A) Theory

1. Communication - definition, models of communication process - Aristotle, Shannon-Weaver, Berlo, Schramm, j.P. Leagans, Rogers and Shoemaker, Litterer, Westley-Macleans and extension communication system; functions of communication
2. Elements of communication and their characteristics - communicator, message, channel, treatment, audience, audience response and feedback
3. Types of communication - oral, written and non-verbal; non-verbal
4. Communication-types and functions - barriers / problems in communication –some concepts relating to communication –frame of reference, perception, communication fidelity, commun'tcation gap, time lag in communication, empathy,heteriphily and homophily
5. Extension teaching method - definition - functions and classification according to use and form - strong and weak points of individual - group and mass contact methods - individual contact methods: farm and home visit - meaning - purpose - procedure - advantages and limitations
6. Individual contact methods _ field trial - meaning - objectives - procedure - advantages and V~mitations - result demonstration - meaning principles - purpose - procedure - advantages and limitations
7. Group contact methods - method demonstration - meaning - objectives procedure -advantages and limitations - basis for demonstration differences between method demonstration and result demonstration;
8. (youp 6scussion - meaning - purposes - procedure - roles of chairman, membevs and expert - advantages and fiaiftafiong
7. Group contact methods - field trips and field days - meaning - objectives - procedure -advantages and limitations - Farm Field School (FFS) meaning - concept - objectives - and steps in organizing FFS
8. Small group discussion techniques - lecture / extension talk - meaning characteristics - advantages and limitations - difference between extension talk and lecture - symposium -panel – debate - forum - buzz group - workshop - brain storming - seminar - conference -meaning
9. Mass contact methods - campaign - meaning - objectives - procedure advantages and limitations - exhibition meaning - objectives procedure - advantages and limitations kisan mela -meaning objectives - dimensions of activities - procedure and limitations
10 Radio - meaning - purposes - advantages and limitations; rural and farm broadcasting - farm and home units - objectives;, radio rural forums - farm school on All India Radio (AIR) -.Meaning and procedure and agricultural programmes; Television meaning -, objectives - agricultural programmes advantages and limitations
11. Information sources - internet - meaning - purposes – benefits and limitations -cyber cafes / kioskS - meani.ng - video and teleconferences meaning - components -advantages - cyber extension - meaning features - five successful models - advantages -factors influencing selection and combination of extension teaching methods
12. Call centres – Parishkaram (Farmers Call Centre) in AP and Kisan call.centres -.meaning – objectives - operational mechanism (Three levels) - agri-,clinics - rneaning – objectives - eligibility - training – loan assistance and advantages - agricultural journalism - meaning – scope - importance - characteristics~ of news - factors determining the news value, types of news and sources of news
13. Diffusion and._adoption of innovations - adoption - diffusion - adoption process and innovation - meaning - models of adoption process - five and seven stage models -. attributes of innovation – relative advantage, compatibility, 'complexity, trialability, observability and predictability
14. Innovation decision process - meaning and stages (knowledge, persuasion, decision, implementation and confirmation); concepts dissonance and rejection - active rejection and passive rejection discontinuance - replacement'ahd disenchantment discontinuance, over

adoption, rate of adoption and innovativeness - adopter categories and their characteristics

15. Factors influencing adoption process - social, personal and situational; capacity. building of extension personnel and farmers - training - meaning - types of training - pre-service training, in service, orientation, induction training, refresher training and training for professional qualification trainIng to farmers - time, duration and venue.
16. Farmers' Training Centre (FTC) objectives and trainings organized; Krishi, Vigyan Kendra (KVK) mandate; District Agricultural Advisory and Transfer of Technology Centre (DAATTC) - objectives

B) Practical

1 Simulated exercises on communication

2. Simulated exercises on distortion communication

3. Organizing a group discussion

4. Conducting method demonstrations skill teaching

5. Visit to Krishi Vigyan Kendra (KVK)./ Farmers' Training, Centre, (FTC)

6. Visit to Distdct Agricultural Advisory and Transfer of Technology Centre (DAATTC)

7. Planning and writing a script for radio

8., Planning and writing a script for television

9. Audio-Visual aids - importance and classification, planning, presentation and evaluation of visual aids

10 Planning and preparation of charts and posters

11. Planning and preparation of OHP transparencies

12. Planning and preparation of powerpoint slides

13. Planning and preparation of information materials - leaflet, folder and pamphlet

14. Planning and preparation of news stories and success stories

15. Handling of video camera

16. Handling of video camera

References

Dahama, O.P. and Bhatnagar, O.P. 1980. Education and Communication for Development. Oxford & lBH Publishing Co. Pvt. Ltd., New Delhi.

