Extension Concepts in KVK Activities

6.1 Education, Training and Extension

6.1.1 Concept

A concept can be defined as a notion, idea or way in which one can see a thing in his mind, but it itself is not observable (Sharma and Sharma,1983). In other words, concepts are simply abstractions that serve to organize our thoughts and experiences into manageable mental entities. It acts as guide to understand something one can observe. Concepts vary greatly in terms of their precision, scope, clarity and acceptability.

6.1.2 Definition

According to Aristotle, a definition is summum genus et differentia, i.e., it has two components: the genus and the differentia. A genus is the essence belonging to number of things exhibiting difference in kind. The differentia is that part of the essence which distinguishes the species (class under a genus) from other species in the same genus. The sole purpose of definition is the classification of a concept. Words without definition are generally vague and do not know as to what precisely they mean.

6.1.3 System

A system is an entity composed of interrelated parts each of which contributes to the unique characteristics of the whole (Mescon et al, 1973). In an organization set up, it is an orderly arrangement of interrelated activities and related procedures which implements and facilitates the performance of a major activity of the organization.

6.1.4 Process

Process means a course of procedures, something that occurs in a series of actions or events conducting to the desired end.

6.1.5 Theory

According to Talcott Parsons (1949), a theory is a group of closely interrelated concepts used for interpretation of some experience. In other words, it refers to the relationships between facts or the ordering of them in some meaningful way (Goode and Hatt, 1952)

6.1.6 Philosophy

It is pursuit of wisdom, a body of general principles or laws of a field of knowledge. Essentially philosophy is a view of life and its various components. The practical implication is that the philosophy

of a particular discipline would furnish the principle or guidelines with which to shape or mould the programmes or activities relating to that discipline.

6.1.7 Principles

Principles are generalized guidelines which form the basis for decision and action in a consistent way. It may also be defined as a statement of policy to guide decisions and action in a consistent manner.

6.1.8 Procedure

Procedure is a series of logical steps by which all repetitive business action is initiated, performed, controlled and finalized. A procedure prescribes what action is to be taken in a specific situation.

6.1.9 Approach

An approach refers to a specific and chosen way of advancing or proceeding actions.

6.1.10 Policies

Policies are broad guides to action and decision making that facilitates attainment of objectives.

6.1.11 Mission

The primary, overall objective of an organization; its expressed reason for existence; is referred to its mission.

6.1.12 Method

A method is a way of doing something, an orderly arrangement of a set of procedures. It involves a sequence of progressive steps in an orderly and logical regularity in order to accomplish some task or purpose.

6.1.13 Strategies

Strategies are broad decisions to act and allocate resources in certain ways or order to attain objectives.

6.1.14 Goal

Goal refers to higher-order programme or sector objective to which a development intervention, such as a project, is intended to contribute. Thus it is a statement of intent.

6.1.15 Aims

Aims are generalized and broad statement of directions with respect to given activities. For example, improvement of farmers' economic condition.

6.1.16 Scope

It is the area of coverage for study/ investigation on a given subject matter

6.1.17 Objectives

Objectives are expression of the ends towards which our efforts are directed. For example, to increase the yield of wheat by 20 percent.

6.1.18 Situation

Situation is a statement of affairs that includes the cultural, social, economic and physical conditions in which a particular group of people find themselves at a given period of time (Ray, 2003). The situation, which constitutes the environment for planning, is continually changing.

6.1.19 Fact

A fact is taken as something definite or something which happens or which is correct. According to Concise Oxford Dictionary, a fact is happening of an incident, a correct statement, a matter of experience, the reality of situation.

6.1.20 Education

Education is the process of bringing about desirable change into the behaviour of human beings (Dahama and Bhatnagar, 1988). Education is a life-long process which helps an individual (a) adapt himself to the real world through participation and reciprocal interactions with the environment and (b) enhances the quality of social, professional and national life.

6.1.21 Informal Education

Informal education is the lifelong process by which every person acquires and accumulates knowledge, skills, attitudes and insights from daily experiences and exposure to the environment at home, at work, at play etc.

6.1.22 Formal Education

Formal education is the highly institutionalized, chronologically graded and hierarchically structured 'education system', spanning lower primarily school and the upper reaches of the university.

6.1.23 Non-Formal Education

Non-Formal education is an organized, systematic, educational activity carried on outside the framework of the formal system to provide selected types of learning to particular sub-groups in the population, adults as well as children according to their needs. Example is Agricultural Extension.

6.1.24 Learning

Learning is the process by which an individual, through one's own effort's and abilities changes the behaviour. In other words, any change of behaviour which takes place as a result of experience may be called as learning.

6.1.25 Teaching

Teaching is directing the learning process, the process by which one through his own activity becomes changed in behaviour. It is the process of a series of (learning) steps involving communication and interaction set up for a learner to move from one level of competencies to a higher level of competencies. The process may be made up of several methods and techniques through which learner is taken through to learn the competencies.

6.1.26 Effective Learning Situation

An effective learning situation is one in which all the essential elements for promoting learning i.e. learners, teachers, subject matter, teaching materials and physical facilities, relevant to a particular situation, are present in a dynamic relationship with one another.

6.1.27 Learning Experience

The learning experience is the mental and / or physical reaction to seeing, hearing or doing the things to be learnt and through which one gains meaning and understanding, useful in solving new problems.

6.1.28 Experiential Learning

Experiential learning is "learning from experience" which is learner-centered and allows the participants to manage and share responsibilities for their learning with their teachers.

6.1.29 Extension

The word 'extension' was originated in England in 1866 with a system of university extension which was taken up first by Cambridge and Oxford Universities, and later by other educational institutions in England and in other countries. The term 'extension education' was first used in 1873 by Cambridge University to describe this particular educational innovation. The objective of university extension was to take the educational advantages of universities to ordinary people. (Swanson and Claar, 1984)

In brief, Extension may be defined as the science of developing capability of the people for sustainable improvement in their quality of life.

6.1.30 Extension Education

Leagans (1961) conceptualized extension education as an applied science consisting of contents derived from research, accumulated field experiences and relevant principles drawn from the behavioural sciences synthesized with useful technology into a body of philosophy, principles, contents and methods focused on the problems of out-of-school education for adults and youth.

6.1.31 Cyber Extension

Cyber Extension can be defined as the extension over cyber space i.e, using the power of online networks, computer communications and digital interactive multi-media to facilitate

dissemination of agricultural technology. Cyber space is the imaginary or virtual space of computers connected with each other on networks across the globe. These computers can access information in the form of text, graphics, and audio, video or animation tools.

6.1.32 Agricultural Extension

When the process of Extension Education is confined only to the subject matter of agriculture, it becomes agricultural extension.

6.1.33 Training

Training is a systematic instructional means to develop knowledge, skills and attitude for adults in order to keep pace with the changes in life. It is the process by which individuals are helped to acquire certain specific skills related to a given set of operations in certain specified contexts only.

In organizational set up, a training means acquiring of specific skills to perform a job better. Usually an organization facilitates the employees' learning through training so that their modified behaviour contributes to the attainment of organization goals.

6.1.34 Training for Extension Personnel

It can be defined as a planned and systematic effort to increase Knowledge (K) improve Skill (S), inculcate appropriate Attitudes (A) and develop other attributes (Os) in extension personnel to enable them to better serve their clients-the farmers. In other words, training (T) is concerned with KSAOs and may be described as function (f) as follows T = f (K,S,A,Os)

6.1.34.1 Knowledge (K)

Knowledge may be defined as retained information concerning facts, concepts and relationships.

For Extension Personnel, K covers

- Knowledge of extension methods

- Knowledge in Subject matter

- Knowledge of clients' problems and their solutions

- Knowledge of farm, farm families and farming systems

- Knowledge of farm economics, input supply and marketing

6.1.34.2 Skill (s)

Skill is the ability to do things to effectively apply knowledge and personal aptitude and attitudes in work situations.

For extension Personnel, these skills include –

- Communication skill
- Technological skill
- Demonstration skill
- Organisation skill
- Training skill
- Diagnostic skill.

6.1.34.3 Attitude (A)

It refers to an individual's predispositions to view their jobs, other people and the work and the farming environment in certain way. For extension personnel, attitude includes:

- Attitude for serving clients
- Attitude for acquiring latest knowledge and technical know how
- Attitude for problem solving
- Attitude for field work
- Attitude for self-development

Attitudes reflect values which in turn are based on an individual's life experiences and the environment in which he has been brought up.

6.1.34.4 Attributes (Os)

Are characteristic qualities needed of extension personnel. For extension personnel, these includes:

- Personality traits
- Conduct
- Empathy
- Experience
- Self development

Traits are typical thought pattern and resultant behaviour characteristic of a person in a variety of situation.

6.1.35 Training Effectiveness

Training Effectiveness can be defined as the degree to which a training course helps to transfer to make effective performance in one's job through application of knowledge gained, skills acquired and changed attitudes.

6.1.36 Capacity

The ability of individuals and organisations to perform functions effectively, efficiently and in a sustainable manner.

6.1.37 Capacity building

Capacity building is the ability to perform appropriate tasks effectively and sustainably. UNDP (1997), defined capacity building as the ability of an individual or organisation to perform functions effectively, efficiently and sustainably.

6.1.38 Capacity Development

Capacity development can be viewed as a process by which an individual, groups, organisation, institution or societies increase their ability to perform function, solve problems and achieve objectives.

6.1.39 Human Resource Development (HRD)

It refers to planned approach of developing human capabilities, latent talents and contribute to full growth of all aspects of people in terms of skills, maturity, competence, self-awareness, continuous adjustment with changing environment and self-confidence.

6.1.40 Job Satisfaction

It refers to the feelings and the emotional aspects of individuals experience towards his jobs.

6.1.41 Pre-service Training

It is a process through which individuals are made ready to enter a certain kind of professional job, as in agriculture, health care or engineering. The prerequisite to this, is to attend regular classes in a formal institution and need to complete a definite curriculum and courses successfully, and receive a formal degree or diploma.

6.1.42 In-service Training

In-service training is a process of staff development for the purpose of improving the performance of an individual of an incumbent holding a position with assigned job responsibilities. It promotes the professional growth of individuals. In-service training is a problem-centered, learner-oriented, and time bound series of activities which provide the opportunity to develop a sense of purpose, broaden perception of the participants, and increase their capacity to gain knowledge and mastery of techniques. Inservice training may be broadly be categorized into five different types.

