

## Chapter - 1

### Agricultural Extension; its definitions, Objectives and Importance of Extension

#### 1. Introduction to Agricultural Extension

Extension science serves as practices and as a body of knowledge from which practitioners derive their professional insight, in informal policy formulation, programme implementation and assists extension system to attain higher performance. There is no profession that has not profited from extension services in one way or the other.

##### 1.1 What is Agriculture?

The art and science of crop and livestock production. In its broadest sense, agriculture comprises the entire range of technologies associated with the production of useful products from plants and animals, including soil cultivation, crop and livestock management, and the activities of processing and marketing.

Agriculture is the oldest profession applied science in the world. Revolutionary changes have taken place in the field of agriculture. Most of the developing countries are grappling with the plans of the development of agriculture

The term **agribusiness** has been coined to include all the technologies that mesh in the total inputs and outputs of the farming sector. In this light, agriculture encompasses the whole range of economic activities involved in manufacturing and distributing the industrial inputs used in farming; the farm production of crops, animals, and animal products; the processing of these materials into finished products; and the provision of products at a time and place demanded by consumers.

**1.2. Background of Agriculture in Pakistan:** - From time Immemorial, agriculture has been the major occupation of the people of Pakistan. Even today agriculture is a major sector and occupies a very important place in the economy of Pakistan **Agriculture** is the backbone of Pakistan's economy. Pakistan has a rich and vast natural resource base, covering various ecological and climatic zones; hence the country has great potential for producing all types of food commodities. Agriculture has an important direct and indirect role in generating economic growth. The importance of agriculture to the economy is seen in three ways: first, it provides food to consumers and fibers for domestic industry; second, it is a source of scarce foreign exchange earnings; and third, it provides a market for industrial goods.

The agriculture sector continues to be an essential component of Pakistan's economy. It currently contributes (Economic survey of Pakistan 2011-12)

1. Contributing 21 percent towards GDP

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2. Providing food to about 181 million people;
3. Earning about 50 percent of the country's total export earnings;
4. Providing employment to 45 percent of the total work force;
5. Providing the main source of livelihood for 60 % rural population of Pakistan;
6. Providing raw materials for many industries and a market for many locally produced industrial products.

7.. During 2011-12, the overall performance of agriculture sector exhibited a growth of 3.1 percent.

8. It has a vital role in ensuring food security, generating overall economic growth, reducing poverty and the transforming towards industrialization

9. The livestock accounts for approximately 55.1 percent of the agriculture value added and 1.5 percent to GDP during 2010-11

### **1.3. Current Status of Agriculture in Pakistan :**

Pakistan has achieved impressive agricultural growth in the past few decades. Yet this growth is unsustainable because it has been achieved mainly through an increase in area of cultivated land, rather than productivity increases. Government intervention -- such as price controls, public sector output marketing and trading farm inputs as well as provision of rural financial services has not been effective. The intervention has removed incentives for technological advancement, efficiency improvements and private sector participation. Efforts to control salinity and water-logging have not yet reversed the declining trend in soil and irrigation water quality.

While agricultural growth has lowered food poverty in rural areas, it has not led to widespread increases in income. It has benefited large landholder's more than small landholders and the landless. The growth in total income has not resulted in better access to health and education services for the poor in rural areas.

### **1.4. Agricultural extension has three main facets: (Discipline, process and service)**

**1. As a discipline** it deals with the behavior of people. , extension is always dependent on a firm knowledge and expertise in sociology, anthropology, psychology, administration, economics, communication arts, political science and so on.

**2. As a process,** agricultural extension seeks to influence the behavior of rural people through education and information exchange. The aim is to assist them in gaining a livelihood, improving the physical and psychological level of living of rural families, and fostering rural

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community welfare. The success of the extension process requires an atmosphere of mutual trust, helpfulness and respect on the part of both extension worker and rural farmers.

**3. As a service**, agricultural extension makes the government ministry and university as useful sources. Keep research scientists in contact with the practical problem being faced by the farmers?

