
UNIT 4 AGRICULTURAL EXTENSION SERVICES

Structure

- 4.0 Objectives
- 4.1 Introduction
- 4.2 Concept and Scope of Agricultural Extension
- 4.3 Different Approaches for Organising Agricultural Extension Services
- 4.4 Evolution of Agricultural Extension Service System
 - 4.4.1 Agricultural Extension In India after Independence
 - 4.4.2 T & V System of Extension
- 4.5 Present Extension Service System
 - 4.5.1 Extension Organisation: Setup at Various Levels
 - 4.5.2 Current Status of Agricultural Extension
- 4.6 Extension Role of Agricultural Universities and ICAR Institutes
- 4.7 Privatisation of Extension Services
- 4.8 Recent Innovations in Organising Extension Services
- 4.9 Problems and Challenges in Extension Services
- 4.10 Let Us Sum Up
- 4.11 Key Words
- 4.12 References and Suggested Readings
- 4.13 Check Your Progress – Possible Answers

4.0 OBJECTIVES

In this unit we introduce you to the basic concept of extension and agricultural extension services. You will also learn about the agricultural extension system in India. By the end of this unit, you should be able to:

- bring out the distinguishing features of agricultural extension;
- trace the evolution of agricultural extension system in India;
- outline the organisational set-up of agricultural extension services in India; and
- identify the constraints and problems in the extension system and the measures to tackle them.

4.1 INTRODUCTION

Now you are familiar with the planning and administrative structures for rural development and also the functions of rural-development institutions such as the cooperatives, the banks and the Panchayati Raj Institutions. Let us now look into agricultural extension services as they obtain in India.

You have seen in Block 1 of Course 1 that agriculture forms the backbone of rural India and that it is essential to transform traditional agriculture and modernise it so as to increase productivity. Agricultural extension is one of the important instruments for achieving this goal. India has, in fact, one of the largest agricultural extension systems in the world. The impressive growth in agricultural production after independence, particularly that by means of the Green Revolution, was greatly facilitated by the large network of agricultural extension services. The understanding of its functioning in the transformation of agriculture and in the development of rural India is, therefore, important.

In this unit you will be exposed to the present organisation of agricultural extension services in the country including the extension services offered by agricultural universities and research institutes. A brief discussion on the history of agricultural extension has also been presented to help you in understanding the evolutionary changes in the set-up of agricultural extension. The present agricultural extension services as well as its problems are also referred to in our discussion.

4.2 CONCEPT AND SCOPE OF AGRICULTURAL EXTENSION

Change through educational methods (and not through force) is the goal of *extension*; the basic assumption being that humans have immense capacity to learn and broaden their experience through education. Emphasising the educational role, *Ensminger* (1957) observed that “Extension is education and its purpose is to change the attitude and practices of the people with whom work is done.” The basically educational role is also emphasized by *Maunder* (1973) who defined extension as a “service or system which assists farm people, through educational procedures, in improving farming methods and techniques, increasing production efficiency and income, bettering their levels of living and lifting the social and educational standards of rural life.” *Mosher* (1979), however, feels that the concept of extension has to go beyond education in the case of developing countries where the most important need of the farmers is not just to make better use of the resources already available with them, but to get access to one or more specific resources. This means that the role of extension agents is not only to teach farmers about improved methods of farming, but also to make necessary arrangements for the supply of inputs like improved seeds, fertilizers, credit, marketing facilities, etc.

In India the concept of extension included both education and services in the past. The following observation of the Report on Organising Agricultural Extension in India (Government of India, 1970) makes interesting reading :

“The dichotomy between extension (education) functions on the one hand, and supplies and services function on the other, is largely artificial in the Indian situation. Educating the rural community in techniques designed to bring about better living is no doubt the primary objective of extension, but the educative process itself is unlikely to succeed in the long run unless its relative efficiency can be demonstrated and it is guaranteed that the adopter shall have no difficulty whatever in implementing it. The process of change has to overcome the drags of traditional social structure, and these drags frequently are the financial, supplies, production, distribution and marketing (in brief economic) arrangements in the society. Resistance to change derives much of its strength from the inconsistency between these arrangements and the contemplated innovation. An innovation cannot succeed without necessary modernisation of the aforesaid arrangements and it is natural therefore that a relapse to traditional practices should occur after a brief and perfunctory endeavour of introducing innovations. This, in fact, has happened in some instances where the farmers abandoned higher yielding varieties in favour of local varieties after an initial effort, the lessons of which were bitter. The explanation for the failure of the innovation was the inadequacy of the supplies and services structure ... Extension should be oriented towards production and this automatically involves reform and strengthening of supplies and services arrangements.”

The National Commission on Agriculture (1976) was, however, of the view that extension is basically education and preparation for the change when it stated that extension “refers to an informal out-of-school education and services for the members of the farm family and others directly or indirectly engaged in farm production, to enable them to adopt improved practices in crop, livestock and fisheries production, management, conservation and marketing. Agricultural extension is not only imparting knowledge and securing adoption of a particular improved practice, but also aims at changing the

outlook of the farmer to the point where he will be receptive to, and on his own initiative continuously seek means of improving his farm occupation, home and family life in totality.” Thus, though extension to be effective implies coordination with supply and service agencies so that timely support can be ensured, supply and regulatory functions as such are not a part of extension. This continues to be the accepted meaning of extension today.

Extension has been defined according to different contexts and policy traditions which is one of the reasons for different definitions of extension. Four traditions of extension have been identified by **Roling** (1988) which are outlined in Box:1 below.