6.1.43 Induction or Orientation Training

Induction training is given immediately after employment to introduce the new entrant to the job. This helps in moulding the individuals as per requirement of the organization.

6.1.44 Foundation Training

This training is usually provided at an early stage of service life. Every staff member needs some professional knowledge about various rules, regulations, and procedures of the organization, financial transactions, administrative capability, communication skills, leadership ability, coordination and cooperation among institutions and their linkage mechanism, report writing and so on. This training is made available to the employees to strengthen the foundation of their service career.

6.1.45 Maintenance or Refresher Training

This training is offers to update and maintain the specialized subject-matter knowledge of the incumbents. This deals with new information and new methods, as well as review of older materials. This type of training is given to the employees to keep them at their peak performance level and also to prevent them form getting into a rut.

6.1.46 On – the - Job Training

This is periodical or adhoc training on the job, and is generally provided by the superior officer or specialists to the subordinate field staff. This training is problem or technology oriented and may include formal presentations, informal discussion, and opportunities to try out new skills and knowledge in the field.

6.1.47 Career or Development Training

This type of training is designed to upgrade the knowledge, skills and ability of employees to help them assume greater responsibility in higher positions. This training may lead to the acquisition of higher degree or diploma by the employees, and motivate them to move up in the higher levels of administrative hierarchy.

6.1.48 Vocational Training

It refers to long-term vocation-based and skill oriented training for rural youth, farm women, school drop-outs etc. in agriculture and allied activities for income generation and self-employment.

6.1.49 Sensitivity Training

In this kind of training, members or participants are brought together in a free and open environment in which participants discuss themselves and interact. The discussion is lightly directed by a behavioural expert, who creates the opportunity for participants to express their ideas, beliefs and attitudes.

The objective of this method is to provide the participants with increased awareness of their own behaviour and of how others perceive them, greater sensitivity to the behaviour of others and increased understanding of group processes. Specifically it aims at increased ability to empathize

with others, improved listening skills, greater openness, increased tolerance for differences and improved conflict-resolution skills.

6.1.50 Participatory Training

It is a learning through sharing and doing. A trusting atmosphere is basic to the success of a training programme which is participatory in nature. For example, role playing, case study, brain storming etc.

6.1.51 Institutional Training

This is a traditional approach which includes courses organised away from the farmers' field which requires residential accommodation for the trainees. The most typical example of this approach is the training course imparted in the farmers training centres. The training organised under this approach is more of formal nature.

6.1.52 On-farm Training

The approach under this category provides non-formal training mostly on the farmers' field in a variety of ways. The training programme under this approach are multi-purpose in nature emphasizing skill training in agriculture, home-making and related vocational fields. For example; Farm Science Club, Rural Youth Club etc.

6.1.53 Comprehensive Training

Both approaches viz; "institutional" and "on-farm" are integrated in this approach. Therefore, training imparted through this approach has been found to be the most effective. This approach has been in use in KVKs.

6.1.54 Change Agents

The concept of change agents includes all those persons, groups or the like engaged in bringing about behavioural changes in the people on the behalf of an extension education organisation, to improve their welfare.

6.1.55 Facilitator

A person who helps members of a group conduct a meeting in an efficient and effective way but who does not dictate what will happen.

6.1.56 Stakeholders

An agency, organisation, group or individual who has a direct or indirect interest in the project/ programme, or who affects or is affected positively or negatively by the implementation and outcome of it. Primary stakeholders is the term used for the main intended beneficiaries of a project.

6.1.57 Extension Workers

An extension worker is a leader appointed from outside, by an organisation to work with the rural people.

6.1.58 Target

A specified objective that indicates the number, timing and location of that which is to be realised.

6.1.59 Target group

The specific group for whose benefit the project or programme is undertaken, closely related to impact and relevance.

6.1.60 Performance

Performance is defined as a desirable outcome or result of an individual in his job in a fixed period.

6.1.61 Performance Appraisal

Performance appraisal is a systematic process of evaluating achievements of an individual with regard to his predetermined job goals in terms of quality and quantity within a fixed time framework.

6.1.62 Need

Need implies a gap between what is, the existing situation; and what ought to be, the desirable situation. The nature and extent of the gap indicates significance of the problem.

What ought to be?

Gap   } Need

What is?
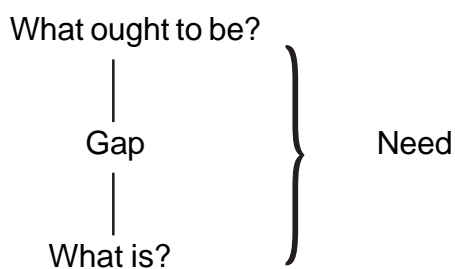
6.1.63 Felt Needs

Felt need or consciously recognized need i.e the need of which people are aware of. For example, every year flood causes damage to crops and suffering to the people in an area.

6.1.64 Unfelt Needs

Unrecognized needs i.e. the need of which the people are not aware of at present.

For example, People are not aware of need for mobilization of resources and funds before they come forward to dig out a drainage channel and solve the problem permanently. People may, however, be made aware of unfelt need i.e, unfelt need may be brought to the level of felt need, through appropriate motivation techniques.

6.1.65 Interest

An Interest is a preference for one activity over another. The selection and ranking of different activities along a like dislike dimension is known as expressed interest. An interest is made manifest (visible), when a person voluntarily participates in an activity.

There is no necessary relationship between expressed interest and manifest interest, though in many situations they tend to coincide or overlap. Many individuals engage in some activities which they claim to dislike and just on the reverse, many people may refuse to engage in activities which they claim to enjoy.

6.1.66 Training Needs

The training needs for extension personnel can be defined in terms of gap between job requirement and job performance. Training needs of individuals, groups and organisations have to be analysed by the employer before finalizing training plan of the organization. Training needs are to be identified in terms of knowledge required, skills to be acquired and attitudes to be changed.

6.1.67 Need Assessment

Need assessment is defined as the systematic identification of the needs and problems of a specific target group, tend to be an overlooked part of the rural development project planning process. (Smith, Etling and Diamond, 1991)

6.1.68 Training Needs Assessment (TNA)

Assessment / evaluation of training can be defined as a process by which the desired behavioural changes (in knowledge, skills and attitudes) due to training are measured against set of objectives/ standards. The assessment can be conducted by training institution, participants (trainees) and participating institution (sponsoring agency).

TNA provides information on

(1)   Where training is needed

(2)   What the content of training should be

(3)   Certain kinds of skills and knowledge.

The literature of training needs assessment has traditionally focused on the development of better techniques and method for improving the quality of information collected about organizational tasks and person analyses.

6.1.69 Training Impact Assessment/Evaluation

An Impact Evaluation is a method of assessing changes in on-the-job behaviour (i.e. improved performance) as a result of training effort.

It is concerned with the overall effect of training on farmers or the rural community served by the trainees. Under this evaluation, the impact is usually measured in terms of productivity (crop yield per hectare) production (total crop production in an area) and per capita income of farmers.

6.1.70 Training Plan

A training plan is a manpower document developed on the basis of assessed training needs of extension personnel indicating the category-wise existing strength of extension personnel, their category wise requirements of training and the ways and means for meeting them.

6.1.71 Training Strategy

According to Lynton and Pareek (2000), training strategy is not a static blueprint but is open to clarification, modification, and further development through experience with it .Its initial formulation, testing in practice, and on-going review and development may cost much time and effort, but this is quickly justified by keeping training effective and also economical. According to them, training success depends on designing training systems that capture the five core principles of learning.

6.1.72 Extension Technique

It means either extension teaching methods or extension teaching aids or both. They are used to denote short-cut and dubious methods to achieve an end.

6.1.73 Extension methods

Extension methods are basic and proven methods, for attracting attention, arousing interest, leading villagers to have successful experiences with new ways and of doing things that are an improvement over the old practices.

6.1.74 Training Methods

Training methods are means of communication of message(s) to the trainees. Several methods like lecture, discussion, seminar, conference, case study, role play etc. are being used in training.

6.1.75 Aids

Aids are those instructional devices or teaching aids which makes teaching more effective.

6.1.76 Tools

Tools are means to a trainer for achieving the training objectives by communicating subject matter contents and related skills to the participants.

6.1.77 Teaching Aid

Teaching aid is any device that assists the teacher/ extension worker in transmitting to a learner/ farmers the facts, skills, attitude, knowledge, understanding and appreciation.

6.1.78 Training Aids

They are aids to the trainer to convey his idea/ messages clearly for the trainees and help them learn better such as flip charts, posters, slides, graphs etc.

6.1.79 Audio-Visual Aids (A-V Aids)

A-V Aids are those instructional devices that may be used by a teacher or a communicator in order to facilitate better understanding on the part of learners by involving their many senses, particularly those relating to seeing and hearing.

The commonly used methods for training of extension personnel are discussed in brief. Some of them may be used also for the training of farmers.

6.1.80 Micro lab

A microlab is a package of exercises organized at the beginning of any programme to provide a glimpse of all aspects of the training likely to be covered. It is a combination of physical activity and small group interactions amongst the participants. Its broad aim is to help the participants overcome barriers due to status position, consciousness, unfounded fears, complexes, etc.

6.1.81 Lecture

According to a dictionary meaning, lecture is a discourse on a given subject delivered to a class or audience. A lecture, however, now may be defined as a carefully prepared oral presentation of a subject by a qualified person to group of participants. It may be supplemented by audio-visual aids and question-answer session.

The lecture is an excellent method for presenting information to a large number of persons in a short period of time. Its weakness is that people are not likely to master as such of the information as the speaker is likely to assume; because for the most part, it is a one-way communication. Members of audience listen in terms of their interests and remember in terms of motivation and memory. To compensate somewhat for this weakness, a discussion or question-answer session may be held following the speech.

6.1.82 Case Study

In this method, the trainer gives the trainees information about a situation and directs them to come to a decision or solve a problem concerning the situation. For this, a written case or a problem situation is presented to the participants in a programme for careful study and examination from all facets, so as to enable them to exercise their analytical, synthetical and decision making powers. As there is no single infalliable solution to a problem, different solutions will be evolved and, in course of evaluation of these solutions, participants are enable to appreciate the view points of others and also see the lacunae in their own thinking and analysis. The interrelatedness of various factors operating in the situation is also highlighted.

