

# CHAPTER 10

## Agricultural Extension

### OBJECTIVES

At the end of the chapter, students should be able to:

- â—† state the meaning and importance of agricultural extension.
- â—† discuss agricultural extension as a teaching and learning process.
- â—† state the methods of disseminating new ideas and techniques to farmers.
- â—† mention agricultural extension programmes in Nigeria.
- â—† link between agricultural researchers and technology transfer to the target farmers.

### 10.1 Introduction

Agricultural extension is a very important component of agriculture. It is the process by which useful agricultural skills and technologies are disseminated to and adopted by people for an improved agriculture and better life.

Farmers are trained to learn, observe and put to practice the technologies that have been developed and passed on to them. The extension worker uses a variety of methods, such as field demonstrations, farm visits and in-service training to teach a specific skill. Thus, the agricultural extension forms a major

### 10.2 Meaning and Importance of Agricultural Extension

Agricultural extension is the process of dissemination of useful agricultural skills and developed technologies to and adopted by rural people for an improved agriculture and better life. It is an education process designated to equip farmers for better practice of agriculture and self-reliance. It is also the process through which the farmers can learn the reasons for change, the value of change, the results that can be achieved and the process of that change.

#### 10.2.1 Importance of Agricultural Extension/Roles/Functions of Extension Agent

- â—† Training and encouragement of farmers to try, accept and adopt new agricultural practices and technologies.
- â—† Dissemination of research results through the development of appropriate production packages and encouraging rural farmers in their use.
- â—† Organization of credit, marketing and farmers co-operative.
- â—† Provision of farm-management advisory services.
- â—† Guidance and general education of farmers.
- â—† Helps to introduce community, economic or youth development programmes in the target areas.
- â—† Helps to collect and collate basic information related to the rural economy used for planning, organizing and implementing auxiliary programmes.
- â—† Acts as liaison between farmers and the research institutes or Ministry of agriculture.
- â—† Helps to supervise the beneficiaries of agricultural loans.
- â—† Helps to source farm inputs and identify proper marketing channels to sell their products.
- â—† Helps to raise the standard of living of farmers by their own efforts using their own resources with minimum assistance from the government.

### 10.3 Characteristics of Extension

The following characteristics distinguish extension from formal education:

1. It is voluntary, not compulsory.

2. It is a problem-centred education.
3. Its classroom is the field of the farmer and the home of the housewife.
4. It involves trained workers in agriculture and home economics.
5. Involves practical demonstration.

## 10.4 Principles of Extension

1. Extension should start from where the people are and move to higher levels (from known to unknown).
2. Extension should assist people to determine their own problems, help them to find solutions and encourage them to take action.
3. It should be based on the needs and interest of the people which must be related to their livelihood.
4. Extension should work with all members of the family.
5. Extension should use different methods of teaching rural people in order to keep their interest in the process.
6. Extension should assess its work regularly to see how much of the objectives have been achieved.
7. Extension should be based on facts and knowledge.
8. Extension should work towards encouraging the development of volunteer local leaders.

## 10.5 Qualities of a Good Extension Personnel

Extension personnel work directly with people; therefore, they need to possess certain qualities which include the following:

1. Ability to relate well with farmers and attend to their learning needs.
2. Ability to organize group development and interaction and to perform as leader in group-learning methods.
3. Ability to communicate well with individuals and groups.
4. Knowledge of and skill in agriculture and agricultural technologies.
5. Ability to structure and restructure information for different audiences.
6. Good health and physical conditions.
7. Desire and dedication to teach.
8. Ability to use simple terms and methods in teaching rural farmers.
9. Must be able to speak the language of the people.

## 10.6 Extension Methods

These are channels or avenues or media used to pass on messages to and from the farmers and the research institutes or universities. The choice of extension method as a tool determines the success of the extension worker. This depends on the skill and proper usage of the various methods by the extension worker. Extension methods can be categorized according to the number of people reached as follows:

**(a) Individual contact methods:** This involves direct contact between the farmer and the extension workers. The methods may include:

- i. Farm and home visits
- ii. Office calls
- iii. Telephone calls
- iv. Correspondence
- v. Result demonstration

**(b) Group contact methods:** This is used for a small group of farmers. The methods often used

include:

- i. Method demonstration
- ii. Result demonstration
- iii. General meeting
- iv. Lectures
- v. Group discussion
- vi. Workshops
- vii. Field trips or farm walks or excursion
- viii. Agricultural shows

(c) **Mass media methods:** This involves the use of mass media channels to reach large audience or farmers with extension messages at the same time. The messages must be general so as to be of interest to all. Such methods include:

- i. Electronic media such as radio, television, audio and video tapes, Internet, cinema vans and films or agricultural shows.
- ii. Print media such as newsletters or pamphlets, newspapers, magazines, professional journals, posters, bulletins, circulars, leaflets, manuals and textbooks.