Box-1 Traditions of Extension

- i) **Conservative tradition:** Here, extension is seen as an instrument for helping people to make right choices to achieve their goals. This tradition can also be named ‘informative’ extension.
- ii) **Socialist tradition:** Here, extension is seen as an instrument of emancipation or liberation of the poor people, which may call for structural changes to achieve societal objectives. This can be termed ‘emancipatory’ extension.
- iii) **Formative or human resource development tradition:** Here the emphasis is on improving the capacities of the rural people which will enable them to make right decisions as well as organise themselves to deal with their problems.
- iv) **Persuasive extension:** Here the emphasis is on inducing preventive behaviour related to health hazards, environmental pollution, etc.

What are the common elements in the different definitions of extension? A critical analysis of the different definitions will reveal the following common elements [Zuubier (1984) as reported by Roling (1988)] :

- i) *Extension is an educational process and aims at voluntary change.*
- ii) *Extension is an intervention deployed by an institution.*
- iii) *Extension makes use of different communication channels and teaching methods.*
- iv) *Extension focuses mainly on the promotion of presumed collective or public utility, rather than some private interest.*

The following definition as given by Roling (1988) encompasses the above common elements: Extension is ‘a professional communication intervention deployed by an institution to induce change in voluntary behaviour with a presumed public or collective utility.’

Though extension as an educational and service system was first applied to extend improvements in agriculture, the concept and method of extension is now used in various fields. When the concept of extension is used in agriculture, it is called ‘agricultural extension’; when it is used for home science, it is called ‘home science extension’ and so on. The term *rural extension* includes extension activities related to all aspects of rural development including animal husbandry, industry, forestry, fisheries, home science and health.

Objectives of agricultural extension

An important goal of extension is growth with equity, i.e. serving the educational, technological and service needs and the interests of the smaller farmers as much as those of the bigger farmers, though sometimes there is a tendency to concentrate on the bigger farmers for quick results; this, however, tends to restrict the actual goal of extension.

You have by now got some idea about the objectives of extension. Let us now list the objectives in detail as follows:

- To educate farmers about farming innovations and prepare them for change and development;
- To provide improved technology, information and skills to farmers for increasing agricultural and livestock production, and the productivity;
- To give feedback from the field to the research stations on the application of technology generated by them;
- To conduct demonstrations in farmers’ fields on the potentials of improved farm technology;
- To assist farmers to get access to services and supplies, credit and marketing; and
- To help them develop resources like land and water.

We, thus, see that a wide range of functions need to be performed in order that the objectives of agricultural extension are attained.

Check Your Progress I

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) Briefly explain the meaning of extension.

.....

.....

.....

.....

.....

.....

2) What are the common elements in the various definitions of extension?

.....

.....

.....

.....

.....

.....

4.3 DIFFERENT APPROACHES FOR ORGANISING AGRICULTURAL EXTENSION SERVICES

There are several approaches for organising agricultural extension services. These have depended on factors such as the administrative structure for agricultural development, research and training, the goals that extension seeks to achieve, the field level infra-structure for development, and the financial and manpower requirements. Axinn (1988) has identified the following eight models of or approaches to organising agricultural extension:

- i) **The general agricultural extension approach:** It is the common model followed by most of the countries. It follows a top-down transfer of technology approach with the assumption that communicating the details of improved technology available with research institutes to farmers will result in increased productivity and production.
- ii) **The commodity specialised approach:** It focuses on a particular crop or commodity such as coffee, rubber, sugarcane, etc. It is highly specialised in nature with the planning and implementation of the programme controlled by the commodity organization.
- iii) **The training and visit approach:** It became popular during mid-1970s. This approach emphasises regular training of extension workers on the latest techniques and their visits to selected contact farmers. The programme planning and implementation is centrally controlled.
- iv) **The participatory extension approach:** It emphasises formation of farmers' organisations and groups such as self-help groups and the need for learning from farmers' wisdom. Farmers are involved not only in decision making related to programme planning and implementation, but also in controlling it locally.
- v) **The project approach:** Here, the extension efforts are concentrated on a specific area for a defined period of time along with a greater level of the infusion of resources from outside. The planning and implementation of the programme is done by the project staff.
- vi) **The farming system approach:** The main focus of this approach is to develop appropriate technology for the farmers in resource poor areas on a participatory basis. The technologies are developed on the basis of holistic agro-ecosystem involving researchers, extension personnel, farm women and men.
- vii) **The cost-sharing approach:** Here, a part of the cost of agricultural extension is paid by the farmers. Planning and implementation of the programme is jointly shared by the implementing agency and the local people.
- viii) **The educational institution approach:** Here, the local agricultural research or educational institutions get involved in planning and implementation of extension programmes on a limited scale for the purpose of testing and transferring the new technologies developed by them.

4.4 EVOLUTION OF AGRICULTURAL EXTENSION SERVICE SYSTEM

4.4.1 Agricultural Extension in India after Independence

In Unit 4 on 'Rural Development in India' in the previous block of this course, you have read about the early pioneering efforts of the extension and community development programme which was launched in 1952.

