overcome their constraints and realize their potential.

Extension systems have been evolved based on the emerging challenges of agricultural development from time to time. A close look at the analysis of past few decades shows that the situation is improving. The per capita availability of food rose up and change has also been observed in consumers’ tastes and preferences as there is a shift from coarse grains to superior grains and from grains to horticultural and meat products. However these changes are more conspicuous in urban areas than in rural areas.

Institutional restructuring

It is clear that no one uniform extension system will serve as a panacea for all states. Each state has different farming patterns, geographical location, spread of population, institution and the characteristics of people inhabiting it. Even within the state there is a combination of various agencies and different institutional arrangements to address the needs of different agro-climatic zones as well as different sections of farmers.

Public extension will continue to remain central to technology dissemination, small and marginal farmers and economically backward regions will need to be serviced by it. This implies that public extension functionaries will have

to be placed in new decentralized arrangements which are demand driven, farmer accountable, bottom-up and have a farming systems approach as in Agricultural Technology Management Agency (ATMA), at the district level.

Paradigm shifts in agricultural extension

Parameters	Present status	Future strategy
Focus	Production-oriented technologies	Production-cum- market oriented technologies
Production levels	Varied form shortage to sufficiency Imports in some cases	Surplus and focus on Post-harvest technologies
Technology	Exogenous technology developed by scientists and researchers	Participatory technology development wherein farmers,scientists and extensionists jointly develop the technology
Mode	Delivery of messages	Empowering farmers through FOs / FIGs
Services and supplies	Public sector and co-operatives	Moving towards public-private partnership
Extension cadre	Limited to public extension system	Moving towards para-technical professionals, agriprenuers and agribusiness industry, farmer leaders, etc.
Coverage of market	Mostly domestic markets	Shifting towards removal of geographical barriers

Challenges to national agricultural extension system

- ▶ Capacity building of extension professionals in new trends like globalization, bio-technology and environmental issues
- ▶ Liaison among Research- Education- Extension-Market and farmers i.e. inter-institutional linkages

- ▶ Adoption of participatory extension methodologies
- ▶ Farming situation based extension methodologies
- ▶ Identifying and promoting suitable farming systems
- ▶ Enriching the extension role with market information
- ▶ Making use of information technology
- ▶ Making small holdings into viable units of agri-enterprises
- ▶ Assigning a proper status to the extension profession
- ▶ Ensuring sustainable agricultural development

Some of the **key systems constraints** that need to be addressed have been identified to meet the emerging challenge:

- ▶ Multiplicity of technology transfer systems
- ▶ Narrow focus of the agricultural extension system
- ▶ Lack of farmer focus and feedback
- ▶ Inadequate technical capacity within the extension system
- ▶ Need for intensifying farmer training
- ▶ Weak research-extension linkages
- ▶ Poor communication capacity
- ▶ Inadequate operating resources and financial sustainability

Mechanisms for addressing the emerging challenges in agricultural extension

- ▶ Group approach: Farmers need to be organized into Farmer Interest Groups (FIGs), Women Interest Groups (WIGs) and Commodity Interest Groups (CIGs) for providing extension services. These groups should be provided with extension support on integrated basis for all enterprises like agriculture, veterinary, fisheries, dairy, etc.
- ▶ Empowerment of farmers through formation of federation of farmers: Capacity building of scientists/ extension functionaries/ farmers through

training, demonstrations, exposure visits, etc for having a common vision of upbringing the living standards of farmers. They should also be educated on globalization, liberalization and biotechnology, etc.

- ▶ Linkages with financial agencies for the need based groups for fulfilling the requirements of credit, etc.
- ▶ Specific training to farmers on INM, IPM and non-land based technologies like mushroom cultivation, post harvest technologies, environmental safeguards, etc.
- ▶ Develop situations specific crop planning and also allied activities.
- ▶ Pluralistic extension system where both public and private institutions are involved in delivering extension service. Synergy of NGO, Private and public extension for transfer of technology.
- ▶ Agriculture and rural development to be looked at together.
- ▶ Build on ITK s, farmer's innovations for replication by farmers in other areas and focus on non-conventional technologies.
- ▶ Develop technologies that are best for farmers in the long run.
- ▶ Business orientation at all levels, i.e. extensionists, rural development experts, farmers to view farming as an enterprise wherein the cost of production, return on investment, profits etc., are calculated.
- ▶ Speedy communication wherein gathering information, managing information and use of information should be taught at all levels. Agricultural extension service can exploit this potential of information technology to strengthen their own capacities and educate the rural population. The Internet and Video Conferencing facilities are a great breakthrough in this direction and farmers should be encouraged to use them. Farm Information and Advisory Centers (FIAC) modules at block level may be promoted.
- ▶ Survey for exploring possibilities for the commodities most needed and having potential in global and domestic markets.
- ▶ Value addition to fetch maximum returns including grading, packing, transportation, storage and marketing.

- ▶ Making available the supply of most suitable and critical inputs well in time.
- ▶ Assigning proper status to extension profession: Extension workers should be empowered with responsibility and accountability. Motivation awards, should be worked out. Incentives should be given for people working in rural areas. Continuous updating of technical skills of extension functionaries is a necessity.
- ▶ Improvement of commercialization through better production and marketing. The agricultural extension service should come up with strategies that could help subsistence farmers in organizing themselves for commercializing their operations profitably, without losing the pride of land ownership.
- ▶ Participatory extension approach wherein the decision-making power lies in the hands of farmers. Recent modalities like participatory farmers group extension, client-oriented extension, gender-sensitive extension and empowering the farmers have gained powerful importance.
- ▶ Emphasis on development of rural infrastructure to increase the efficiency of local and regional trade flows.
- ▶ Sustainable management of land, water and other natural resources on a national level.
- ▶ Building mechanisms to improve the linkages among research, extension, education, farmers and the markets.
- ▶ Need for focus on agricultural journalism.

Conclusion

The new millennium throws up new challenges in the Indian agriculture sector that are different from those in the past. Continuous pressure of producing more food from the same land with shrinking natural resources and marketing the produce is a tough task for farmers. Public agricultural extension system with a mandate and mission, beyond transfer of technology, is needed to develop the capacities of the farming community. It is expected to change

itself to respond to global changes and act as an integral component of extension-farmer-research-education-market linkage chain. The emphasis on farmer-centered and participatory approach, usage of information technology must overtake the top-down centralized approach. The present extension scenario calls for private- public partnership, diversification, intensification, natural resource management, research on consumer preferences, and continuous capacity building of all the stakeholders in the agricultural development.

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