6.1.83 Group discussion

The lecture method may be made more participative, if at the end the audience are allowed to discuss the topic in presence of the speaker and elicit the latter's comments and clarification on the points raised. This shall lead to a better understanding of the topic, as the participants are more actively involved, have the opportunity to express their views and get their doubts clarified. Learning is reinforced through the interaction of the audience with the speaker. Limitations of traditional group

discussion are that group members may pursue an idea to the exclusion of other alternatives, and pressures to confirm can discourage the expression of deviant opinions.

6.1.84 Buzz sessions

With large groups when there is limited time for discussion, the audience may be divided into smaller units for a short period. This is called 'buzz session' or 'huddle system' or 'Phillips 66'. Groups of 6 to 8 persons get together after receiving instructions to discuss about a specific issue assigned. The secretary of each small group will report the findings or questions to the entire audience when they are resembled. This is actually a device to get more people to participate in a forum than would be the case otherwise.

6.1.85 Brain Storming

It is a type of small group interaction designed to encourage the free introduction of ideas on an unrestricted basis and without any limitations to feasibility. It is a form of thinking in which judicious reasoning gives way to creative initiative. Participants are encouraged to list for a period of time all the ideas that come to their minds regarding some problems and are asked not to judge the out come. At a later period all the contributions will be sorted out evaluated and perhaps later adopted.

6.1.86 Role Playing

A simulation in which participants enact different roles to obtain insight into a behaviour, problem or situation. Participants are encouraged to discuss different roles. It provokes thought and is a learning experience.

6.1.87 Workshop

It is essentially a long meeting from one day to several weeks, involving all the delegates in which the problems being discussed are considered by delegates in small private groups. There must be a planning session where all are involved in the beginning. There must be considerable time for work sessions. There must be a summarizing and evaluation sessions at the close. The workshop as the name implies must produce something in the end like a report, a publication, a visual or any other material objects.

6.1.88 Conference

An assembly of different organizations, departments and even interests for discussing issues of common interest. It is noted for its wide and varied representation. It has agenda for its deliberations. Its end-result is usually a set of recommendations for policy-makers and others. Its handicap is that the mode of participation in it is through speeches. It is the pooling of experiences and opinions among a group of people who have special qualification in an area.

6.1.89 Panel

A moderated discussion of a single subject by experts usually representing different fields or disciplines. Panel provides in-depth informed opinion on the subject. Audience are benefited by

observing interaction among panelists and questioning panelists. It also needs experienced moderator to make it successful.

6.1.90 Syndicate Studies

These essentially follow the seminar method and the focus is on any particular subject or problem. The syndicate studies are conducted with the help of group discussions, supplemented by the available literature on the subject and the end product is an erudite report. Resource men are utilized for the syndicate studies. The studies on any subject can continue for a month or more, with 10 to 12 sittings.

6.1.91 Colloquy

Literally act of conversing, it is modified version of panel with 3-4 experts with audience having greater participation by raising issues or asking questions.

6.1.92 Task Force

Borrowed from military usage and a distinctly American contribution, it is a small team of experts complete in its requirement of specialities for examination of a subject. Usually formed to assist the deliberations of a wider body like a Commission. It is of limited value to extension training.

6.1.93 Round Table

Here, experts sit around a round table to discuss a subject. Beneficial for professional development. Strictly, not a training method. The audience, however, benefits from it by sitting around the round table.

6.1.94 Mission

A powerful group of front-rank experts charged with attainment of specific objectives and goals in a 'thrust' area at the national level like Technology Mission on Oilseeds (TMO). Not a training method but can be immensely useful to specialists for professional development by way of attachment to the mission for a short duration, say, of one week.

6.1.95 Symposium

This is a short series of lectures: usually by 2 to 5 speakers. Each one speaks for a definite amount of time, and presents a different phase or subdivision of a general topic. The topic should be large enough or general enough to permit two or more subdivisions that are sufficiently significant to justify separate discussion by speakers. The subject may or may not be controversial. It is important that the speakers are of approximately equal ability, to avoid one speaker dominating the meeting or giving the audience a distorted view of the subject. The speeches may be followed by a forum to facilitate mastery of information. The advantage of symposium over lecture is that two or more experts present different phases of the topic. It also has an advantage over the debate as it is possible to escape the antagonism that may accompany the letter.

6.1.96 Seminar

It is one of the most important forms of group discussion. The discussion leader introduces the topic to be discussed. Members of the audience discuss the subject to which ready answers are not available. A seminar may have two or more plenary sessions. This method has the advantage of pooling together the opinions of a large number of persons.

6.1.97 Conventions

A convention is an assembly of representatives or delegates from local units of a parent organization who have a common interest or an assembly of representatives or delegates from different organizations or professions who have a common interest.

6.1.98 Committee

A small group of individuals appointed or related to perform a task that cannot be done efficiently by the entire group. A Committee will have terms of reference and its end-result is a report submitted to the present body.

6.1.99 Institute

An Institute is a service of meetings arranged for a group of persons who come together to receive instructions in, or information about, a specific field of work. It is noted for its authoritative instruction. Summer institutes organized by the Indian Council of Agricultural Research (ICAR) every year for teaching scientists in different subjects are examples of this genre.

6.1.100 Demonstration

Demonstration is that activity, process or means by which mind is presented with decisive evidence. In agricultural extension work, it is mostly used to convince farmers about the utility and usefulness of a new practice.

6.1.101 Method Demonstration

A method demonstration is given before a group of people to show how to carry out an entirely new practices or an old practice in a better way. It is essentially a skill training, where the emphasis is on effectively carrying out a job, which shall improve upon the result. It involves seeing, hearing, participating and practicing in a group which shall stimulate interest and action. Method demonstration is sometimes used as complementary to result demonstration.

6.1.102 Result Demonstration

Result demonstration is a method of motivating the people for adoption of new practice by showing its distinctly superior result. The demonstrations are conducted in the farm or home of selected individuals and are utilized to educate and motivate groups of people in their neighbourhood. This is very effective method for the transfer of technology in a community.

Demonstrations may stimulate farmers to try out innovations themselves, or may even replace a test of the innovation by the farmer. They can show the causes of problems and their possible solutions without complicated technical details. A great advantage of demonstration is seeing how an innovation works in practice.

Conducting demonstrations with own hands shall encourage the farmers to act on a scientific basis, rather than something which is magical. Demonstrations, to be effective, should be integrated with the total extension programme.

6.1.103 Field Demonstration

Field demonstration is a long term educational activity conducted in a systematic way in farmers' field to show the worth of a new practice/technology. 'Seeing is believing' is the basic philosophy of field demonstrations. Only proven technologies are therefore selected for field demonstrations.

6.1.104 Composite Demonstration

Composite Demonstration is a combination of field based result demonstrations and a chain of skill oriented method demonstrations. A long term sequential method demonstration (composite demonstration) aims at demonstrating the superiority of a package of practice in growing field crops.

6.1.105 Frontline Demonstration

Front-Line Demonstration is the concept of field demonstration evolved by the Indian Council of Agricultural Research with the inception of the Technology Mission on Oilseed Crops during mid-eighties. The field demonstrations conducted under the close supervision of scientists of the National Agriculture Research System is called front-line demonstrations because the technologies are demonstrated for the first time by the scientists themselves before being fed into the main extension system of the State Department of Agriculture.

6.1.106 Models

A model is a three-dimensional recognizable imitation of an object. It may be of the same size, larger or smaller than the thing it represents. It can be handled, operated and seen from a number of angles, and so it is generally more interesting and instructive than a graphic form of the same.

6.1.107 Mock-ups

A mock-up is a three dimensional imitation of a thing used for the purpose of learning and so it may not be similar in appearance. A most common example is the mock – up clock in schools showing movement of the hands, or a mock-up of a driver's seat in training schools.

6.1.108 Objects

The term object refers to sample of real things minus the natural setting. They are very valuable teaching aids both in formal and adult education. Collection of stamps, coins, minerals, bones, insects-pests and other agricultural products have long been used in teaching.

6.2 Adoption and Diffusion

6.2.1 Data

Data usually means raw, unevaluated facts, figures, symbols, objects, events etc. They are the collection of natural phenomena descriptors including the results of experience, observation or experiment, or a set of premises. This may consist of numbers, words, or images, particularly as measurements or observations of a set of variables.

A data base is a structured collection of records or data. A computer database relies upon software to organize the storage of data. The software models the database structure in what are known as database models.

6.2.2 Database Management System (DBMS)

A Database Management System (DBMS) is computer software designed for the purpose of managing databases based on a variety of data models. A DBMS is a complex set of software programs that controls the organization, storage, management, and retrieval of data in a database.

6.2.3 Information

When data are processed conveying some meaning, it is called information. Information – usually consisting of facts and figures collected at the initial stages of a project – that provides a basis for measuring progress in achieving project objectives and outputs. Davis and Olson (1985) provides a general definition of information which reads as "information is data that has been processed into a form that is meaningful to the recipient and is real or perceived value in current or prospective actions or decisions". It bears a diversity of meanings, from everyday usage to technical settings. Generally speaking, the concept of information is closely related to notions of constraint, communication, control, data, form, instruction, knowledge, meaning, mental stimulus, pattern, perception, and representation.

6.2.4 Knowledge

Knowledge is the retained information concerning facts, concepts and relationship. Oxford English Dictionary defined Knowledge as (i) expertise, and skills acquired by a person through experience or education; the theoretical or practical understanding of a subject, (ii) what is known in a particular field or in total; facts and information or (iii) awareness or familiarity gained by experience of a fact or situation.

6.2.5 Technology

Technology is any systematic knowledge applicable in a particular area in order to achieve some values. Technology involves application of science and knowledge to practical use, enable

man to live more comfortably. The Merriam-Webster dictionary offers a definition of the term: "the practical application of knowledge especially in a particular area" and "a capability given by the practical application of knowledge".

Technology can be most broadly defined as the entities, both material and immaterial, created by the application of mental and physical effort in order to achieve some value.