India launched Community Development Programme (CDP) in 1952 to bring about integrated development of villages through extension services. The Community Development Programme failed to bring about the desired level of agricultural production and productivity. The rate of change in the average annual growth rate of agricultural production during the period 1952-53 to 1958-59 was only marginal. There was no significant increase in the production and productivity of major agricultural crops. In fact the fall in production during 1957-58 due to drought increased the import of food grains. Under these circumstances the agricultural scene of India was critically examined by the Government with the help of experts and Ford Foundation. As a result, Intensive Agricultural District Programme (IADP) was launched during 1961. The IADP was started in several selected districts on a pilot basis and subsequently extended to nine

more districts. The IADP or the Package Approach was based on a package of improved agricultural practices, supply of necessary farm inputs including credit and increased extension services. The extension organisation of IADP District was headed by a Project Officer and supported by a number of subject matter specialists. The VLWs under the project devoted their entire time for agriculture. The IADP was based on selective area approach because only the districts with low risk and high potentials were selected in order to have a quick response. The successful experience with IADP led to Intensive Agricultural Area Programme (IAAP) in 1964, which was implemented in about 1084 blocks drawn from 114 districts. The IAAP was less intensive in nature, crop oriented and employed staff at a reduced scale.

Both the programmes of IADP and IAAP were marked by increased agricultural production, though only in restricted areas. These programmes, however, could not bring about substantial increases in production, because the technological package of the schemes was not sufficiently responsive to fertilizer. The above point can be seen from the fact that the annual food-grains production remained only around 80 millions during 1961 to 1964. It rose to 89 million tones during 1965 mainly because of favourable weather conditions. The instability of Indian agriculture as well as its dependence on the vagaries of monsoon was again reflected during 1966 and 1967, when the drought brought a drastic reduction in food-grains production. It was during this time that the new agricultural technology based on genetic manipulation, especially in crops like wheat, maize and sorghum, came on to the scene. India took a bold step in formulating a new agricultural strategy based on high yielding varieties, plus a package of improved practices. This led to the programme known as ***High Yielding Varieties Programme (HYVP)***, which was introduced in 1967. The HYVP resulted in wide adoption of new varieties of seeds and practices like the use of fertilizers, improved cultural practices, pesticides, etc., by the farmers, especially in irrigated areas. This made the way for the era of 'green revolution' in India in late 1960s. The major component of extension services under HYVP was the introduction of new technologies with necessary inputs.

Contrary to the expectations of the planners, the new technologies did not diffuse to all sections of the farming community, especially to small and marginal farmers. Thus, the benefits of the green revolution were concentrated mainly on big and rich farmers and that too in limited areas. In fact the inter-personal as well as the inter-regional disparity in income distribution was widened. In order to narrow the gap and to help the weaker sections of the community, special target group programmes were started in 1970s. These were ***Small Farmers Development Programme, Marginal Farmers and Agricultural Labourers Development Programme, Drought Prone Area Programme and Hill Area Development Programme.***

Even with all the above programmes and various extension approaches, there remained a wide gap between the potential of new technology and the actual yield in the fields. Further, extension organisation continued to remain weak with poor linkages with research institutes. The technical competency, morale and motivation of the majority of the extension functionaries were poor. Under these circumstances, during 1970s India introduced a modified version of extension services called 'Training and Visit (T&V) system' with the help of World Bank.

4.4.2 T & V System of Extension

The Training and Visit (T&V) System of extension was introduced in India to improve the effectiveness of agricultural extension. This system is also known as Reformed Extension or Intensive Agricultural Extension. It is operated through the Departments of Agriculture in the States. T & V was introduced with the help of the World Bank during 1974 as a component of three Command Area Development Projects in Rajasthan and Madhya Pradesh. In mid-1975, it was introduced in six districts of West Bengal, and then the system spread to almost all the states of India. The concept of T & V was

developed by Daniel Benor, an Israeli extension expert, and was first tried in Seyhan Irrigation Project in Turkey.

A basic feature of the T & V system was a systematic programme of in-service training of Village Extension Workers (VEWs) and planned schedule of visits to the farmers' fields. The VEW was given training once in a fortnight on specific agriculture practices directly related to farm operations scheduled for the coming weeks. There was concentration of efforts on important crops and agricultural practices. The VEW planned his visits to farmers once in a fortnight at a fixed time known to them. The visits of VEW were supervised and guided by Agricultural Extension Officers and subject matter specialists. The farmers to be covered by each Village Extension Worker (usually 500 to 800) were divided into eight groups and each group was covered under a fixed fortnightly schedule. As it was not possible individually to meet all the farmers in each group, ten contact farmers from each group were selected for this purpose. These contact farmers were selected on the basis of norms fixed by the Department. Thus a representative selection of contact farmers, including small and marginal farmers and farmers from disadvantaged sections, was made. The VEW primarily concentrated his efforts on contact farmers who were expected to diffuse the technology to other farmers in the group. These farmers were encouraged to meet the VEW directly and get advice. The system also ensured streamlining of arrangements for the supply of agricultural inputs and credit and mobility of extension personnel.

4.5 PRESENT EXTENSION SERVICE SYSTEM

Agricultural extension service in our country is the primary responsibility of State Departments of Agriculture. In recent years, organisations supplying inputs, credit agencies, and voluntary organisations have also begun to provide agricultural extension services.

Till the 1960s, the Departments of Agriculture in the states were responsible not only for extension, but also for agricultural education and research. Subsequently, agricultural research and education were transferred to agricultural universities. Further, due to increased specialisation and workload, the Department of Agriculture has been divided into several Departments/Directorates – Horticulture Department, Agricultural Engineering Department, Oilseeds and Pulses Directorate, etc. These departments have their own field level extension functionaries and do not come under the extension service system, which is operated through the Department of Agriculture. Arrangements, however, have been made to establish linkages between various agencies involved in agricultural extension work.

In all the states, the Department of Agriculture is headed by the Director of Agriculture who is responsible for the implementation of the Government policies related to agricultural production in the state. The Agricultural Production Commissioner does the overall coordination of the activities of various departments and organisations related to agricultural production in the state.