Ganesh, R., Mohammad lqbal, 1. and Anandaraja, N. 2003. Reaching the Unreached - Basics of Extension Education. Associated Publishing Company, New Delhi.

Ray, G.L. 2006. Extension Communication and Management Naya Prakashan, Kolkata.

Rayuclu, C.S. 1997. Communication. Himalaya Publishing House, Hyderabad.

Reddy, A.A 2005 Extension Education. Sri Lakshmi Press, Bapatla.

Rogers, E.M. 2003. Diffusion of Innovations. Free Press, New Delhi.

Somasundararn, T. 1977. Producing Agricultural Information Materials. Kansas State University, USA and APAU, Hyderabad.

Yella Reddy, N. 1998. Audio-Visual Aids for Teaching, Training and Extension. Haritha Publishing House, Hyderabad

Lecture - 1 Communication – Definition, models of communication process- Aristotle, Shannon-Weaver, Berlo, Schramm, J.P.Leagans, Rogers and Shoemaker, Litterer, Westley – Macleans, and extension communication system; functions of communication:

What is communication? It is the process of transferring an idea, skill or attitude from one person to another accurately and satisfactorily. In other words, it is the sharing of ideas, attitudes or skills, between two or more persons. The main purpose of communication is to influence the behavior of people exposed to the communication. Needless to say, a good extension worker should be a good communicator.

Definitions

Hovland defines Communication is the process by which an individual - - the communicator - - transmits stimuli to modify the behavior of other individuals - - communicatees. In other words, the communicator's ***expression*** should make the intended ***impression*** on the communicatee.

According to Leagans, Communication is the process by which two or more people exchange ideas, facts, feelings or impressions in ways that each gains a common understanding of the meaning, intent and use of messages.

The word communication is derived from Latin word 'Communis' which means establishing **'commonness'**. Communication therefore, is a conscious effort to share information, ideas, attitudes, skills etc., with others.

The success of extension worker depends largely on his ability in effective communication. He should, therefore, be familiar with the key elements of the communication process to be fulfilled by each of the elements if the communication is to be successful.

Models of Communication:

Different models have been developed by writers on communication to illustrate the key elements of the communication process.

Source: Some person / group of persons with a purpose

Message: The purpose of the source is expressed in this form called message.

Code : System of signals for communication

Encode : To put the message into code or cipher.

Encoder: Takes ideas of source and put them in a code; thus, the source's purpose is expressed as message

Channel: A medium / a carrier of message through which signals move.

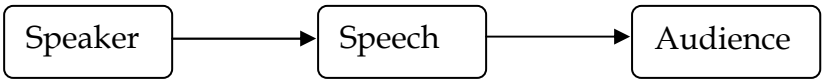
Decoder : Converts message in the code into ordinary language which may be easily understood

Receiver: The target of communication.

A few important models are illustrated as follows:

I. ARISTOTLE MODEL: According to Aristotle Model, communication process has three elements

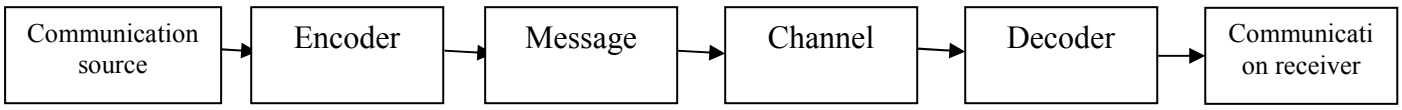
1. Speaker – Person who speaks
2. Speech – The speech that the individual produces
3. Audience – The person who listens



II. SHANNON-WEAVER MODEL (1949): model is consistent with Aristotle's proposition. According to them, the ingredients of communication are-

Compared with the Aristotelian model, the source is the speaker, the signal is the speech and the destination is the audience, plus two added ingredients, a transmitter which sends out the source's message and a receiver which catches the message for the destination.