6.2.6   Innovation

An innovation is an idea, practice or object that is perceived as new by an individual or other unit of adoption. The technologies/practices developed through research are innovations which may be new varieties of crops and plants, new breeds of livestock, new chemicals and medicines, new technique of doing things etc. Farmers themselves may develop some new practices which are also innovations. Irrespective of the time period the idea or practice was originally developed, when a person first becomes aware of it, it is an innovation to that person.

6.2.7   Agricultural Technology

Agricultural Technology is a complex blend of materials, processes and knowledge. Agricultural technologies are of two types:

i.   **Material Technology** (When knowledge is embodied into technological products such as tools, equipments, seed materials etc.)

ii.   **Knowledge-based technology** (Such as the technical knowledge, methodologies, managerial skills, motivational techniques etc. that farmers and rural people need for better production in their enterprises.)

6.2.8   Knowledge management

Knowledge management is a management theory which emerged in the 1990s. It seeks to understand the way in which knowledge is created, used and shared within organizations. A significant part of Knowledge Management theory and practice aligns two models:

(i)   the **DIKW** model, which places Data, Information, Knowledge and Wisdom into an increasingly useful pyramid.

(ii)   Nonaka's reformulation of Polanyi's distinction between *tacit* and *explicit* knowledge.

6.2.9   Wisdom

Wisdom is having gained knowledge, experience, discretion, and intuitive understanding, along with a capacity to apply these qualities well. It is the judicious application of knowledge. To some extent the terms wisdom and intelligence have similar and overlapping meanings. The status of wisdom or prudence as a virtue is recognized in cultural, philosophical and religious sources.

6.2.10   Technology Development

Technology Development is a process which consists of all the decision and activities which a scientist does from recognition of a need/ problem with planning, testing, conducting research,

verification, testing and dissimilation for adopting. During same time, some other problems are sent back to the scientist for solution. Thus, it's a continous process.

6.2.11 Technology Management

Technology management can be defined as the integrated planning, designing, optimization, operation and control of technological products, processes and services, for human advantage.

6.2.12 Technological Gap

Technological Gap is the gap between the level of recommendation and the extent of adoption (against recommendations). The technological gap in respect of different aspects of the technology are computed in percentage by the following formula:

$$\text{Technological Gap (TG)} = \frac{R-A}{R} \times 100, \qquad \text{Where,}$$

R= Maximum possible adoption score that a respondent could be awarded in respect of a given component of the technology.

A= score obtained by a respondent by virtue of his adoption of a given component of technology.

6.2.13 Technology Fatigue

Linkages between the laboratory and field have weakened and extension services have often little to extend by way of specific information and advice on the basis of location, time and farming system. Good quality seeds at affordable prices are in short supply and spurious pesticides and bio-fertilisers are being sold in the absence of effective quality control systems. Micronutrient deficiencies in the soil as well as problems relating to soil physics are crying for attention. Farmers have no way of getting proactive advice on land use, based on meteorological and marketing factors. No wonder the prevailing gap between potential and actual yields, even with technologies currently on the shelf, is very wide. Many KVKs are also found utilizing old and obsolete technologies for OFTs, FLDs and training programmes. A knowledge deficit as mentioned above along with the usage of obsolete technologies and package of practices together leads to a situation called 'technology fatigue'.

6.2.14 Technology Backstopping

Backstopping refers to any precaution taken against an emergency condition. Accordingly, technology backstopping can be defined as any technology precaution taken to combat technology fatigue. In simple terms, technology backstopping is the process of making available ready to use technologies for farm families through assessment, refinement and demonstration processes in order to combat the existing/forecasted technology fatigue.

6.2.15 Methodology Backstopping

This is a process almost similar to technology backstopping but differs with respect to the kind of technology solution offered. Instead of material technology, methodology backstopping aims

at assessment, refinement and demonstration of knowledge based technologies often referred to as methodologies/package of practices. It provides detailed procedures to carry out the technology application functions by the extension personnel in the field. It includes methodologies for conducting OFT, which includes TAR, demonstrations, training, conducting surveys, impact assessment and evaluation etc.

6.2.16 Technology assessment

It is the study and evaluation of new technologies. It is based on the conviction that new developments within, and discoveries by, the scientific community are relevant for the world at large rather than just for the scientific experts themselves, and that technological progress can never be free of ethical implications. Also, technology assessment recognizes the fact that scientists normally are not trained ethicists themselves and accordingly ought to be very careful when passing ethical judgement on their own, or their colleagues' new findings, projects, or work in progress.

6.2.17 Transfer of Technology (TOT)

The term transfer of technology means movement of information from a research (source of technology) or an innovation system through an extension system (which acts as interpreter disseminator and facilitator) to the client (users of technology) system i.e. the target group of farmers who are expected to adopt and integrate the new technology into the existing farming systems and practices. Besides the above three primary systems, the effectiveness of technology transfer also depends on the support systems as well as the socio-economic structures in which other systems operate.

6.2.18 Technology Assessment and Refinement (TAR)

Technology Assessment and Refinement (TAR) refers to a set of procedures whose purpose is to develop recommendations for a particular agro-climatic situation/ location through assessment and refinement of recently released technology through participatory approach. It refers to the process or a set of activities before taking up new scientific information for its dissemination in a new production system.

6.2.19 Participatory Technology Development (PTD)

It is the process of combining local farmers' knowledge and skills with those of external agents to develop site specific and socio-economically adopted farming technologies.

6.2.20 Adoption

Adoption is essentially a decision making process to make full use of an individual innovation as the best source of action available.

Wilkening (1953) described the adoption of an innovation as a process composed of learning, deciding and acting over a period of time. The adoption of a specific practice is not the result of a single decision to act but series of actions and thought decisions. He identified four adoption stages: awareness, obtaining information, conviction and trial, and adoption.

6.2.21 Decision Making

Decision making is the process of consciously choosing courses of action from available alternatives and integrating them for the purpose of achieving the desired goal. It involves deciding on what goals are to be achieved, what means and methods are to be adopted in reaching them, based on what facts are available and how they are interpreted. Decision making is generally influenced by the level of knowledge, cost involved and time available in taking and implementing the decisions.

6.2.22 Diffusion

Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. It is a special type of communication, in that the messages are concerned with new ideas. It is this 'newness' of the idea in the message content of communication that gives diffusion its special character. The diffusion of innovations is essentially a social process in which subjectively perceived information about a new idea is communicated.

6.2.23 Adoption Period

The time taken by a technology or innovation to pass from the awareness of an innovation to its adoption. The main aim of agricultural extension workers is to shorten the length of the adoption periods of individual farmers so that an innovation will diffuse rapidly within a social system.

6.2.24 Rate of Adoption

Rate of adoption is the relative speed with which an innovation is adopted by members of a social system. It is generally measured as the number of individuals who adopt a new idea in a specified period, such as each year. The variables determining the rate of adoption of innovations according to Rogers (1995), are: perceived attributes of innovations, type of innovation-decision, communication channels used or available, nature of the social system, and extent of extension agents' promotion efforts.

6.2.25 Over-Adoption

Sometimes it may happen that farmers continue to adopt an innovation rather vigorously, when experts feel that it should not be done. It is over adoption.

6.2.26 Diffusion Effect

Self-generated pressure towards adoption also increases proportion of the members to adopt innovation. This increasing pressure from interpersonal networks may be termed as the diffusion effect.

6.2.27 Innovativeness

Innovativeness is the degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than other members of a system. In technology transfer programme, it

is of great practical utility for the extension agents to identify the individuals who are likely to adopt innovations early and who may lag behind.

6.2.28 Trial

It is the application of a new idea on a small scale in order to determine its utility in own situations/conditions.

6.2.29 Trial Method

Trial Method is the means of communication of messages to the trainees. Several methods like lecture, discussion, seminar, conference, case study, role play etc. are being used in training.

6.2.30 Skill Gap

It is the difference between the expected and existing standard of skills required to perform the job by the extension functionaries.

6.2.31 Attributes

Attributes are qualities, characteristics or traits possessed by an object. An innovation has some qualities or characteristics such as relative advantage, compatibility, complexity, trialability, observability etc.

6.2.32 Awareness

It is realization of something which is related to one's own need or arouses the need.

6.2.33 Innovators

They are the category of adopters who first adopt a new idea, much ahead of other members in the community.

6.2.34 Laggards

They are the category of adopters who are traditional and the last to adopt an innovation in a community.

6.2.35 Competency

It refers to the ability of an individual to reach a desired goal.

6.2.36 Dissemination

An innovation is disseminated in a social system through a well organised publicity campaign. At this stage, efforts are made to spread new idea in a social system as quickly as possible.

6.2.37 Assimilation

Dissemination is followed by assimilation. It is the level of understandability and popularity of an idea in a social system. Social approval of an idea is the major break-through in its adoption.

6.2.38 Acceptance

Acceptance is the decision of an individual to make full use of an innovation as the best course of action available. The demonstration of the usefulness of an innovation spread up its acceptance.

6.2.39 Discontinuance

Discontinuance is a decision to cease use of an innovation after previously adopting it. It may be due to the dissatisfaction with the innovation or availability of another superior innovation.

6.2.40 Non-Adoption

It is defined as a decision to reject a new idea. It occurs after trial stage. If the adopter does not feel satisfied with the results of the trial of an innovation, he will not adopt it further.

6.2.41 Adaptive or Minikit Trial

Adaptive or minikit trial is a method of determining the suitability or otherwise of a new practice in farmer's situation. This may be regarded as an on-farm participatory technology development process in which farmer's choice and farmer's opinion about the practice are most important. This is the first stage a new and improved practice passes through, before it is taken up for result or method demonstration, or recommended for large scale adoption. Minikits are, however, distributed in some States for assisting the poor farmers or in times of distress, to maintain farm productivity.

6.2.42 On Farm Testing v/s PTD

The major difference of PTD in comparison to OFTs are that in PTD, the problems for which solution have been sought are defined by the farmers, the alternative solution to be tested are defined by the farmers, the design is decided by the farmers, the implementation is done by the farmers, monitoring is decided and executed by the farmers and the evaluation is done by the farmers. All these activities are researcher- controlled in the normal OFTs.