### 1.5 Global Extension Terminology

Country	Local Terminology	Meaning
Arabic	Al-ershad	Guidance
Austria	Forderung	Furthering/stimulating
Dutch	Voorlichting	Lighting the path
German	Beratung	Advisory work
French	Vulgarisation	Simplification
Indonesia	Penyuluhan	Lighting the way a head with a torch
Malaysia	Perkembangan	Lighting the way a head with a torch
Persian	Tarvij and Gostaresh	To promote and to extend
Spain	Capacitacion	Improving Skill
Thai Lao	Song-suem	To promote
USA	Cooperative Extension	Teach People to solve problems themselves

### 1.6. Definitions of Agricultural Extension

Agricultural extension was once known as the application of scientific research, knowledge, and technologies to improve agricultural practices through farmer education. The field of extension now encompasses a wider range of communication and learning theories and activities (organized for the benefit of rural people) by professionals from different disciplines. There is no widely accepted definition of agricultural extension, but to see how this field has evolved over the past 50+ years, look at 10 examples from different extension books found

#### 1.6.1. Definitions:

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**(1) Agricultural Extension** is a two-way channel; it brings scientific information to the village people, and also takes the problems of the village people to the scientific institution for solution. It is a continuous educational process, in which both learner and teacher contribute and receive. – **B. Rambhai (1958)**

**(2) Agricultural Extension** education is an applied science consisting of content derived from research, accumulated field experiences and relevant principles drawn from the behavioral science synthesized with useful technology into a body of philosophy, principles, content and methods focused on the problems of out of school education for adults and youth.– **J.P. Leagans (1961)**

**(3) Agricultural Extension** work is an out of school system of education in which adult and young people learn by doing. It is partnership between the Govt. and the people, which provides service and education designed to meet the people. Its fundamental objective is the development of the people. – **Kelsey and Harne (1963)**

**(4). Agricultural Extension** is an education that brings about improvement in a systematic way, through carefully planned and organized programmes (**Fenley and Williams, 1964**)

**(5). Agriculture Extension** is informal out-of-school system of education designed to help rural people to satisfy their needs, interests and desires. It is a system of education which involves adult learners (**Obibuaku, 1983**).

**(6). Agricultural extension** is « 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 ». A Reference Manual (Swanson, 1984).

**(7) Agricultural extension** is a professional method of non-formal education aimed at inducing behavioral changes in the farmers for increasing their income through increased production and productivity by establishing firm linkages with research for solving farmer's problems ensuring adequate and timely supply of inputs and using proven methods of communication for speeding of the process of diffusion and adoption of innovations." – **Y. C. Sanoria (1986)**

**(8). Agricultural Extension** is a comprehensive programme of services deliberately put in place for expanding, strengthening and empowering the capacity of the present and prospective farmers, farm families and other rural economic operators (**Adedoyin, 2004**).

**(9). Agricultural extension** can be defined as the entire set of organizations that support and facilitate people engaged in agricultural production to solve problems and to obtain information, skills, and technologies to improve their livelihoods and well-being (**Birner, Davis, Pender, Nkonya, Anandajayasekeram, Ekboir, et al., 2006**).

**(10). Agricultural Extension** has been recently defined as systems that facilitate the access of farmers, their organizations and other market actors to knowledge, information and technologies; facilitate their interaction with partners in research, education, agribusiness, and other relevant institutions; and assist them to develop their own technical, organizational and management skills and practices (**Christoplos, 2010**)

**1.6.2. From the above definitions, it is gathered that** From the above definitions, it is concluded that: "Extension education is a professional method of non-formal education to bring desirable Changes in knowledge, skills, attitudes and understanding of the rural people to improve their Social, economic and psychological status."

### **1.7. Objectives of Agricultural Extension**

Having looked at the definitions of agricultural extension, it is imperative to equally look at the Objectives of extension. Every extension programme or activity should have clearly defined objectives.

#### **1.7.1. Definition of Objective**

**1. Leagan, (1963)** defined an objective as a "direction of movement". This means the direction which an extension worker wants to take his clientele or the distance he wants to cover.