4.5.1 Extension Organisation: Setup at Various Levels

General Organisational Structure

At the state or headquarters level, there are several ***Additional Directors of Agriculture who report to the Director of Agriculture***. The Additional Directors are assisted by Joint Directors or Deputy Directors and a number of subject matter specialists who take charge of different components like administration, personnel management, inputs, extension, seeds, information, training, monitoring, technical support, etc. In some states, where there are many districts, the ***District Extension Officer*** (also called ***Deputy Director of Agriculture***) is supervised by ***Zonal or Divisional Extension Officer***

(also called Joint Director of Agriculture). At the district level, the District Extension Officer is supported by a small team of *Subject Matter Specialists* (SMS). At the sub-divisional level there are *Sub-Divisional Extension Officers* (SDEOs). About 4 to 8 SDEOs are supervised by a District Extension Officer. At the block level there are 5 to 8 Agricultural Extension Officers (AEOs) who are guided by a SDEO. Each AEO supervises and trains 6 to 8 Village Extension Workers (VEWs). The VEWs are directly in touch with the farmers at village level.

4.5.2 Current Status of Agricultural Extension

At the state level, the Department of Agriculture, through its Extension Wing, continues to be the major player in the field. Almost all states established Training and Visit System of Extension in the late 1970s or the early 1980s. Though the World Bank's assistance to this programme has been withdrawn, yet the basic frame of T&V system has been maintained by the states. The number of the different categories of extension staff in India has been estimated to be 110,000. Twenty per cent of the extension staff possess a college degree as their minimum qualification.

Different studies and experiences have shown that the T&V approach was suitable mainly for irrigated areas, which have witnessed a higher level of gains in production and productivity. This system, however, was not effective in resource poor areas. The problems of T&V system were as follows:

a) poor spread of messages through contact farmers; b) low levels of the relevance of technical messages to farmers' conditions; c) concentration on cereal crops; d) lack of farming system approach; e) neglect of farm women; f) routine fortnightly training programmes which lacked new technical content; g) non-availability of qualified subject matter specialists; h) problems related to non-filling up of vacant posts; i) weak input support system; j) poor performance of monthly workshops and other mechanisms to improve linkage with research; and k) lack of an effective use of multimedia for the diffusion of innovations.

In order to tackle the weakness of T&V system, many states have made extension "broad based". The "broad based" extension approach envisages the transfer of not only the technologies related to the major crops but also allied enterprises such as forestry, fisheries, horticulture, livestock, etc. in an integrated manner through co-ordination among the different development departments. It may be mentioned here that the results of broad-based extension have not been encouraging due to various factors like difficulties in co-ordination among the different departments and poor professional competencies of the field level extension personnel.

Some states, like Kerala and Rajasthan, have introduced 'group approach' to extension which has been found successful in countries like Indonesia and Thailand. The group rather than the individual based extension approach has shown promising results in securing farmers' participation and making the extension services relevant to farmers' needs. Some states are also experimenting with bottom up approaches in preparing extension programmes by involving farmers in the planning process.

The other innovative approaches and practices which have been recently tried to improve the efficiency of extension includes the concept of 'para-extension worker' or 'farmer-led extension'. This approach relies on 'farmer to farmer' extension based on the participation of the members of the farming community. Some of the members of the farmers' groups or organisations are selected to perform the role of extension workers on voluntary or nominal payment basis. The selected para-extension workers are given training at State Agricultural Universities (SAUs) or Krishi Vigyan Kendras (KVKs) in collaboration with NGOs. These 'farmer extensionists' keep in touch with extension agencies and pass on the technical messages to the members of their group.

At the national level, the Directorate of Extension, which is a part of the Department of Agriculture, Ministry of Agriculture & Co-operation, co-ordinates various activities related to agricultural extension. The Directorate of Extension was set up in 1958 in the wake of the Community Development Programme and National Extension Services. It was to serve as a nodal agency to provide guidance and technical support to different states to operate efficient extension services. The functional areas of the Directorate are extension management, extension training and farm information. The Directorate, through its four Extension Education Institutes located at Nilokheri (Haryana), Anand (Gujarat), Hyderabad (Andhra Pradesh), and Jorhat (Assam), is also imparting training in different areas of extension methodology. The National Institute of Agricultural Extension Management (MANAGE) established in 1985 offers training in the area of extension management to senior and middle level extension functionaries.

Check Your Progress II

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) List two features of T&V system of extension.

.....
.....
.....
.....
.....
.....
.....
.....

2) Name at least three measures undertaken by the State Departments of Agriculture to tackle the weaknesses of T & V system.

.....
.....
.....
.....
.....
.....

3) List three recent innovations in the organisation of extension.

.....
.....
.....
.....
.....
.....