6.2.43 Opinion Leader/ Local Leader

Opinion leader is an individual who is able to influence informally other individual's attitude or overt behaviour in a desired way with relative frequency. Opinion leader is also known as local leader.

6.2.44 Opinion Leadership

Opinion Leadership is the degree to which an individual is able to influence other individuals' attitude or overt behaviour informally in a desired way with relative frequency. This informal leadership is not function of the individual's formal position or status in the system. Opinion leadership is earned and maintained by the individual's technical competence, social accessibility, and conformity to the system's norms. When the social system is oriented to change, the opinion leaders are quite innovative; but when the system's norms are opposed to change, the behaviour of the leaders also reflects

these norms. By their close conformity to the system's norms, opinion leaders serve as a model for the innovation behaviour of their followers.

6.2.45 Leadership Style

It refers to leader's behaviour. Behavioural pattern which the leader reflects in his role as a leader is often described as the style of leadership. Leadership style is the result of leader's philosophy, personality, and experience and value system.

6.3 Communication and Development

6.3.1 Communication

The term communication stems from the Latin word 'communis' meaning common. According to Rogers and Shoemaker (1971), communication is the process by which messages are transferred from a source to receiver. van den Ban and Hawkins (1988) defined communication as the process of sending and receiving message through channels which establishes common meanings between a source and a receiver. Leagans (1961) defined communication as the process by which two or more people exchange ideas, facts, feelings and impressions in ways that each gains a common understanding of the meaning, intent and use of message. Communication, thus is a conscious attempt to share information, ideas, attitude and the like with others.

6.3.2 Development

According to Rogers (1995), development is a widely participatory process of social change in a society intended to bring about both social and material advancement. It includes greater equality, freedom, and other valued qualities, for the majority of people through their gaining greater control over their environment.

6.3.3 Personality

Personality is the unique, integrated and organized system of all behaviour of a person. Personality is the sum total of one's experience, thoughts and actions; it includes all behaviour patterns, traits and characteristics that make up a person. A person's physical traits, attitude, habits and, emotional and psychological characteristics are all parts of his personality.

6.3.4 People's Participation

People's participation may be defined as the process of giving priority to local people's perspective in identifying and analyzing their problems and opportunities, and improving the situation through their self-mobilization. The focus is on the insiders' i.e. local people's perspective, rather than outsiders' i.e. change agents', development administrators' perspective. People's participation is contrary to 'I know what they require' type of bureaucratic approach.

6.3.5 Participatory Development

Participatory development means to sensitize people and thus, to increase the receptivity and ability of rural people to respond to development programs as well as encourage local initiatives. It includes people's involvement in decision making process, where participants on their own set the direction of development, set their priorities, make decision about it, plan action and execute them.

6.3.6 Communication Gap

Communication gap refers to the difference between what was communicated by the extension agents and what has actually been received by the audience. Desirable action by the audience cannot take place if there is a large communication gap. The nature of communication gap may be of two types. (i) The message does not reach the target and (ii) the message fails to produce the desired impact, even if reaches the target.

6.3.7   Interaction

Interaction is the mutual and reciprocal influencing of each others' behaviour. The concept of interaction is control to an understanding of the concept of process in communication. If two individuals make influence about their own roles and take the role of others at the same time then they are communicating by interacting with each other.

6.3.8   Participatory Communication

Participatory communication means moving from focus of informing and persuading people to change their behaviour or attitude to focus on facilitating exchange between different stakeholders to address a common problem.

6.3.9   Communication Effectiveness

Communication effectiveness means a communication encounter that has produced desired results.

Communication effectiveness = Comprehension (clearance) + Validity (consonance, credibility and congruity) + Utility (relevance).

Communication effectiveness can be measured in terms of comprehension, validity and utility on the part of the receiver.

6.3.10   Human Relations

Human relations are integration of people into works situation that motivate them to work together productively and co-operatively to provide economic, psychological and social satisfaction.

6.3.11   Group Dynamics

Group dynamics may be defined as the social process by which people interact face to face in small groups.

6.3.12   Entropy

The information can be measured by entropy, which is a measure of the degree of randomness or choices or one's degree of freedom of choice to select a message.

6.3.13 Redundancy

This refers to the amount of information that could be omitted or added in a noiseless channel, so that the message would still retain information or same meaning.

6.3.14 Noise

This refers to any sound, distortion etc., that may be added into the channel which is not intended by the communicator. Due to noise, the received message will contain certain distortion/ errors leading to an increased uncertainty.

6.3.15 Communicator

A communicator is that person who initiates the process of communication. He is the source, originator or sender of message. He is the first one to give expression to a message intended to reach an audience.

6.3.16 Communication Behaviour of Communicator

Communication behaviour of a communicator may be defined as his expression of results from information seeking, information processing and information dissemination behaviour.

6.3.17 Communication Behaviour of Farmer

Communication behaviour of the farmers refers to the degree to which a farmer exposes himself to various information sources communicating agricultural technology, the extent to which he processes the information so received and the extent to which he uses or passes on the information received by him to others.

6.3.18 Communication Skills

As Berlo (1960) points out that there are five verbal communication skills. Two of these are encoding skills, writing and speaking while two of them are decoding skills, reading and listening. The fifth is crucial to both encoding and decoding i.e. thought or reasoning. There are other encoding skills also, such as painting, drawing and gesturing.

From extension education's point of view, communication skills also include an extension worker's ability to plan a communication strategy vis-a–vis a given objective, his ability to write, speak, prepare and use a teaching aid, treat a message to suit a given situation and to analyse feedback.

6.3.19 Attitude

Attitude is the feeling of an individual towards an object, event or something. The attitude of a communication source affects the ways in which he communicates. We can argue that the source's attitudes affect communication in at least three ways:

(i)   Attitude towards Self:

Attitude towards self is important. A favourable attitude leads to self – confidence, while a negative attitude will reflect pessimism. However, an extension worker conscious of his favourable/ unfavourable/ attitude towards self, can manipulate/ hide/ neutralize it during communication with others.

(ii)   Attitude towards Subject matter:

Listener is likely to pick up the attitude of a speaker towards his subject matter. Quite often it is reflected in his message. If he does not believe in the value of his subject matter, convincing communication is difficult to achieve. A study by Sinha (1969) revealed that the village level workers and extension officers themselves did not like the farm-planning concept in the IADP, which they were expected to 'sell'. To be an effective communicator the extension worker must be aware of his attitude towards the contents of his message, and must be able to manipulate it to advantage, if favourable, or be able to hide/ neutralise it, if unfavourable.

(iii)   Attitude towards Receiver:

The source's attitude towards his receiver(s) also affects communication. When listeners or readers realise that the source is really speaking or writing for them, they are much less critical of his message, and much more likely to accept what he says. Aristotle called this perceived characteristic of the speaker as 'ethos', a quality in the speaker that is personally appealing to the listener.

6.3.20   Aptitude

Aptitude is a person's potential capacity to do something. It is the innate ability of a person to do something. E.g., Some students are good in music/ mathematics. A little effort/ training helps him to do excellent.

6.3.21   Communication Intelligence Quotient (CIQ)

Communication intelligence quotient refers to a person's level of understanding of the intricacy of communication effectiveness.

6.3.22   Message

From Agricultural Extension point of view, a message is the facts, feelings, impressions, attitude, information etc. that a communicator wishes his audience to receive, understand, accept and act upon.

6.3.23   Empathy

Empathy is the ability on the part of a person to understand the other person's internal frame of mind and reference, and accept the same. This acceptance does not mean agreement. Empathy

is also defined as the ability of an individual to project oneself into the role of another person, to be able to appreciate the feelings, thinking and actions of another person.

An extension agent who is empathic shall be able to understand and appreciate the farmers' situations and communicate with them effectively. Similarly, an empathic farmer shall be able to communicate with the outsiders to get the desired information. Empathy is an indispensable skill for people moving out of their traditional settings.

6.3.24 Perception

Gibson (1959) defined perception as the process by which an individual maintains contact with the environment. Kollat, Blackwell and Engel (1970) explained perception as the process whereby an individual receives stimuli through the various senses and interprets them. Perception of the same situation may differ from individual to individual due to differences in their experiences and ways of looking into it. The expectations, needs and ways of thinking influence how an individual interprets what is observed.

6.3.25 Credibility

Credibility means trust-worthiness and competence. Before the audience accept any message, they will judge whether the communicator and the organization the individual represents, can be relied upon and is competent enough to give the information or not.

6.3.26 Organizations

Organizations are social units, or human groupings, deliberately constructed to seek specific goals. The goals of an organization serve many functions. They provide orientation by depicting a future state of affairs which the organization strives to realize. Thus they set down guidelines for organizational activity. Goals also constitute a source of legitimacy which justifies the activities of an organization and, indeed, its very existence. Moreover, goals serve as standards by which members of an organization and outsiders can assess the success of the organization i.e its effectiveness and efficiency. A proper understanding of the goals of an organization is of crucial importance for its success.

6.3.27 Emotion

Emotion denotes a state of being moved, stirred up or aroused and involve impulses, feelings and physical and psychological reactions. A negative emotional response may lead to non-cooperation and non-participation in programmes, stoppage of work or even destruction of the work done. In a programme of planned change, the extension agent should take care of the state of emotion of the client system.

6.3.28 Initiation

This is the process that unfolds naturally bringing people together for a common action. It is based on the initiative of the people, by the people and for the people.

6.3.29 Facilitation

This is a process catalyzing action by an outside agent. It is planned intervention to create awareness and motivate action by a group or a community to change a situation or redress the cause or causes of problems.

6.3.30 Co-operation

This is a process through which a programme is decided upon, designed and packaged for implementation in the community. It is a participatory process of decision making.

6.3.31 Authority

Authority is the limited right to use the organisation's resources and channel the efforts of some of its people to perform tasks.

6.3.32 Responsibility

Responsibility is an obligation to perform tasks and account for their satisfactory completion.

6.3.33 Accountability

Obligation of government, public services or funding agencies to demonstrate to citizens that entrusted work has been conducted in compliance with agreed rules and standards or to report fairly and accurately on performance results vis-à-vis mandated roles and/or plans. This may require a careful, even legally defensible, demonstration that the work is consistent with the contract terms. Projects commonly focus on upward accountability to the funding agency, while downward accountability involves making accounts and plans transparent to the primary stakeholders. Ensuring accountability is one part of the function of monitoring and evaluation (learning and management are the other two).