III. BERLO'S MODEL (1960) OF COMMUNICATION PROCESS CONSISTS OF :



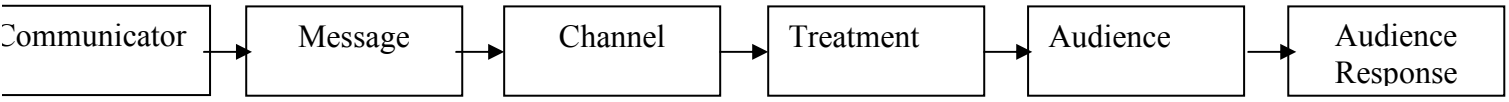
Code is a system of signals for communication. Encode means to put the message into code or cipher. Channel means the medium through which the signals move, the decoder means which converts the message in the code into ordinary language which may be easily understood.

He further elaborated that all human communication has some source, some person or group of persons with a purpose. The purpose of the source has to be expressed in the form of message. The communication encoder is responsible for taking the ideas of the source and putting them in a code, expressing the source's purpose in the form of a message. A channel is a medium, a carrier of message. For communication to occur there must be somebody at the other end, who can be called the communication receiver, the target of the communication.

IV. SCHRAMM (1961), MODEL OF COMMUNICATION PROCESS involves

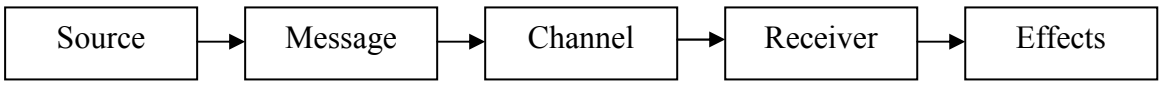
This model of communication is particularly relevant for the mass media. In human communication it is most important whether the people can properly encode or decode the signal i.e., message and how they interpret it in their own situations.

V. LEAGANS (1963) OF COMMUNICATION PROCESS has the following elements



The task of communication, according to him, is to provide powerful incentives for change. Success at this task requires through understanding of the six elements of communication, a skilful communicator sending useful message through proper channel, effectively treated, to an appropriate audience that responds as desired.

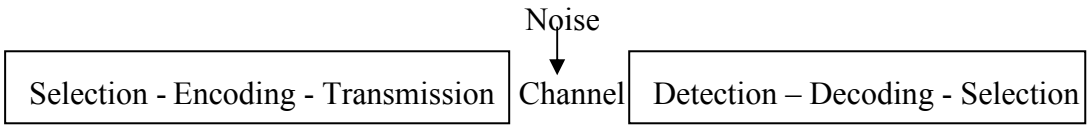
VI. ROGERS AND SHOEMAKER (1971) THOUGHT OF COMMUNICATION PROCESS IN TERMS OF S-M-C -R-E MODEL, THE COMPONENTS OF WHICH ARE



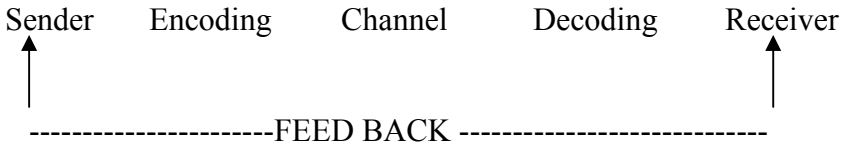
According to them a source (S) sends a message (M) via certain channels (C) to the receiving individual (R), which cause some effects (E) i.e. changing the existing behavior pattern of the receiver.

Communication in extension may also be thought of as two-way stimulus-response situation in which the necessary stimulus is provided by the communicator, the extension agent, in the form of a message, which produces certain response on the audience, the farmers and vice-versa. A favourable response by the audience reinforces learning.