4.6 EXTENSION ROLE OF AGRICULTURAL UNIVERSITIES AND ICAR INSTITUTES

Since 1960 significant progress has been made in the field of agricultural education in India. *A new set of institutions called agricultural universities patterned after the Land Grant Universities of U.S.A., were set up in various states in India.* This important innovation in the field of agricultural education has led to strengthening of the national system of farm education, research and extension. The role of these agricultural universities differs sharply from that of the traditional universities. In addition to being academic institutions of higher learning in the usual sense, these universities are actively involved in transforming the lives of rural people through their tripartite functions of teaching, research and extension. In more specific terms the major extension roles of agricultural universities are: i) *manpower development in extension*, ii) *collect, process and disseminate the latest research findings to extension personnel and extension clientele through appropriate methods and media*, iii) *identify field problems for which scientific solutions are not yet available and to communicate these to the concerned subject matter departments to work on*, and iv) *plan and organise training of various types and durations for extension personnel and farmers.*

The Indian Council of Agricultural Research (ICAR) is also involved in agricultural extension apart from its major role of research and education. The ICAR has contributed to agricultural extension by way of innovative extension approaches. In fact the concept of and the project on National Demonstration, which was one of the key instruments for bringing about 'green revolution' in India, was developed and launched by ICAR during the 1960s. The extension projects like Operational Research Project (ORP) and Krishi Vigyan Kendra (KVK) and Lab to Land Programme (LLP) were also introduced by ICAR. The present thrust areas of extension activities of ICAR are related to technology assessment and refinement for identifying the location specific technology, vocational training of farmers, training of extension personnel to update their knowledge, and providing single window delivery system of technology products, services and information through Agricultural Technology Information Centres (ATIC).

The extension activities of ICAR are carried out through Krishi Vigyan Kendras (344 in number spread all over India), Trainers' Training Centres (10 in number), Institute Village Linkage Project (42 centres) and Agricultural Technology Information Centres (44 in number).

Krishi Vigyan Kendras

Krishi Vigyan Kendras (KVKs) or Farm Science Centres are specialised institutions to provide vocational training to farmers based on the idea of *learning through work-experience*. The KVKs were born out of the recommendations of the Education Commission (1964-66). The KVKs in contrast with Polytechnics do not offer diploma or degree oriented courses. Instead, the courses offered by KVKs are need based and impart skills and knowledge to the practicing farmers, in-service extension workers and to those who seek self-employment in agriculture. At present, there are 344 Krishi Vigyan Kendras spread all over India. The mandate for KVKs has been revised in recent years in accordance with the changing needs of the farmers. The current mandate of the KVKs includes conducting 'on-farm tests' for identifying relevant location-specific technologies, organising training to update the extension personnel with emerging advances, organising short and long-term vocational training courses in agriculture and allied vocations for the farmers and organising frontline demonstrations on various crops.

Institute Village Linkage Programme (IVLP)

The IVLP is an innovative programme developed by the ICAR to help scientists to have direct interaction with the farming community, so that appropriate technologies are

developed for farmers. Here research, extension and farmers establish firm links by jointly carrying out the assessment and refinement functions in the technology development and dissemination process. This helps the research system to generate a cafeteria of technologies, which are more productive in small production systems, more profitable in the commercial production system and gender sensitive for removal of drudgery of farmwomen. The major objectives of IVLP as per ICAR guidelines are as follows:

- 1) To introduce technological intervention with emphasis on stability and sustainability along with productivity of small production systems.
- 2) To introduce and integrate the appropriate technologies to sustain technological interventions and their integration to maintain productivity and profitability taking environmental issue into consideration.
- 3) To introduce and integrate the appropriate technologies to increase the agricultural productivity with marketable surplus in commercial on- and off-farm production systems.
- 4) To facilitate adoption of appropriate technologies for the removal of drudgery, increasing efficiency and generating higher incomes for farmwomen.

4.7 PRIVATISATION OF EXTENSION SERVICES

As you know, agricultural extension services are largely funded and managed by government agencies. Due to factors such as limited resources and changes in the policies of the government, '*privatising extension*' has been accepted as one of the strategies in recent years. The word 'privatise' is defined as transfer from state ownership to private ownership (Oxford Advanced Learners Dictionary, 1989). According to Savas (1987), the word '*privatisation*' has acquired a broad meaning as it has now come to symbolise a new way of looking at *society's needs and rethinking of the role of government in fulfilling these needs*. It means relying more on societies' private institutions and less on government. Privatisation is the act of reducing the role of government or increasing the role of private sector in an activity or in the ownership of assets." (Sulaiman and Sadamate, 2000). The factors that favour privatisation of extension services are: i) difficulties faced by the government in funding the extension machinery, ii) reduced donor contribution to agricultural research and extension, iii) poor quality of the extension services provided by the government agencies, iv) transformation of agriculture from a subsistence to profit oriented enterprise, v) the development of private research and extension set-up with promising technology, and vi) global competition after GATT agreement.

Box 2

Alternative Cost-Sharing Arrangements (Mariam, 1993)

- 1) **Contracting:** Contracting out is now frequently considered to be one of the more feasible options for privatising the economies of the developing countries. This option is even more feasible when private companies prefer to act as contractors or concession agents. Government can assign contracts to non-profit voluntary or neighbourhood organisations for various types of service.
- 2) **Franchise agreements:** Franchising is a privatisation method whereby government grants private entity, authority to provide a particular service within a specific geographical area. Users receive and pay for the service directly but the government may monitor performance with respect to the franchise in terms of price, amount or level of service and the ability of providing a service. Franchising has great potential for achieving cost savings when applicable and properly implemented. The reason for this is that franchising allows the government to remove itself from the actual provision and delivery of service.

- 3) **Vouchers:** Government provides certificates to eligible citizens requiring a particular service. The users are then free to exchange the certificates or vouchers for services from qualified private organisations that return the vouchers to local governments for reimbursement. The voucher alternative allows the user to choose among services and providers and generally means better monitoring and quality control of services.
- 4) **Self-help:** This privatisation alternative is the most underutilised. Under this approach, the government encourages individuals or groups to organise their own services. The individuals involved become their own clients. This alternative is designed to encourage individuals to become more self-reliant, and to provide a service better tailored to local circumstances.
- 5) **Subsidy arrangements/ grants:** Government makes a financial or in kind contribution to private extension agencies at reduced cost. The subsidy arrangements are often used for governmental activities such as public safety, wealth and human services and recreation.”