## **10.7 Roles of Government and Non-Governmental Organizations in Agricultural Extension**

The organizations that are involved in the dissemination of new ideas and techniques include:

- i. Universities
- ii. Research institutes
- iii. Government ministries and
- iv. Farmers' association

### **10.7.1 Universities**

These are centres of in-depth knowledge, training and research.

—† They train and produce skilled manpower or personnel in agricultural extension, rural sociology and adult education.

—† They carry out research on problems faced by the farmers and communicate the results and solutions to the farmers.

—† They establish experimental or demonstration farms and refresher courses for extension personnel to keep them abreast of advances in the field.

—† They recruit and train volunteer farmers who are employed in extension education.

### **10.7.2 Research Institutes**

These are centres of research in agriculture. Examples are:

—† Institute of Agricultural Research and Training (IART), Ibadan

—† International Institute of Tropical Agriculture (IITA), Ibadan

—† Cocoa Research Institute of Nigeria (CRIN), Ibadan

—† National Horticultural Research Institute (NIHORT), Ibadan

—† Institute of Agricultural Research (IAR), Zaria

—† National Veterinary Research Institute (NVRI), Vom

—† National Cereal Research Institute (NCRI), Badeggi

—† Nigeria Institute for Oil Palm Research (NIFOR), Benin

—† National Root Crops Research Institute (RCRI), Umudike

—† Rubber Research Institute of Nigeria (RRIN), Benin etc.

—† They conduct intensive research in defined areas of agriculture

—† They conduct seminars, courses, workshops and training for farmers, extension workers,

administrators and other agricultural officers.

â† They establish and maintain a direct link of communication with farmers, government and non-governmental organizations.

### **10.7.3 Government Ministries**

These include Ministry of Agriculture, Ministry of Education, Ministry of Commerce and Industry.

â† They help to formulate and implement agricultural policies with respect to agricultural extension.

â† They help to maintain extension services divisions. For example, they advise farmers on crops to plant or livestock to rear, planting time, sources of inputs and record keeping.

â† They help to maintain field offices from where extension agents pay a visit, arrange field trips and conduct meetings with farmers.

â† They help to relay programmes and announcements to farmers on radio and television. For example, outbreak of diseases or pest infestation.

â† They help to bring farmers and consumers together as a cooperative body in order to cater for mutual interests.

â† They liaise with financial institutions in assisting farmers to achieve their goals.

### **10.7.4 Farmers' Associations**

These are group of farmers who come together to form a union, the overall purpose is to work together to achieve common goals. They play the following roles:

â† They encourage free association among farmers for mutual benefits.

â† They are involved in the marketing of produce on behalf of their members.

â† They organize meetings to discuss their problems and provide solutions to the problems.

â† They speak as a group when dealing with the government, consumers, lenders and others.

## **10.8 Agricultural Extension Programmes in Nigeria**

Several of agricultural extension programmes have been set up by the government to deal with specific agricultural projects. The various ministries of agriculture, schools of agriculture, universities and research institutes have extension education units that teach the principles, train field workers on the job to strengthen their daily extension services, and pass on new technologies to farmers. Some agricultural extension programmes in Nigeria include the following:

1. Agricultural Development Programmes (ADP)
2. Farm Settlement Schemes
3. Agro-Service Centres
4. River Basin and Rural Development Authority (RBRDA)
5. Directorate of Food, Roads and Rural Infrastructure (DFRRI)
6. National Accelerated Food Production Programme (NAFPP)
7. Ministries of Agriculture
8. Green Revolution
9. Young Farmers Club
10. Cooperative societies
11. Back to land farming programme
12. Radio–television farming programme
13. Root and tuber expansion programme
14. National Agricultural Land Development Authority (NALDA)
15. National Fadama Development Project (NFDPP)
16. National Special Programme on Food Security (NSPFS)
17. National Agricultural Extension and Research Liaison Services (NAERLS)
18. Operation Feed the Nation (OFN)

## 10.9 Adoption and Diffusion Processes in Agriculture

**Diffusion Process:** This is the process by which new ideas spread from one group to another.

**Adoption Process:** The process which an individual goes through from the time he hears about the idea till when he finally accepts it.

There are five stages of decision making by the farmer in adoption process. They are as follows:

**(a) Awareness stage:** This is when the farmer knows that the idea exists but does not know much details about it.

**(b) Interest stage:** The farmer seeks more information about the idea if it interests him. He seeks answers to questions like: What is the idea? How does it work? What are the gains?

**(c) Evaluation stage:** The farmer weighs the advantages and the risks involved. The farmer wants to know if the new idea would be more effective than what he has been doing and if it will increase his income.