6.3.34 Feedback

Feedback means carrying some significant responses of the audience back to the communicator. Extension communication is never complete without feedback information. The extension agent should know what has happened to the audience after the message has reached them.

6.3.35 Code

It is a system of signals for communication.

6.3.36 Symbols

A symbol is something that represents something else. The most function type symbol is a word. Pictures, numbers and gestures also are widely used as symbols.

6.3.37 Encode

It means to put the message into code or cipher.

6.3.38 Channel

It means the medium through which signals move. According to Rogers and Shoemaker (1971), communication channels are the means by which messages travel from a source to a receiver.

6.3.39 Decode

It means conversion of the message in the code into ordinary language which may be easily understood.

6.3.40 Treatment of message

It means the way a message is processed so that the information gets across to the audience. The purpose of treatment is to make the message clear, understandable and realistic to the audience.

6.3.41 Models

Models are symbolic representations of structure, objects or operations.

6.3.42 Fidelity

It is the faithful performance of communication process by all its elements-communicator, message, channel and receiver. Fidelity of communication process is the degree of exposure and effectiveness of various communication sources at various stages of adoption.

6.3.43 Homophily and Heterophily

Accordingly to Rogers (1995), a fundamental principle of human communication is that the exchange of ideas occurs most frequently between individuals who are alike, or homophilous. HOMOPHILY *is the degree to which a pair of individuals who communicate are similar in certain attributes, such as beliefs, education, social status and the like*. On the other hand, HETEROPHILY *is opposite of homophily, and is the degree to which pairs of individuals who interact are different in certain attributes.*

When two individuals share common meanings, beliefs, and mutual understandings, communication between them is more likely to be effective. Individuals enjoy the comfort of interacting with others who are similar. Heterophilious communication between dissimilar individuals may cause *cognitive dissonance* because an individual is exposed to messages that are inconsistent with existing beliefs and create an uncomfortable psychological state.

6.3.44 Effect

Intended or unintended change resulting directly or indirectly from a development intervention.

6.3.45 Efficacy

The extent to which the project's objectives were achieved or expected to be achieved, taking into account their relative importance.

6.3.46 Effectiveness

A measure of the extent to which a project attains its objectives at the goal or purpose level; i.e. the extent to which a development intervention has attained, or is expected to attain, its relevant objectives efficiently and in a sustainable way.

6.3.47 Efficiency

A measure of how economically inputs (funds, expertise, time, etc.) are converted into outputs.

6.4 Programme Planning and Evaluation

6.4.1 Plan

A plan is a predetermined course of action. Plans may be tailored to specific projects, or they may be established as standing plans (eg. Five Year Plans) for future actions. Planning not only involves predetermining a course of action to be taken, but also includes mentally searching for possibilities of future problems that might appear later.

6.4.2 Programme

A programme is the total educational job being done in a particular setting. It is a prospectus or a statement issued to promote understanding and interest in an enterprise.

6.4.3 Planning

Planning is a process which involves studying the past and present in order to forecast the future and in the light of that forecast determining the goals to be achieved and what must be done to reach them.

6.4.4 Extension Programme

Extension programme is a statement of situation, objectives, problems and solutions. It is relatively permanent but requires constant revision. It forms the basis for extension plans.

6.4.5 Programme Planning

Programme planning is a decision making process involving critical analysis of the existing situation and the problems, evaluation of the various alternatives to solve these problems and the selection of the relevant ones, giving necessary priorities based upon local needs and resources by the cooperative efforts of the people both official and non-official with a view to facilitate the individual and community growth and development.

6.4.6 Extension Programme Planning

Extension Programme Planning is a social-action, decision-making, interactional process in which advance thinking is needed for identifying the needs, interests and resources of the people through educational means to prepare a blueprint for action.

6.4.7 Programme Projection

Programme Projection is an expanded concept of extension programme planning. Programme projection also means improved programme planning by looking more broadly, looking more deeply, looking longer or farther ahead and necessarily, involving more people. It involves the logical analysis of all available information and the setting of long-range goals and objectives to the people.

6.4.8 Levels of objectives

Three levels of objectives are generally well recognized.

Fundamental or all-inclusive objectives of society; say, people's participation in planning at the gross roots level.

General but more definite social objectives; say, mandatory creation of Panchayati Raj bodies in the States.

Working or specific objectives are say, enactment of suitable laws relating to Panchayats, holding Panchayat elections in time, providing funds and facilities to the Panchayati Raj bodies.

6.4.9 Problem

Problem is a condition that the people after study, with or without outside help, have decided needs changing.

6.4.10 Solution

Solution is a source of proposed action to change an unsatisfactory condition to one that is more satisfying.

6.4.11 Project

Project is a specification of work to be done or procedures to be followed in order to accomplish a particular objective.

6.4.12 Work plan

A detailed document stating which activities are going to be carried out in a given time period, how the activities will be carried out and how the activities relate to the common objectives and vision. The work plan is designed according to the logical framework and contains a description in each cell of the work plan table of each activity and output, its verifiable indicators, the means of verification and its assumptions.

6.4.13 Plan of Work

A Plan work is an outline of activities so arranged as to enable efficient execution of the programme. It is a statement of activities to be undertaken by an individual, a group of people or an organization, within a definitely stated time, to carry out the recommendations in the programme.

The plan of work indicates what is to be done, who is to do it, how it is to be done, when it is to be done, who are to be served or reached and how the results will be evaluated.

6.4.14 Calendar of work

A calendar of work is a plan of activities to be undertaken in a particular time sequence.

6.4.15 Baseline Survey/ Study

An analysis describing the situation in a project area – including data on individual primary stakeholders – prior to a development intervention. Progress (results and accomplishments) can be assessed and comparisons made against it. It also serves as an important reference for the completion of evaluation.

6.4.16 Benchmark

Reference point or standard against which performance or achievements can be compared. A benchmark might refer to what has been achieved in the past, by other comparable organisations, or what could reasonably have been achieved under the circumstances.

6.4.17 Risk

Risk refers to the degree of uncertainty with which an outcome can be predicted.

6.4.18 Commitment

Commitment is a state of being in which an individual becomes bound to do his actions and through these action to beliefs that sustain the activities and his own involvement.

6.4.19 Households

Household is a social organisation in which members normally live and sleep in the same place and have their meals. They may or may not be a joint family.

6.4.20 Rules

A rule specifies exactly what is to be done in a specific, single situation.

6.4.21 Budget

A budget is a technique for allocating resources, expressed quantitatively, to attain objectives expressed in the same terms.

6.4.22 Delegation

Delegation is the assignment of tasks and authority to a recipient who assumes responsibility for them.

6.4.23 Indicator

Quantitative or qualitative factor or variable that provides a simple and reliable basis for assessing achievement, change or performance. A unit of information measured over time that can help show changes in a specific condition. A given goal or objective can have multiple indicators.

6.4.24 Input

Something that is put into a process/program. Eg. An amount put in an investment, a fertilizer application for increasing the crop yield. It is a component of production such as land, water, labour, seed, package of practices, plant protection measures, energy etc.

6.4.25 Outputs

The tangible (easily measurable, practical), immediate and intended results to be produced through sound management of the agreed inputs. Examples of outputs include goods, services or infrastructure produced by a project. These may also include changes, resulting from the intervention, that are needed to achieve the outcomes at the purpose level.

6.4.26 Outcome

The results achieved at the level of "purpose" in the objective hierarchy. Outcome is part of impact (result at purpose and goal level).

6.4.27 Impact

It is the change that has taken place across the system over a period of time due to a development initiative. It is something that follows as a result or consequence.

6.4.28 Decision trees

Decision trees are management science technique for choosing the best alternative course of action. A decision tree is a schematic representation of a decision problem. Decision trees can be developed for the more complex situation in which the outcome of a decision affects later decisions.

6.4.29 Qualitative

Something that is not summarised in numerical form, such as minutes from community meetings and general notes from observations. Qualitative data normally describe people's knowledge, attitude or behaviours. The aroma, colour, taste etc are some of the qualitative parameters and are intangible.

6.4.30 Quantitative

Something measured or measurable by, or concerned with, quantity and expressed in numbers or quantities.

6.4.31 Relevance

The extent to which the objectives of a project are consistent with the target group's priorities and the recipient and donors' policies.

6.4.32 Reliability

Consistency or dependability of data and evaluation judgements, with reference to the quality of the instruments, procedures and analysis used to collect and interpret evaluation data. Information is reliable when repeated observations using the same instrument under identical conditions produce similar results.

6.4.33 Resources

Items that a project has or needs in order to operate, such as staff time, managerial time, local knowledge, money, equipment, trained personnel and socio-political opportunities.

6.4.34 Result

The measurable output, outcome or impact (intended or unintended, positive or negative) of a development intervention.

6.4.35 Review

An assessment of the performance of a project or programme, periodically or on demand. A review is more extensive than monitoring, but less so than evaluation.

6.4.36 Sample

The selection of a representative part of a population in order to determine parameters or characteristics of the whole population.

6.4.37 Situation Analysis

The process of understanding the status, condition, trends and key issues affecting people, ecosystems and institutions in a given geographic context at any level (local, national, regional, international).

6.4.38 Triangulation

Use of a variety of sources, methods or field team members to cross check and validate data and information to limit biases.

6.4.39 Validity

The extent to which something is reliable and actually measures up to or makes a correct claim. This includes data collection strategies and instruments.

6.4.40 Validation

The process of cross-checking to ensure that the data obtained from one monitoring method are confirmed by the data obtained from a different method.

6.4.41 Attitude

Attitude is the degree of positive or negative feeling associated with some psychological object towards which people differ in varying degrees.

Allport (1937) defined *attitude* as a mental state of readiness, organized through experience, exerting a directive and dynamic influence upon the individual's response to all objects and situations with which it is related.

6.4.42 Motive

Motive is that which moves or activates. In psychology, it refers to some internal activator within an individual. The motives are the directing tendencies inside the individual to follow a particular course of action.

6.4.43 Motivation

Motivation means movement or motion, an inner state that energizes, activates or moves and directs human behaviour towards goals. It is a need satisfying and goal seeking behaviour.