Alternative Cost-Sharing Arrangements

To facilitate withdrawal of Government from the provision of extension service, Mariam (1993), as quoted by Sulaiman and Sadamate (2000), has suggested several alternatives, which may be seen in Box 2 above.

4.8 RECENT INNOVATIONS IN ORGANISING EXTENSION SERVICES

In recent years several innovations have been introduced for organising extension. The following innovative approaches have been identified by Rasheed (2003):

- 1) Support the NGOs and Farmers' Organisations through the State Department of Agriculture.
- 2) Special programmes related to women in agriculture.
- 3) Development of Agricultural Technology Management Agency (ATMA) as a part of National Agricultural Technology Project
- 4) Promotion of group approach including Self-Help Groups.
- 5) Increasing the role of private and NGO sector.
- 6) Promotion of para-extension workers.
- 7) Increased use of modern Information and Communication Technologies such as computers, digital networks, telecommunication, radio, television, internet, etc. for the dissemination of farm information.
- 8) Establishment of Agri-clinics by the agricultural graduates with the assistance of bank loans.

Given below is a brief description of the Agricultural Technology Management Agency (ATMA).

Agricultural Technology Management Agency

Agricultural Technology Management Agency (ATMA) is one of the innovations meant to promote technology dissemination under the National Agricultural Technology Project (NATP). It functions as a registered society at district level and serves as a focal point for integrating research and extension activities and helps in decentralising the management of agricultural technology transfer. The members of ATMA include representatives of the Departments of Agriculture, Animal Husbandry, Horticulture,

and Fisheries. Each research-extension unit retains its institutional identity and the management committee of ATMA plans extension activities. At present, ATMA is in operation in twenty-eight districts spread over seven states. The objectives of ATMA are to strengthen research-extension-farmer linkages and to provide an effective mechanism for the co-ordination and management of the activities of different agencies involved in technology adaptation, validation and dissemination at the district level and below.

Salient innovative features of ATMA

The salient innovative features of ATMA are: i) creating Farmer Advisory Committees to improve feedback, ii) using NGOs to organise farmers and encourage private sector involvement in technology transfer, iii) validating and refining technologies through research units in the district, a bottom up planning procedure, iv) increasing the use of Information Technology (ARIS, WWW), v) providing in-service training to increase staff competence, vi) developing new Public-Private partnerships, and vii) forming and strengthening farmers' interest groups.

Major Functions of ATMA

The major functions of ATMA are given below:

- Diagnostic survey by researchers and extension workers along with other government staff from the agriculture and other line departments, NGOs and representatives of corporate sector processors, input suppliers, bank and farmer representatives using PRA techniques.
- Identification of problems currently affecting the technology dissemination system and limiting its performance or sustainability.
- Determination of the main opportunities and constraints (markets, input supplies, financial and social factors, the natural resource base, etc.) that should be considered for developmental planning.
- Formulation of Strategic Adaptive Research and Extension Plan for the district concerned, setting out technical objectives as well as innovations to be introduced into the organisation and funding of technology dissemination.
- Preparation of specific action plan plus implementation responsibilities of the public sector and other stakeholders for the specific year.
- Arranging technical programmes covering the need for adaptive research, farmer participatory trials, demonstrations, field days and the development of extension recommendations for the coming season.

4.9 PROBLEMS AND CHALLENGES IN EXTENSION SERVICES

In spite of different approaches and experiments of the past, we have not been fully successful in diffusing technology. Different studies, reports and observations reveal the following problems currently facing agricultural extension system of our country.

1) Lack of the Participation of Farmers

By and large the extension programmes have been developed and implemented without the active participation of farmers. Farmers (especially the small and marginal farmers), farm women and weaker sections of the rural society are rarely involved in identifying the needs and establishing priorities. Thus, without the inputs, and feedback from farmers, many extension programmes remain ineffective as an instrument of positive and planned change.

2) **Trickle down Approach**

The extension approach of our country has, by and large, been based on Roger's model of diffusion of innovations. According to this theory, the innovation is first adopted by a small group of motivated farmers, then it spreads to other farmers in the community. Our experiences, however, have shown that technologies have not diffused to the majority of small and marginal farmers and weaker sections. The diffusion model does not pay attention to social issues like inequality in socio-economic status, and unequal distribution of impacts and benefits of innovations. Extension approaches in the past have concentrated on reaching individual farmers and neglected 'group approach' and social 'action model'.

3) **Lack of Attention to Farming**

The agricultural extension for various reasons has been operating with a narrow focus with regard to the dissemination of farm technology. Efforts of extension are concentrated more on individual crops and efforts have not been made to improve the whole farming system. A holistic approach to extension, which includes different crops, animals, forestry, horticulture and fisheries, is missing.

4) **Financial Crisis**

Due to the problem of resource crunch the availability of funds for agricultural extension is getting reduced. Studies have pointed out that per hectare investment on extension works out to be about Rs. 16. Annual expenditure per extension worker is Rs. 15,000 for the main extension system of the Department of Agriculture. The extension system also suffers from the lack of operational funds needed for programme activities and the maintenance of physical infrastructure, as up to 90 per cent of the budget is allotted to salaries. Studies have also indicated that the share of non-salary component in the total extension expenditure is decreasing every year (Pal and Singh, 1997).