VII. LITTERER'S MODEL OF COMMUNICATIN PROCESS

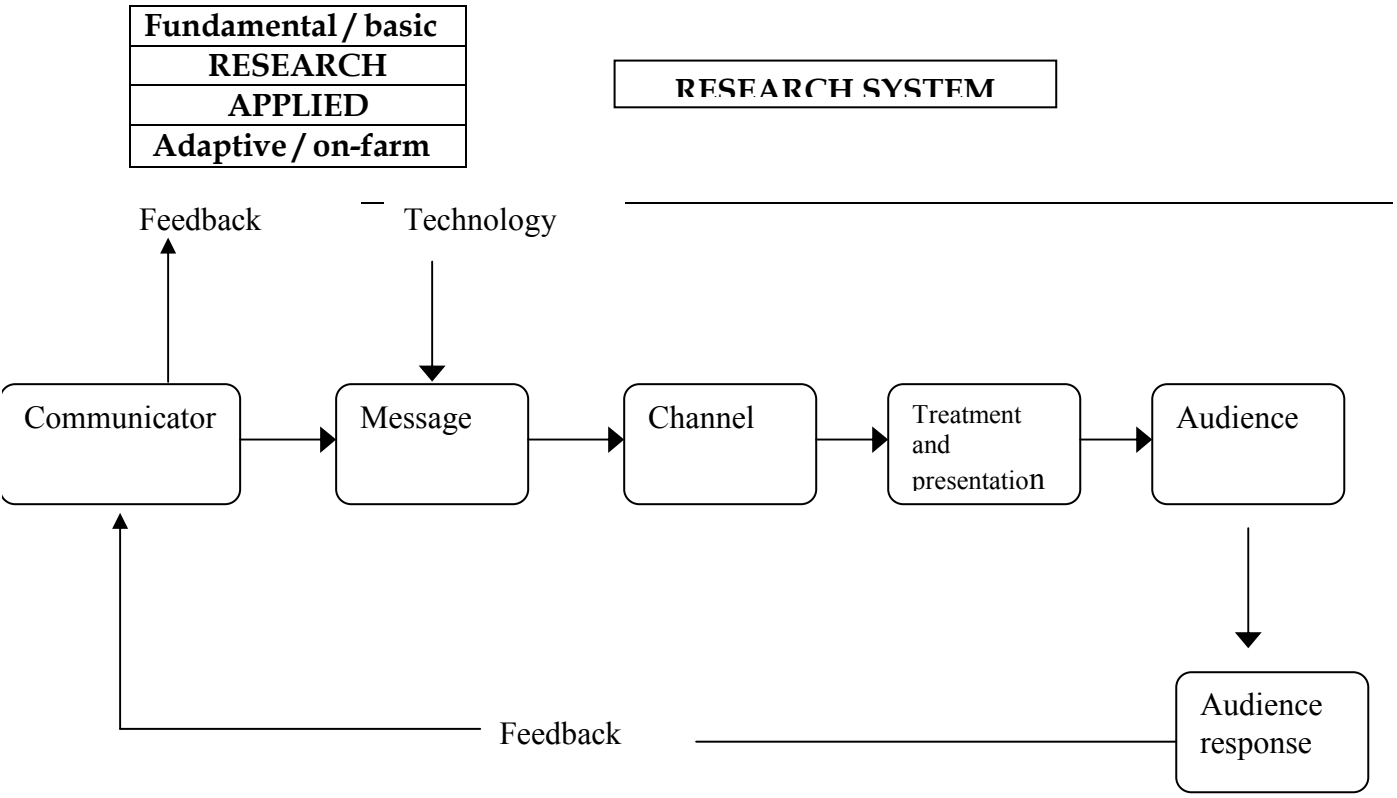


VIII.WESTLEY-MACLEAN'S MODEL OF COMMUNICATION PROCESS:



IX. LEAGAN'S MODEL (1963) OF EXTENSION COMMUNICATION SYSTEM.

A diagrammatic representation of the extension communication system on the basis of the model suggested by Leagans (1963) is presented as



EXTENSION COMMUNICATION SYSTEM

Communication in Extension, may also be thought of as two – way Stimulus-Response (S-R) situation in which the necessary stimulus is provided by the communicator, the extension agent in the form of a message, which produces certain response on the audience, the farmers and vice – versa. A favourable response by the audience reinforces learning. A diagrammatic representation of the extension communication system on the basis of the model suggested by Leagans (1963) is presented above.

FUNCTIONS OF COMMUNICATION:

Communication has four basic functions-

1. Information function: The basic requirement of adapting and adjusting oneself to the environment is information. There must be some information about what is going on in the environment which concerns the people. The getting or giving of information underlies all communication functions, either directly or indirectly.

2. Command or instructive function: Those who are hierarchically superior, in the family, society or organization, often initiate communication either for the purpose of informing their subordinates or for the purpose of telling them, what to do, how to do, when to do etc. The command and instructive functions of communication are more observable in formal organizations than in informal organizations.