6.4.44 People's Participation

People's participation may be defined as the process of giving priority to local people's perspective in identifying and analyzing their problems and opportunities, and improving the situation through their self-mobilization. The focus is on the *insiders'* i.e. local people's perspective, rather than on 'outsiders' i.e., change agents', development administrators' perspective.

6.4.45 Value System

It is viewed as relatively permanent perceptual framework which influence the nature of an individual's behaviour.

6.4.46 Semi- structured Interview

It is a form of guided interviewing where only some questions are predetermined. Many questions are formulated during the interview, as in a journalistic interview.

6.4.47 Rating

Rating means judging an object in absolute term against some specified criteria.

6.4.48 Ranking

Ranking is the relative judgement of an object against other similar objects according to some criteria. It is useful for sensitive information like income or wealth. Ranking scores are easier to obtain than absolute measurements. They may be used either as a part of interview or separately.

6.4.49 Participatory Evaluation

Participatory evaluation is designed to help people to help themselves and improve their programmes using a form of self-evaluation and reflection. It is characterized by maximum community involvement at all levels, with emphasis on cooperation, collaboration and shared resources. The participants are seen as experts, and power residing with them. The participants have shared responsibility, accountability, and appreciation of ethnic diversity (Lynton and Pareek, 2000).

6.4.50 Organizing

Organizing involves establishing an intentional structure of roles for people to fill in an organization. It involves, (a) the identification and classification of required activities, (b) the grouping of activities necessary to attain objectives, (c) the assignment of each grouping to a manager with authority necessary to supervise it (delegation), and (d) the provision for coordination horizontally and vertically in the organization structure.

An organization structure should be designed to clarify who is to do what and who is responsible for what result, to remove obstacles to performance caused by confusion and uncertainty of assignment, and to furnish decision making and communication networks reflecting and supporting enterprise objectives.

6.4.51 Coordination

Coordination means establishing harmonious relationship between the efforts of individuals and groups for accomplishment of enterprise objectives. For smooth running of an enterprise coordination is necessary within the organization, as well as with outside organisations. Some sort of basic coordination is essential within an organisation throughout its lifetime for its survival and for unified action.

6.4.52 Staffing

Staffing is the process of selecting, maintaining and developing personnel in position to fulfill the organizational objectives.

6.4.53 Reporting

A report is a formal record of activities or performance. It generally reflects the achievement or otherwise of a programme. Preparation of too many reports may hinder the day-to-day work, particularly field extension work. However, it is useful to bring out at least an Annual Report by each ongoing programme or project and also by the organization. Reporting should be standardized as far as possible, so that comparable data are obtained from the units and summarized for the organization. However, there should be provision for reporting something significant and unusual.

6.4.54 Questionnaire and Schedule

A questionnaire is a device for securing answers to questions by using a form which the respondent fills in or marks himself, while schedule is administered by an interviewer in a face- to-face situation (sometimes modifies also). It may be with the help of instruments like telephones, etc.

6.4.55 Interview

Interviewing being an interesting and skillful process becomes a sort of battle of wits between the respondent and interviewer, involving lots of interaction. It swings between acceptance and rejection attempts from both sides. During this process the interviewer has to perform two major functions, viz,(i) motivating the respondents and (ii) collecting and securing measurable data by using predetermined aids and / or devices.

6.4.56 Surveys

Surveys are investigations of subjects with respect to values, conditions, traits and situations, which provide needed information on a limited number of topics, clients, conditions and facilities on a usually extensive scale. It is designed to give an overview about a population. Surveys are combined with other methods of evaluation. It may cover the entire population or may be restricted on sample surveys. Their biggest problem is to establish their reliability and validity.

6.4.57 Testing (Tests)

A test is a systematic procedure for comparing the behaviour of two or more persons, with a set of constructed stimuli (test items) which enables the tester to assign the testee a numeral from which inferences can be made about the testee's possession of whatever the test is supposed to measure.

Tests are developed and designed to measure maximal rate (speed), their achievements, skills, creativity, intelligence, emotions and hosts of socio-psycho-cultural variables.

6.4.58 Scaling Techniques

Physical scales for weighing or measuring things are very common. In recent years socio-psycho-cultural and attitudinal measurements (or weighing) are practiced by using empirical techniques, with gradual measuring instruments of appropriate levels, by assigning the numerals to the psycho-social-attitudinal object according to rules which are called scaling techniques.

6.5   Extension Activity in Transfer of Technology

6.5.1   Farmer

The term "farmers" refers to both men and women, and include landless agricultural labourers, sharecroppers, tenants, small, marginal and sub-marginal cultivators, farmers with larger holdings, fishers, livestock and poultry rearers, pastoralists, small plantation farmers, as well as rural and tribal families engaged in a wide variety of farming related occupations such as apiculture, sericulture and vermiculture.

The KVKs should also include tribal families engaged in shifting cultivation and in the collection and use of non-timber forest products. Farm and Home Science Graduates earning their livelihoods from crop and animal husbandry, fisheries and agro-forestry will also have their rightful place in the world of farmers and farming.

6.5.2   Agriculture

Agriculture is the process of producing food, feed, fiber, fuel and other goods by the systematic raising of plants and animals. It is also defined as the science of working with the land, such as the harvesting of crops, and the rearing and care of live stock (animals on a farm). Agriculture is also the science and art of farming; work or business of cultivating the soil, producing crops, and raising livestock.

6.5.3   One straw Agriculture

Refers to system of natural farming without ploughing, chemical fertilizers, weeding and chemical pesticides and herbicides.

6.5.4   White Agriculture

System of agriculture based on substantial use of micro organisms, particularly fungi.

6.5.5   Green Agriculture

Cultivation with the help of integrated pest management, integrated nutrient supply and integrated natural resource management systems.

6.5.6   Organic Agriculture

Cultivation without any use of chemical inputs like mineral fertilizers and chemical pesticides.

6.5.7   Evergreen Revolution

Refers to increasing productivity in perpetuity without associated ecological harm.

6.5.8   Eco Agriculture

Agriculture based on conservation of soil, water and biodiversity and the application of traditional knowledge and ecological prudence.

6.5.9   EM Agriculture

System of farming using effective micro organisms (EM).

6.5.10   Adult

An adult is a human being after an age of 21 (or say 18) years, as specified by law. An adult is considered to be a fully developed and mature person. As a person matures, his or her self-concept moves from a dependent personality towards a self-directing human being.

6.5.11   Rural Youth

The Ministry of Human Resource Development (1985) considers 'youth group' in India as persons in the age group 15 to 35 years. Youth forms nearly one-third of the population of India. Rural Youth constitute over two-and half times of the size of urban youth.

6.5.12 Group

It is a collection of two or more individuals in reciprocal communication and interaction.

6.5.13 Community

A group of people living in the same locality and sharing some common characteristics.

6.5.14 Institution

An institution is an organized system of social relationships which embodies certain common values and procedures, and meets certain basic needs of the society. Institutions are culturally approved patterns of behaviour including prescribed roles and procedures, and are grouped to satisfy some basic social needs. These have persisted long enough to be considered as permanent.

6.5.15 Organizations

Organizations are social units, or human groupings, deliberately constructed to seek specific goals.

6.5.16 KVK

KVKs are grass root level organizations meant for application of technology through assessment, refinement and demonstration of proven technologies and training of same under different 'micro farming' situations in a district.

6.5.17 Extension Service

It is mainly to provide educational services to the people according to their needs, for improving their life through better working.

6.5.18 Expert System

An "Expert System" is an intelligent computer program that uses knowledge and inference procedures to solve problems that are difficult enough to require human expertise for their solution. The knowledge necessary to perform at such a level plus the inference procedures used can be thought of as a model of the expertise of the best practitioners in the field. (Daniel Hunt, 1986)

6.5.19 Self Help Group (SHG)

SHG is a people's institution which provide the poor with the space and support necessary to take effective steps towards greater control of their lives in private and in society. SHG is not a static institution. It grows on resources and management skills of its members and their increasing confidence to get involved in issues and programmes that require their involvement in the public and private sectors.

6.5.20 Beneficiaries

The individuals, groups or organisations who, in their own view and whether targeted or not, benefit directly or indirectly from the development intervention. Here, they are referred to as the primary stakeholders of a project.

6.5.21 Sustainability

Sustainability refers to the successful management of resources to satisfy changing human needs, while maintaining or enhancing the quality of environment and conserving natural resources. The KVK staff while formulating their programs should focus on maintaining the sustainability of the micro farming system in their districts.

6.5.22 Activity

Actions taken or work performed in a project to produce specific outputs by using inputs, such as funds, technical assistance and other types of resources.

6.5.23 Field Days

A field day is a day in which an area containing successful farming or other practices is open for people to visit. This way, a group of farmers could witness the performance or results of certain practice (s) under local conditions. Filed days could be planned to deal with one specific topic at a time or a number of items of interest to the farmers. The purpose of the field day is to permit extension clientele to observe personally, ask about successful and locally applicable practices, and to create a situation in which informal contacts and learning can take place.

Filed days are normally held once or twice a year, usually in each crop season. They are held on farmers' fields, regional research stations, agricultural universities and government farms to demonstrate successful farming techniques or research.

6.5.24 Farmers' Field School (FFS)

The farmers' field school (FFS) is basically "a school without wall". FFS consists of a group of people with a common interest who get together on a regular basis to study the "how or why" of a particular topic. The topic covered can vary considerably from IPM, organic agriculture, and husbandry etc, to income generating activities such as handicrafts.

6.5.25 Clinic

A meeting of a group of people with common interests. It is established for the purpose of diagnosing, analyzing, and seeking solutions to specific problems.

6.5.26 Agri- clinics

Agri- clinics are those which provide expert services and advice to farmers on cropping practices, technology dissemination, crop protection from pests & diseases, market trend and prices of various crops in the market and also clinical services for animal health etc, which would enhance productivity of crops/animals.

6.5.27 Farm Clinic

Farm clinic is a facility developed and extended to the farmers for diagnosis and treatment of farm problems and to provide some specialist advice to individual farmers. The extension agency

may set up farm clinics in the village and/or in the organization's headquarters and sub-centres, where the relevant subject matter specialists, in collaboration with the extension agents, discuss, diagnose and prescribe treatment to farmers' problems, meeting those present individually, on a fixed place, day and time. The specialist may visit the local area if needed, for an on–the-spot diagnosis and guidance or follow-up. This method is suitable for treatment and prevention of pest and disease problems relating to plants, animals and soils.