5) **Multiplicity of Agencies and Lack of Co-ordination among them**

One of the significant problems facing the extension system today is the multiplicity of departments and agencies dealing with extension work. Each department operates its own extension services. This problem has increased due to the creation of new departments like horticulture, agro-forestry, oil seeds, agricultural engineering, etc. While there is very little co-ordination among these line departments, most of them are involved only in the distribution of subsidised inputs. Attention has not been paid to improve the farmers' knowledge, skill and managerial abilities.

6) **Lack of Motivation and Morale among Extension Workers**

The extension service of our country has always suffered due to poor motivation and morale among extension staff. One of the reasons for this situation is poor professional status including low salary levels and lack of career advancement.

7) **Poor Impact**

The impact of extension services is not always visible and measurable. The impact due to extension cannot be easily separated out from that of other factors such as technology, various inputs and favourable climate. Due to methodological weaknesses in finding out the actual contribution of extension, the role and importance of extension has been questioned.

8) **Poor Inputs-support System**

In spite of growth in the provision of different inputs through private sector, the absence of assured and timely supply of quality seeds, fertilizers, pesticides and credit continues to be one of the serious problems facing extension today.

9) **Lack of Professional Competence**

The improvement of professional competence among the village level workers through regular training under T&V system has been found to be only marginal. A majority of the village level workers are matriculates and not interested in improving their professional competencies, as their promotions are not linked to performance. Most of the subject matters specialists at block and district levels are specialists only according to their job designations, and not according to their professional competencies, skills and knowledge. Many of them have become SMSs by the virtue of their seniority and promotions. As a result, they are not in a position to offer solutions to the complex field problems faced by the farmers.

10) **Poor Management of Extension Programmes, Organisations and Personnel**

Since extension services are provided through Government Departments and operated under bureaucratic hierarchies, the organisation and management of extension work has been affected by pathologies of bureaucracy. Thus, the contextual factors of extension have considerably weakened the efficiency of programme planning and implementation. The factors like bureaucratic work culture, ineffective reward system, domineering leadership style, monotonous nature of work, lack of team effort and lack of autonomy in decision making at the field level are responsible for the poor management of programmes and the people in extension organisations. Studies have also pointed out that extension personnel lack management skills in areas like planning, leadership, decision making, problem solving, team building and creativity.

11) **Neglect of Farm-women and Youth**

In spite of the fact that women are actively involved in farm related operations as well as in different farming activities, agricultural extension services are focused mainly on men. This male bias can be seen in the low recruitment levels of female VLWs and AEOs to reach out to farm-women. Attention has not been paid to provide extension services to women farmers assuming wrongly that farm-women play only a marginal role in farm production. Investigations, however, have shown that up to 60 per cent of all the farm operations are performed by women and a large number of farmers in India are women.

12) **Poor Use of Modern Communication Technologies**

While emphasising the importance of face-to-face method of extension, the T&V system has generally neglected the use of mass media such as radio, television, film, videos, and newspapers. Disappointment with the failure of diffusion through ‘contact farmer system’ shows the need for greater use of mass media to create awareness among farmers, as radio and television signals cover almost the whole population of India now.

Check Your Progress III

Note: a) Use the space provided for your answers.

b) Check your answers with the possible answers provided at the end of this unit.

1) Name three factors which favour privatisation of extension services.

.....
.....
.....
.....
.....

2) Suggest five measures for improving agricultural extension services in India.

.....

.....

.....

.....

.....

4.10 LET US SUM UP

In this unit, while looking at the concept and meaning of agricultural extension, we saw that definitions of extension vary according to the context and policy traditions under which they are defined. As we saw, in the Indian context, the meaning of extension is *education and preparation for change*. As we saw, the common elements in the different definitions of extension are that it is an educational process deployed by an institution, that it makes use of different communication channels and focuses on the promotion of presumed public utility.

The Training and Visit (T & V) system which was introduced in India during 1974 was one of the major exercise on re-organisation of extension services. Though the assistance of World Bank to this programme has been withdrawn, yet the basic frame of T & V system has been maintained by most of the states. In order to tackle the weaknesses of T & V system, many states have made extension service 'broad based'. The recent innovative approaches in extension include the promotion of group approach, increased role of NGOs and private sector, promotion of para-extension workers, establishment of agri-clinics and the use of modern information technologies. We also saw that promotion of Agricultural Technology Management Agency (ATMA) as a part of National Agricultural Project is a major innovative effort to make extension responsive to the needs of farmers using a participatory approach. Further, in recent years 'privatising extension' has been accepted as one of the important strategies in India.

Looking at the extension setup in India, we found that State Departments of Agriculture, Agricultural Universities and research institutes of ICAR are all engaged in agricultural extension work. The thrust areas of extension activities of ICAR include technology assessment and refinement of farm technologies, training of farmers through KVKs and a single window for services and delivery system through Agricultural Technology Information Centres.

The major problems of extension services in India are the lack of participation from resource poor farmers, dependence on the trickle down approach, the lack of farming system approach, inadequate funds for extension activities, multiplicity of agencies without proper co-ordination among them, poor motivation and morale of extension workers, poor impact of extension services, poor input-support system, neglect of farm women and youth and poor use of modern information and communication technologies.