**2. Kelsey and Hearne (1963)** define objectives as, "expressions of ends towards which our efforts are directed".

**3. Raudabaugh (1973)** defines objectives as, "the criteria by which content is outlined, materials selected, teaching procedures and learning experience developed and progress toward accomplishment and accomplishments are evaluated. In general **Objectives are** expressions of the ends towards which our efforts are directed. In other Words, an objective is

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a statement of change in knowledge, feeling or action we want to bring about in people. An objective is that which a person, group or agency sets before itself as an object or condition to be attained. Some extension workers like to make a distinction between the meaning of “objectives” and “Goals”. **Objectives** are defined as “directions of movement”, while a **Goal** is defined as the **Distance** in any given direction one expects to go during a given period of time

**1.7.2. The four elements common to modern agricultural extension programmes according to Obinne (1997) included:**

1. Knowledge to be extended 2. People to be served 3. A central extension organization and 4. Extension agent.

### **1.7.3. Kinds of Objectives.**

The objectives should be such which provide right direction to the large number of people to set a direction and travel the distance between theory and practice. Extension education in our country is primarily concerned with the following main objectives:

**A. Fundamental Objectives of Agricultural Extension:** These are the all-inclusive objectives of a society. They are also known as remote, basic, or overall objectives. A fundamental objective is to teach people how to determine their own problems, help them acquire knowledge about the problem, and motivate them to the extent that they will want to do something about the problems. Examples of such objectives are development of the individuals, of communities, of the society itself, and of a county; good life, better citizenship, and democracy. To create an environment for rural people so that they can show their talent, leadership and efficiency. To provide appropriate solution of the farmer’s problems. To bring the scientist closer to the farmers. The basic objectives of the extension education are the overall development of the rural people.

**B. General Objectives of Agricultural Extension** These are more specific than fundamental Objectives. These objectives are the bases for the long term programme which aims at better crops, home, and income. We try to make people more efficient, improve income, and improve the standards of living. General objective of agricultural extension is to improve the quality of our farmer’s life through sustainable agriculture. To bring about desirable changes in the human behavior, which includes change in knowledge, skill and attitude?

**More specifically stated, the following are general objectives or functions of Extension.**

1. To assist people to discover and analyze their problems their felt and unfelt needs.

Need is a difference between what is and what ought to be. It is the lack of something. Need is what one desires

**Felt needs**/recognized needs are those existence the people are aware and feel necessity of Fulfilling them.

<p><b>Unfelt needs</b>/Unrecognized needs are those whose necessity the people don't realize at present, but these none the less are important. Example of felt needs Low yields in paddy- due low yielding varieties, wild boars and rodents</p>	<p>Examples of unfelt needs Soil salinity problem, water shortage at maximum tillering stage</p>
<p>low yields in maize- due to water shortage, pest problems</p>	<p>Poor varieties</p>

2. To develop leadership among people and help them in organizing groups to solve their problems

3. To disseminate information based on research and / or practical experience, in such a manner that the farmer would accept it and put it into actual practice. Ex: Transfer of IPM in cotton through training programmes and demonstrations

4. To keep the research workers informed of the farmer's problems from time to time, so that they may offer solutions based on necessary research. Ex: Botrytis in castor, Heliothis in cotton, stem borers in sugarcane and fruit flies in guava.

**C. Working/ Specific Objectives of Agricultural Extension**

**Working objectives have three parts-**

1. Audience-Who are to be changed through dissemination of useful and practical information relating to agriculture, including improved seeds, fertilizers, implements, pesticides, improved cultural practices, dairying, poultry nutrition etc.

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2. Type of change-Knowledge, attitude or skill to make the people aware that agriculture is a profit table profession.

3, Content or message-What are you trying to teach (What you want them to know, feel or do)

(i) The dissemination of useful & practical information through modern technology relating to agriculture, including improved seeds, **fertilizers**, **implements**, **pesticides**, improved cultural practices, dairying, poultry, nutrition, collection of crop statistics etc

(ii) Provide information to growers on urgent issues like insect pest outbreak, climatic changes, weather forecast. (iii) Prevent adulteration of pesticides as per Agriculture Pesticide Ordinance

1971 (iv) Prevent adulteration of fertilizer as per KPK Fertilizer Control Act 1999.

(v) To disseminate technologies concerned to all aspects of crop growing, management & marketing to growers at their doorsteps through personal contacts and various means of mass media. (vi) The practical application of useful knowledge to farm & home; and thereby ultimately to improve all aspects of the life of the rural people within the framework of the national, economic & social policies involving the population as a whole.