3. Influence or persuasive function: According to Berlo (1960), the sole purpose of communication is to influence people. Persuasive function of communication i.e. to induce people is extremely important for extension in changing their behaviour in the desirable direction.

4 Integrative function: A major function of communication is integration or of continuously offsetting any disintegration at the interpersonal or at the organizational level. This helps to maintain individual, societal or organizational stability and identity.

Lecture 2: Elements of Communication and their characteristics – Communicator, Message, Channel, Treatment, Audience, Audience Response and Feed back

Characteristics of Elements of extension communication system

The characteristics of each of the elements which may contribute to the success or failure of communication are furnished as per Leagans

1. THE COMMUNICATOR

This is the person who starts the process of communication in operation. He is the **source** or originator of messages. He is the sender of messages. He is the first to give expression to messages intended to reach an audience in a manner that results in correct interpretation and desirable response. The communicator may be a Agricultural Extension Officer, Village Development Officer, a Principal or an Instructor in a Training Centre, a Mandal Agricultural Officer, a villager, an administrator or any other person.

The following are the characteristics of a good communicator

He knows:
a) his objectives - has them specifically defined;
b) his audience - its needs, interests, abilities, predispositions;
c) his message- its content, validity, usefulness, importance;
d) channels that will reach the audience and their usefulness;
e) how to organise and treat his message;
f) his professional abilities and limitations.

He is interested in:
a) his audience and its welfare;
b) his message and how it can help people;
c) the results of communication and their evaluation;
d) the communication process;
e) the communication channels - their proper use and limitation;
f) how to improve his communication skill.

3. **He prepares:**
a) a plan for communication - a teaching plan;
b) Communication materials and equipment;
c) a plan for evaluation of results.

4. **He has skill in:**
a) selecting messages;
b) treating messages;
c) expressing messages - verbal and written;
d) the selection and use of channels;
e) understanding his audience;
f) collecting evidence of results.

2. MESSAGE OR CONTENT:

A message is the information a communicator wishes his audience to receive, understand, accept and act upon. Messages, for example, may consist of statements of scientific facts about agriculture, sanitation or nutrition, description of action being taken by individuals, groups or committees, reasons why certain kinds of action should be taken; or steps necessary in taking given kinds of action. Potential messages range as wide as the content of the programmes is.

Messages related to programmes of change are, therefore, the relevant 'cargo' to be carried to people by the channels of communication. They are the important content, sometimes referred to as 'arguments' 'appeals' and 'stimuli'. Whether messages operate effectively as incentives to changed behaviour in any given situation depends on a wide range of influences. A successful communication is one in which the major factors influencing the message are controlled as far as possible. This is the responsibility of the communicator.

A good message must be:

1. In line with the objective to be attained;
2. Clear – understandable by the audience
3. In line with the mental, social, economic and physical capabilities of the audience.
4. Significant – economically, socially or aesthetically to the needs, interests and values of the audience
5. Specific – no irrelevant material;
6. Simply stated covering only one point at a time.
7. Accurate – Scientifically sound, factual and current;
8. Timely – especially when seasonal factors are important and issues current
9. Supported by factual material covering both sides of the argument;
10. Appropriate to the channel selected
11. Appealing and attractive to the audience – having utility, immediate use.
12. Applicable – audience can apply recommendation;

13. Adequate – Combining principle and practice in effective proportion;
14. Manageable – can be handled by the communicator with high professional skill and within the limits imposed by time.

3. CHANNELS OF COMMUNICATION

The sender and the receiver of messages must be connected or '**tuned**' with each other. For this purpose, **channels** of communication are necessary. **Channels** are the physical bridges between the sender and the receiver of messages and the avenues between a communicator and an audience on which messages travel to and fro. They are the **transmission lines** used for carrying messages to their destination. Thus, the channels serve as essential tools of the communicator.

A **channel** may be anything used by a sender of message to connect him with intended receivers. The crucial point is that he must get in contact with his audience. But channels are no good without careful direction or use in the right way, at the right time, to do the right job for the right purpose with the right audience, all in relation to the message.