4.11 KEY WORDS

Agricultural Technology Management Agency (ATMA) : It is one of the innovations in the technology dissemination components of National Agricultural Technology Project (NATP). It functions as a registered society at the district level and serves as a focal point for integrating research and extension

- activities and helps in decentralising the management of agricultural technology transfer.
- Communication** : Communication is the process by which messages are spread from source to the receiver (Rogers and Shoemaker,1971).
- Demonstration** : Demonstration is a presentation which illustrates a task procedure or the use of an equipment in a step-by-step fashion, so that trainees can observe and understand the procedure, principles or the phenomenon in an interesting and convincing way.
- Diffusion** : Diffusion is the process by which innovations spread to the members of a social system (Rogers and Shoemaker, 1971).
- Extension** : Extension is *education* and its purpose is to change the attitude and practices of the people with whom work is done.
- Innovation** : An idea, which is, perceived to be new, or a new tool that can do things in a new way.
- Institute Village Linkage : Prograame (IVLP)** : The IVLP is an innovative program developed by the ICAR to help scientists to have direct interaction with the farming community so that appropriate technologies are developed for farmers. Here research, extension and farmers establish firm links by carrying together the assessment and refinement functions in the technology development and dissemination processes.
- Krishi Vigyan Kendras (KVKs)** : Krishi Vigyan Kendras (KVKs) or Farm Science Centres are specialised institutions that provide vocational training, based on learning through work-experience, to farmers.
- Learning** : In the context of *extension*, learning is a process by which sensations are experienced, ideas and events perceived and understood and action taken resulting in desirable knowledge, skill and attitude.
- Package Approach** : Package approach refers to the package of improved agricultural practices, supply of necessary farm inputs including credit and increased extension services.
- Privatisation** : Privatisation is the act of reducing the role of government or increasing the role of private sector in an activity or in the ownership of assets (Sulaiman and Sadamate, 2000).
- Teaching** : Teaching refers to the process of imparting knowledge where the teacher controls the process and the content of learning.
- Training** : Training is a process of acquiring new skills, attitudes, and knowledge in preparation to enter a vocation or for improving one's productivity for an enterprise.
- Training and Visit (T&V) System** : This system is also known as Reformed Extension or Intensive Agricultural Extension. It is an arrangement for fortnightly training of extension workers and their scheduled visits to farmers' fields. T & V was introduced in India in 1974 with financial assistance from the World Bank.

4.12 REFERENCES AND SUGGESTED READINGS

Ray, G.L. 2001: *Extension, Communication and Management*, 4th Edition, Naya Prokash, Calcutta.

Singh, S.N., K. Vijayaragavan and T. Haque. 1991: *Transfer of Technology to Small Farmers*, Concept Publishing Company, New Delhi.

Swanson, B.E., R.P. Bentz, and A.J. Sofranko. 1997: *Improving Agricultural Extension, A Reference Manual*, FAO, Rome.

Van den Ban, A.W. and H.S. Hawkins. 1998: *Agricultural Extension*, CBS Publishers & Distributors, New Delhi.

Vijayaragavan, K., J.B. Singh, S.N. Singh, B.R. Patel and H.C. Khanduri (1996): *Participatory Approaches to Sustainable Rural Development*, Indian Potash Limited, New Delhi – 110 008.

Axinn, G.H. (1988): *Guide on Alternative Extension Approaches*, FAO, Rome.

Benor, D. and Baxter, H. (1984): *Training and Visit Extension*, The World Bank, Washington, D.C.

Choudhary, B.N. (1999): *Krishi Vigyan Kendra – A Guide for the KVK Managers*, ICAR, New Delhi.

Leagans, J.P. (1961): *Extension Education for Community Development*. In *Extension Education in Community Development*, Directorate of Extension, Ministry of Food and Agriculture, New Delhi.

Maunder, A.H. (1973): *Agricultural Extension: A Reference Manual*, FAO, Rome.

Rivera, W.H. and Cary, J. W. (1997): “Privatizing Agricultural Extension” in *Improving Agricultural Extension. A Reference Manual*, FAO, Rome.

Roling, Niels (1988): *Extension Science: Information Systems in Agricultural Development*, Cambridge University Press, New York.

Sulaiman, V.R. (2003): *Innovations in Agricultural Extension in India. SD Dimensions*, June, IFAO.

4.13 CHECK YOUR PROGRESS – POSSIBLE ANSWERS

Check Your Progress I

- 1) Extension is an educational process of working with people and not for them. It aims at behavioural changes (brought about by the newly acquired knowledge, skills and attitudes) among the recipients of the extension services.
- 2)
 - i) Extension is an educational process that aims at voluntary change.
 - ii) Extension is an intervention that is deployed by an institution.
 - iii) Extension makes use of different communication channels and teaching methods.
 - iv) Extension focuses primarily on the promotion of presumed collective public utility rather than some private interest.

Check Your Progress II

- 1)
 - i) Fortnightly training of extension workers.
 - ii) Scheduled visits to farmers' fields.

- 2)
 - i) Broad-basing agricultural extension.
 - ii) Introduction of group-approach to extension.
 - iii) Involvement of farmers in the planning process.
- 3)
 - i) Special programmes related to women in agriculture.
 - ii) Establishment of Agricultural Technology Management Agency (ATMA).
 - iii) Promotion of para-extension workers.

Check Your Progress III

- 1)
 - i) Financial constraints in funding extension machinery.
 - ii) Transformation of agriculture from subsistence to profit orientation.
 - iii) Global competition after GATT agreement.
- 2)
 - i) Ensure participation of resource poor farmers in extension programmes.
 - ii) Adoption of farming system approach.
 - iii) Improvement of co-ordination among different agencies involved in extension.
 - iv) Increase the motivation and morale of extension workers through effective reward systems.
 - v) Concentrate on farm women and farm youth.



Indira Gandhi National Open University
School of Continuing Education

MRD-101
Rural Development:
Indian Context

Rural Development — Agrarian Issues 3