### 1.7.4. SMART objectives

<b>Specific</b>	The objective should state exactly what is to be achieved.
<b>Measurable</b>	An objective should be capable of measurement – so that it is possible to determine whether (or how far) it has been achieved
<b>Achievable</b>	The objective should be realistic given the circumstances in which it is set and the resources available to the business.
<b>Relevant</b>	Objectives should be relevant to the people responsible for achieving them
<b>Time Bound</b>	Objectives should be set with a time-frame in mind. These deadlines also need to be realistic

### 1.8 . Importance of Agricultural Extension

Extension lays emphasis on “How to teach” instead of on “What to teach” so that the people can be encouraged to adopt new research techniques easily. In other words, if a



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person is very knowledgeable of various methods and techniques but does not know how to explain them or express them, then his knowledge has no meaning. Therefore, the power to express knowledge and viewpoint also plays a crucial role. To educate /motivate the farmers for adoption of proved Agriculture Technology of crop husbandry evolved by the Agriculture Research for obtaining highest return per unit area on sustainable basis. Some of the important points relating to Agricultural Extension are summarized as below.

- To make the country self-sufficient in food. To bridge up the agricultural technology gap at grass root level, Act as mediator for researchers by updating them with field problems of farmers and to help them in developing "Demand Driven Technology."
- To serve as single window system for providing all information regarding agriculture, providing inputs like seeds & planting material through Farm Services Centers.
- To produce organic crops through use of FFS approach.
- To coordinate the development of agriculture with other Nation Building Departments , IGO,s and NGO,s. To educate rural people to attain/participate in development,
- It provides information to farmers and passes to the farmers new ideas developed by agricultural research stations, To develop a system of effective research and extension linkages,
- Agricultural extension, therefore, provides the indispensable elements that farmers need to improve their agricultural productivity. And to improve living conditions of small scale farmers.
- Agricultural extension programmes cover a broad area including improved crop varieties, better livestock control, improved water management, and the control of weeds, pests or plant diseases.
- An agricultural extension service offers technical advice on agriculture to farmers, and also supplies them with the necessary inputs and services to support their agricultural production. To link farmer with newly emerging globalize world by providing them information and guidance,
- Where appropriate, agricultural extension may also help to build up local farmers' groups and organizations so that they can benefit from extension programmes.

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Development of extension literature and its distribution among farmers & extension functionaries.

- Department of Agricultural Extension's mission is to provide efficient and effective needs based extension services to all categories of farmer, to enable them to optimize their use of resources, in order to promote sustainable agricultural and socio-economic development
- To generate employment in the field of agriculture and allied disciplines and to generate an exportable surplus of Agricultural Production.
- More efforts will be made to enhance public- private-relationship in improving the efficiency of technology transfer.

### **What is the purpose of agricultural extension?**

- a. It helps farmers to change their Behavior on a voluntary basis
- b. It creates and shares new knowledge
- c. It motivates, enables, and provides insights
- d. It helps to form opinions and there is better decision-making
- e. It assists with mutual and reciprocal learning
- f. It creates and shares new agricultural technologies
- g. It brings the world to farmers and farmers to the world
- h. Extension is an intervention that can help farmers achieve a better quality of life. When this happens, there are direct and indirect positive effects on national and regional economies.

### **Why studying extension?**

When you study extension it may do the following for you:

- a. Teach you to work in an interdisciplinary environment
- b. Help you to understand farming as a system
- c. Develop your leadership skills
- d. Enhance your skills to work with people

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- e. Help you to get a balance between technical competencies and human relation competencies
- f. Show you how the human being functions
- g. Help you to understand how a human thinks and responds to this process
- h. Develop your skills to work with small groups
- i. Enhance your capabilities to communicate effectively and with confidence
- j. Put you on a personal growth path
- k. Show you how to manage people in an agricultural and working environment
- l. Help you to understand the central role of people in agriculture.

**1.9. Scope of Agricultural Extension : The following nine areas of programme emphasis indicate the scope of Agricultural Extension work, we must remember them :**

1. Efficiency in agricultural production. 2. Efficiency in marketing, distribution and utilization. 3. Conservation, development and use of natural resources. 4. Management on the farm and in the home. 5. Family living. 6. Youth development. 7. Leadership development. 8. Community development. 9. Public affairs.

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