Many obstructions can enter channels. These are often referred to as **'noise'** - that is some obstruction that prevents the message from being heard by or carried over clearly to the audience. **'Noise'** emerges from a wide range of **sources** and causes which are as follows;

1. Failure of a channel to reach the intended audience: Usually, no one channel will reach an entire audience. Some examples: Meetings - all people cannot or may not attend. Radio - all people do not have access to a receiving set or may not be tuned in if they did. Written materials -many people cannot read.

2. Failure on the part of a communicator to handle channels skillfully: If in a meeting, tour, radio programme or any other channel is not used according to good procedure and technique, its potential for carrying message is dissipated. For example in a meeting when everyone cannot hear what is said and see what is shown, they cannot receive the message.

3. Failure to select channels appropriate to the objective of a communicator: All channels are not equally useful in attaining a specific objective. For example, if an objective was to show a certain group of people how to do something - dig a compost pit, build a sanitary latrine, treat seed, cook vegetables. etc. - the radio; circular letter, or newspaper would not do the job. Obviously, the channel needed is a method demonstration meeting. On the other hand, if an objective was to give general information about subjects like the above or to inform people of events etc., radio, letters and newspapers would be the proper channels to use.

4. Failure to use channels in accordance with the abilities of the audience: Written materials, for example, cannot serve as useful channels for communicating information to people who are unable to read or to understand the level of complexity or abstraction of the message.

5. Failure to avoid physical distraction: When using the channel of meetings, for example, distractions including people moving in and out, loud noises in or out of the group, heat, lighting crowded condition and many other forms of distraction often obstruct successful message - sending. Static on the radio, poor writing, unattractive exhibits are other examples of **'noise'** that lessen the effectiveness of channels.

6. Failure of an audience to listen or look carefully: The only messages that get through to an audience are those which are heard, seen or experienced. An unfortunate tendency of people is not to give undivided attention to the communicator. This is a powerful obstruction that prevents messages from reaching their desired destination.

7. Failure to use enough channels in parallel: The more channels a communicator uses in parallel or at about the same time, the more chances he has for the message getting through and being properly received. No single channel will ordinarily reach all people who need to receive a message. Research indicates that up to five or six channels used in combination are often necessary to get a message through to large numbers of people with enough impact to influence significant changes in behaviour.

8. Use of too many channels in a series: An important principle of communication is that the more channels used in a series the less chance a communicator has for getting his message through to the intended audience. Let it be assumed for example, that a Assistant Director of Agriculture originates a message he wishes to communicate to a sizeable number of local cultivators. The series of channels could be about as follows :

Assistant Director of Agriculture communicates the message to the Mandal Agriculture Officer, who in turn communicates it to the Village level Agriculture Extension Officer, who in turn communicates it to a village leader, who in turn is asked to communicate it to a number of local cultivators. The use of such a series of channels raises two grave questions (a) Did the message ever really reach the intended destination? (b) Did it reach with the same content and intent as the original? The following two important principles emerge from this example:

(1) The more steps by which the communicator is removed from his intended receiver, the greater are his chances of losing the proper message (2) When lines of communication get too long for assured communication they can be improved in two primary ways (a) by using additional channels in parallel and (b) by eliminating some of the channels in the series.

Successful communicators prevent the blockage or `noise` affecting channels of communication that emerge from one or more of the foregoing conditions.

To help overcome some of the problems just enumerated and others not mentioned, one should take the following factors into account:

1) The specific objective of the message.
2) The nature of the message-degree of directness versus abstractness, level of difficulty, scope, timing etc.
3) The audience-size, need, interest, knowledge of the subject etc.
4) Channels available that will reach the audience or parts of it
5) How channels can be combined and used in parallel.
6) How channels that must be used in a series can be reduced to the minimum, and those used made effective without fail
7) Relative cost of channels in relation to anticipated effectiveness
8) Time available to communicator and audience
9) Extent of seeing, hearing or doing that is necessary to get the message through
10) Extent of cumulative effect or impact on the audience necessary to promote action

The foregoing are some of the proven guides to handling communication channels in ways that they deliver the message.

4. TREATMENT OF MESSAGES

Treatment has to do with the way a message is handled to get the information across to an audience. It relates to the technique, or details of procedure, or manner of performance, essential to expertness in presenting messages. Designing the methods for treating messages does not relate to formulation of the message or to the selection of channels, but to the technique employed for presentation within the situation provided by a message and a channel.