**(d) Trial stage:** If the farmer finds the idea to be good, he sets up farm trial and observes how it performs.

**(e) Adoption stage:** The farmer adopts and uses the idea continuously on a large scale.

There are four categories of farmers based on the rate of adoption of new innovations. These are:

- i. Innovators
- ii. Early adopters
- iii. Late adopters (Laggards)
- iv. Never adopters

### 10.9.1 Factors Affecting Adoption Processes

The rate of adoption depends on:

1. Size of farm business. This describes how large the farm is.
2. Personal characteristics. Farmer's level of education and income.
3. Social status or prestige in the society. Popularity, position occupied and integrity of the farmer in the locality.
4. Availability of well-trained extension personnel.
5. Norms and beliefs of the individual or community.
6. Nature of the new innovation.

## 10.10 Problems of Agricultural Extension

1. Inadequate manpower: Low extension workers to farmer ratio.
2. High rate of illiteracy among farmers makes communication difficult.
3. Poor extension tools and facilities.
4. Conservative attitude of farmers makes changes difficult.
5. Poor accessibility to farming communities.
6. Bureaucracy level in government or red tapism.
7. Improperly defined roles of extension agents.
8. Uncommitted and undedicated agents.
9. Poor motivation and remuneration to extension agents.
10. Poor social amenities in the rural areas discourage workers.
11. Inadequate transportation facilities for extension agents.
12. Poor communication system.
13. Inadequate input to back up extension messages.
14. Inadequate finance makes the work more tedious.

### ACTIVITY

Visit a nearby Ministry of Agriculture extension unit and find out their activities towards improving agricultural production in the area. Write a summary of the activities in your note.

## SUMMARY

â—† Agricultural extension is the process by which useful agricultural skills and technologies are disseminated to and adopted by the rural people.

â—† The importance of extension includes educating and training farmers, spreading latest information and assisting farmers to adopt new technologies.

â—† A good extension personnel should be technically competent, skilled in human relations, in good health and simple.

â—† The methods used in disseminating new ideas include individual contact, group contact and mass media methods.

â—† Agricultural extension programmes in Nigeria include Agricultural Development Programmes, Farm Settlement Schemes, Agro-Service Centres, Ministries of Agriculture and River Basin and Rural Development Authority (RBDA).

â—† Problems facing agricultural extension include inadequate manpower, high level of illiteracy among farmers, poor tools and facilities, poor communication system and inadequate social amenities in the rural areas.

## REVISION QUESTIONS

### ESSAYS

- (a) List the three main extension teaching methods.  
(b) For each method listed in (a) state three types.  
(c) Give four qualities of a good extension agent. **(WASSCE 2007)**
- (a) State seven objectives of agricultural extension.  
(b) List the three main types of extension teaching methods and explain any two of them. **(WASSCE 2005)**
- (a) Explain the term extension in agriculture.  
(b) State eight functions of an extension agent.  
(c) List six problems of agricultural extension in your country. **(WASSCE 1999)**
- (a) Outline five factors affecting the adoption of new ideas and techniques by farmers.  
(b) Mention four agricultural extension programmes in Nigeria.
- List the organizations involved in extension education and identify the roles played by each.

## OBJECTIVE QUESTIONS

- The extension method that will benefit only the literate farmers is  
(a) radio. (b) television.  
(c) demonstration. (d) newspapers.
- The methods of disseminating new farming techniques to farmers include the following except  
(a) result demonstration. (b) use of radio.  
(c) use of television. (d) organizing symposia.
- The aims and objectives of agricultural extension education do not include  
(a) educating farmers on the use of new tools.  
(b) educating farmers on government's annual budgets.  
(c) encouraging farmers to obtain loans for farming.  
(d) encouraging farmers to use meteorological information in farming.
- The process which a farmer goes through from the time he hears about the new ideas till he finally accepts it is referred to as

- (a) evolution.
- (b) revolution.
- (c) diffusion.
- (d) adoption.

**5.** Agricultural education programmes for rural youth will reduce the

- (a) rate of adoption of innovations.
- (b) population of youth in rural areas.
- (c) age at which youth will venture into family life.
- (d) dependency of youth on parents.

**6.** One of the functions of agricultural extension is

- (a) cultivation of farmers farmlands.
- (b) construction of farmers' farmsteads.
- (c) organization and coordination of credit sources.
- (d) running of the country's formal education system.

**7.** The most inappropriate means of disseminating new ideas and techniques to the peasant farmer is by the use of

- (a) radio.
- (b) television.
- (c) internet.
- (d) cinema.

**8.** The best method of introducing a new pesticide to rural farmers is through

- (a) farmers' co-operatives.
- (b) circular letters.
- (c) demonstration.
- (d) field trips.

## **Answers to Objective Questions**

1. d   2. d   3. b   4. d   5. d   6. c   7. c   8. c