6.5.28 Agri-Business centre

Are those which provide input supply, farm equipment on hire and other services. Commerce/ trade related to agriculture sector is carried out.

6.5.29 Exhibition

Exhibition is a planned and systematic display of real objects, specimens, models, charts and posters presented to public view for instruction, judging a competition, advertising or entertainment. It helps to create awareness, develop interests and stimulate action amongst the public. It accommodates both exhibits and display.

Displays use two dimensional or flat materials like pictures, photograph, chart, posters etc, while exhibits tend to use more three dimensional materials like real objects, specimens and models.

6.5.30 Field visit

Visit to successful farmers' fields in addition to KVK farms to reinforce the relevant technologies imparted in the training programme. The principle of "seeing is believing" can be fulfilled. Field visit gives participants exposure to the real life situation and also provide an idea about the possible solutions to the problems.

6.5.31 Success Stories

Experience of successful farmers as success stories carry special significance both for trainees as well as the KVKs and boost the technology dissemination process. For example, the success stories reported by KVK West Tripura on True Potato Seeds (TPS) have stimulated farmers in the surrounding villages. Other mass media like Radio and Television can broadcast and telecast success stories to create awareness and motivate farmers about successful technologies that could be practiced by them as well.

6.5.32 Campaign

It is an intensive teaching activity undertaken at an opportune time for a brief period, focusing attention in a concerted manner on a particular problem, with a view to stimulate the widest possible interest in a community. Campaigns are launched only after a recommended practice has been found acceptable to the people as a result of other extension methods like method or result demonstrations.

Its purpose is to encourage emotional participation of a large number of people and to foster a favourable psychological climate for quick and large scale adoption of improved practices.

6.5.33 Field Trips/ Farm Tour

It is a method in which a group of interested farmers accompanied and guided by an extension worker, goes on tour to see and gain first hand knowledge of improved practices in their natural setting (whether on research farmers demonstration farms, institutions or farmers field). It is a series of field and demonstration meetings arranged in a sequence.

6.5.34 Study Tour

In study tour, a group of interest persons accompanied and guided by one or more extension agents moves out of their neighbourhood to study and learn significant improvements in farm and home elsewhere.

The main purpose is to motivate the visitors by showing what others have been able to achieve. The programme may include visit to farmers' place as well as research stations, and may be held within the district, outside the district or even outside the State. Study tours may be synchronized with programmes of national importance like National Fair, World Fair etc. Visit to some places of interest may be included in the programme. A group of 30 to 50 persons may be convenient for a study tour. However, a maximum number of 80 to 100 persons may be accommodated in one batch.

6.5.35 Farm Publication

Farm publication is a class of publications prepared by the extension agency in printed form, containing information relating to the improvement of farm and home. Farm publications are of various types such as leaflet, folder, bulletin, newsletter, journal and magazine. Farm publications may be used singly or in combination with other extension methods.

6.5.36 Extension / Publications

Extension publications are very useful extension tools which provide precise and reliable scientific information in simple language and in an interesting manner. They are written with a clear message for farmers, in simple language. Such publications may include a leaflet, folder, pamphlet etc. Attractiveness of extension publications can be increased by using different colours, illustrations, photographs and lettering style.

6.5.37 News

News is any timely information that interests a number of persons and the best news is that which has the greatest interest for large number of people. Accurate, unbiased account of the main facts of a current event is of interest to the readers of a newspaper.

6.5.38 Newspaper

A newspaper is a bunch of loose printed papers properly folded, which contains news, views, advertisement etc. and is offered for sale at regular intervals, particularly daily or weekly.

6.5.39 Newsletter

It is a miniature newspaper in good quality paper, containing information relating to the activities and achievements of an organization. It has a fixed periodicity of publication. News letters are generally distributed free-of-cost.

6.5.40 Circular letters

These are specially prepared intimate letters using a personal approach for a specific message, which are mailed to a large number of farmers periodically or on special occasions. They are written to maintain a continuous contact with farmers and to communicate specific ideas to them. They are also used as a follow-up of several other extension teaching methods.

6.5.41 Pamphlet

Pamphlet varies in size from 12 to 24 pages. A pamphlet may contain and deal with a number of related topics.

6.5.42 Leaflet

It is a single printed sheet of paper of small size, containing preliminary information relating to a topic. It is made as, and when needed. Leaflets are generally distributed free-of-cost.

6.5.43 Folder

It is a single printed sheet of paper of big size, folded once or twice, and gives essential information relating to a particular topic. It is printed as and when required. Generally distributed free-of –cost.

6.5.44 Bulletin

It is a printed bound booklet with a number of pages containing comprehensive information about a topic. It is made as and when necessary. A small price may be fixed on some important bulletins.

6.5.45 Journal, Magazine

These are periodicals, containing information related to various topics of interest not only for the farmers but also for the extension agents. It has a fixed periodicity of publication. Generally supplied against pre-payment of subscription for a particular period.

Farm publications are extremely useful to the literate farmers. Even illiterate farmers can make use of them with the help of literate members in their family. Farm publications are used by all types of media- persons. These may be used in most of the individual, group and mass methods.

6.5.46 Specimen, Model, Diorama

Specimen is a sample which represents the whole, **model** is miniature replica of an object and **diorama** is a scenic representation of the original, with specimen, model and painting. The term **'diorama'** is derived from the Greek which means 'to see through'. In extension work when it is not

possible to expose the audience to the real life situation, these may be used to communicate a reliable idea of the original. Specimen and model are used in method demonstration, group meeting, training programme, exhibition etc. Diorama is generally used in exhibition and in communication centres.

6.5.47 Media Forum

Media forums are organised small groups of individuals who meet regularly to receive a mass media programme and to discuss its contents. The mass media linked to the forum may be radio, television, video etc.

6.5.48 Assigned Reading

The trainer gives the trainees reading assignment that provide new information on the subject matter of the training.

6.5.49 Demonstrations

The trainer shows the correct steps for completing a task, or shows an example of a correctly completed task to the trainers.

6.5.50 Radio Talk

Radio is a device with which the whole mass can be contacted at a time, efficiently and economically. It is a useful tool for extension work in rural areas. The best time for broadcasts for rural people is the evening time between 6 P.M .and 8 P.M., because at this time majority of them are free to listen and usually assemble at their meeting places. Short, simple sentences, familiar words, straight forward ideas, repetition of important facts, and example and not too many ideas will make the talk move effective.

6.5.51 TV Show

TV is a very powerful medium of communication. Television has the quality of direct address; in other words, every viewer feels as if he is being talked to personally.

6.5.52 Film show

It is an effective extension tool which helps extension workers to disseminate agricultural innovation in rural areas whenever they are organised in a village. Most of the time, they are interested in such shows for entertainment. However, with careful selection and use of films, messages about improved farm and home practices can also be effectively conveyed. Attendance at film shows can be increased by telling children that they will be allowed only in the company of parents.

6.5.53 Farmers' Fair/ Kisan Mela

Fairs, or melas, are part of our culture. Rural fairs attract a large number of persons dressed in their best, with joy and gaiety, bringing together rustic culture and traditions.

With the establishment of agricultural universities, the concept of rural fairs has been used to organize farmers' fairs as an effective method of communicating improved practices to a large number of farmers. These fairs generally include an interesting agro- industrial exhibition, effective demonstration of improved seeds in small packets. These fairs are generally held at a place where some institution or research farm is located as their organisers need the participation and coordination of a larger number of departments and persons.

6.5.54 Kisan Call Centre (KCC)

The Department of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India has launched **Kisan Call Centers** with a view to leverage the extensive telecom infrastructure in the country to deliver extension services to the farming community. The purpose of these Call Centers is mainly to respond to issues raised by farmers instantly in the local language, on continuous basis. It operates nation wide through a toll free number 1551 which farmers can dial freely from anywhere in the country.

6.5.55 Farmer-Scientist Interaction

It is defined as "the collaboration of farmers and scientists in agricultural research and development for better understanding of information and experiences".

6.5.56 ATMA/SREP

ATMA is a society of key stakeholders in agricultural activities for sustainable agricultural development in the district. It is a focal point for integrating research and extension activities and decentralizing day to day management of the public Agricultural Technology System (ATS). It is a registered society responsible for technology dissemination at the district level. The ATMA was initially pilot tested in 24 districts across six participating states (Andhra Pradesh, Bihar, Himachal Pradesh, Maharashtra, Orissa and Punjab).

The ATMA at district level would be increasingly responsible for all the technology dissemination activities at the district level. It would have linkage with all the line departments, research organisations, non-governmental organisations and agencies associated with agricultural development in the district. ATMA management committee comprises of the Project Director of the ATMA as the Chairman and members are drawn from line department heads, NGOs and farmers organization. The management committee carries out PRA, prepares Strategic Research Extension Plan for the district, establishes Farmer Advisory Centres and co-ordinate the execution of annual work plan through participatory line departments, ZRSs, KVKs, NGOs, FIGs/FOs and allied institutions. The ATMA creates Farmers Advisory Committees to provide feedback. It uses NGOs to organize farmers and encourages private sector in technology transfer. It also validates and refines technology. It also ensures increased use of information technology, arranges in-service training and encourages developing of new public and private partnership. The ATMA Governing Board (GB) comprises District Magistrate /Collector as chairman, Chief Development Officer as Vice Chairman and, Joint Director, Agriculture, Head KVKs, one farmer, one NGO representative, one SC/ST farmer, lead Bank Officer of District and representative from Agricultural Marketing Board as members.

6.5.57 SREP (Strategic Research and Extension Plan)

It is the process of finding the best scenario for agricultural development and setting the best path to reach that destination by rigorous analysis and choices about:

- Goals-what is intended to be accomplished

- Opportunities and Threats- what is needed and feasible

- Strengths and Weakness-what is the capability of doing things

6.5.58 ATIC (Agricultural Technology Information Centre)

ATIC is a "Single Window" support system linking the various units of a research institution with intermediary users and end users (farmers) in decision making and problem solving exercise.

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