The purpose of treatment is to make the message clear, understandable and realistic to the audience. Designing treatment usually requires original thinking; deep insight into the principle of human behaviour and skill in creating and using refined techniques of message presentation. At this point, the effective teacher is separated from the less effective one, and the art of teaching comes into play. Great teachers are adequate in all ways, but are superb in their ability to "treat" messages.

Treatment of messages can be varied in an almost infinite number of ways. The following are the three categories of basis useful for varying treatment.

A. Matters of general organisation:

1) Repetition or frequency of mention of ideas and concepts
2) Contrast of ideas.
3) Chronological- compared to logical, compared to psychological.
4) Presenting one side compared to two sides of an issue.
5) Emotional compared to logical appeals.
6) Starting with strong arguments compared to saving him until the end of presentation.
7) Inductive compared to deductive.
8) Proceeding from the general to the specific and vice versa.
9) Explicitly drawing conclusions compared to leaving conclusions implicit for the audience to draw.

B. Matters of speaking and acting:

1) Limit the scope of presentation to a few basic ideas and to the time allotted. Too many ideas at one time are confusing.
2) Be yourself. You can't be anyone else. Strive to be clear, not clever.
3) Know the facts. Fuzziness means sure death to a message.
4) Don't read your speech. People have more respect for a communicator who is sure of his subject.
5) Know the audience. Each audience has its own personality. Be responsive to it.
6) Avoid being condescending. Do not talk or act down to people or over their heads. Remember, good treatment of messages result in hitting the 'bull's eye', not the surrounding terrain. Never over-estimate the knowledge of an audience or underestimate its intelligence.
7) Decide on the dramatic effect desired. In addition to the content of messages, a communicator should be concerned with 'showmanship'. Effective treatment requires sincerity, smoothness, enthusiasm, warmth, flexibility and appropriateness of voice, gestures, movements and tempo.

8) Use alternative communicators when appropriate, as in Group discussions, panels, interviews, etc.
9) Remember that audience appeal is a psychological bridge to getting a message delivered.
10) Quit on time. Communicators who stop when they are "finished" are rewarded by audience goodwill.

C. Matters of symbol variation and devices for representing ideas:

1. Word symbols- speech	2. Real objects.	3. Models
4. Specimens.	5. Photographs.	6. Graphs.
7. Charts	8. Motion pictures.	9. Slides.
10. Drama.	11. Puppets	12. Songs.
13. Flash cards etc.		

The foregoing list of suggested possibilities for message treatment can be extended and the techniques used in an almost infinite number of combinations. Communicators should be aware that treating messages to achieve maximum audience impact is a highly professional task. How to do it is not given in books. The task cannot be reduced to a formula or recipe. Treatment is a creative task that has to be 'tailor made' for each instance of communication.

5. The Audience

Obviously, an audience is the intended receiver of messages. It is the consumer of messages. It is the intended respondent in message -sending and the assumed to be in a position to gain economically, socially or in other ways by responding to the message in particular ways. In good communication, the audience aimed at is already identified by the communicator. The 'pay of' in communication is dependent on what the audience does in response to messages.

An audience may consist of one person or many. It may comprise men, women, or both; youth groups, villagers or their leaders. An audience may be formed according to occupation groups as farmers or artisans; professional groups, as engineers, educators, administrators etc.

The importance of clearly identifying an audience cannot be overstressed. The more homogeneous an audience, the greater the chances of successful communication. Likewise, the more a communicator knows about his audience and can pinpoint its characteristics the more likely he is to make an impact. An audience is found by identifying categories such as those previously mentioned.

In addition to knowing the identity of an audience and some of its general characteristics, there are other somewhat more specified aspects that help to clarify the exact nature of an audience and how to reach it. The following are some of these:

1) Communication channels established by the social organisation.
2) The system of values held by the audience - what they think is important.
3) Forces influencing group conformity-custom, tradition etc.
4) Individual personality factors susceptibility to change etc.
5) Native and acquired abilities.
6) Educational, economic and social levels.
7) Pressure of occupational responsibility-how busy or concerned they are.
8) People's needs as they see them, and as the professional communicator sees them.
9) Why the audience is in need of changed ways of thinking, feeling and doing.

10) How the audience views the situation.

It is useful to a communicator to understand these and other traits of an audience in making his plan for communication. Like the marksman, unless a communicator sees his target clearly, he can shoot a thousand rounds, and yet accomplish nothing.

It may be noted that the audience is not a passive recipient of message. The individuals are rather selective in receiving, processing and interpreting messages.

Selective Exposure.: Klapper (1960) suggested that people expose themselves to messages selectively. There is a tendency for individuals to expose themselves relatively more to those items of communication that are in agreement with their ideas, beliefs, values etc.

Selective perception: Regardless of exposure to communication, an individual's perception of a certain event, issue, person or place could be influenced by one's latent beliefs, attitudes, wants, needs or other factors. Thus, two individuals exposed to the same message could go away with different perceptions about it.

***Selective retention*:** All information is not retained by the individuals. People generally tend to retain that information in which they have some interest and which they consider to be important. Research showed that even recall of information is influenced by factors such as an individual's needs, wants, moods, perceptions and so on.

The social categories to which people belong, their individual characteristics, and social relationships greatly influence their acquisition and utilization of information.

Audience segmentation:

According to Rogers (1995), audience segmentation is a communication strategy that consists of identifying certain sub audiences within a total audience, and then conveying a special message to each of these sub audiences. The strategy breaks down a heterophilous audience into a series of relatively more homophilous sub audiences, in which different communication channels or messages are used with each sub audience.

6. AUDIENCE RESPONSE

This is the terminating element in communication applied to rural development programmes. Response by an audience to messages received is in the form of some kind of action to some degree, mentally or physically. Action, therefore, should be viewed as a product, not as a process; it should be dealt with as an end, not as a means. Consequently, the five elements we have just analysed-communicator, message, channel, treatment, audience-are intended to be viewed as an organised scheme (means) for attaining the desired action (end) on the part of an intended audience. Action taken by an intended audience that can be attributed to a given communicative act by an extension worker may properly be assumed to be a result of the degree to which these elements have been effective.

Until the desired action results, programmes of change do not achieve their most essential objective. In evaluating effectiveness, therefore, the important criterion or standard for judging the programme is the nature and extent of action taken by people who needed to act. For, it is what the

people do as a result of participation, not what the programme staff does that is of transcendent importance in programmes of change.

The number of possible kinds and degrees of response to messages received are almost infinite. The following gives an idea of possible variety in response that may result when a useful messages is received by a typical village audience of Indian cultivators.

1. ***Understanding vs. Knowledge****:* Knowledge of facts alone does not constitute understanding. It is only the first step. Understanding is attained only when one is able to attach meaning to facts, see the relationship of facts to each other and to the whole of a proposition and the relationship of the total body of facts to the problem under consideration. Communicative effort often fails because it stops simply with laying facts before people and does not continue in a systematic way to promote an understanding of the facts presented. People usually do not act on facts alone but only when an understanding of facts is gained. Communication must promote understanding.

2. ***Acceptance vs. rejection***: A free, alert and thinking human mind requires that understanding precede acceptance of facts and propositions. In turn, it insists on mental acceptance before resorting to action. For, it is what human beings come to believe, not what they merely know or even understand, that determines what they do when they are free to act as they choose.

3. ***Remembering vs. forgetting***: When opportunity for action is not immediately available or action is delayed, the factor of forgetting what was learned influences the kind and extent of action taken at any point of time in the future. This basic principle has extensive implications for timing in communication programmes. Transmitting the right message to the right people at the right time is often a crucial factor in successful communication.

4. ***Mental vs. physical action****:* Changes in the mind of man must always bring changes in the actions of his hands. In short, man's mind controls his overt behavior. Consequently, a message suggesting physical action could receive all the mental action required, except the final decision to act. This is sometimes referred to as 'lip service'.

5. ***Right vs. wrong*****:** The intent of a communication is to promote desirable action by an audience as determined by the communicator and expressed in his objectives. Consequently, resulting action in line with the intended objectives is assumed to be 'right' action. But the problem is more complex. Unfortunately, 'noise' often plays mischief at this point. For a variety of reasons, people often fail to behave precisely according to instructions, even when they understand and accept them. Assume, for example, that a message giving five steps in seed treatment has been transmitted to a group of cultivators. Assume further that the cultivators understood, accepted and acted on the message. But the results were disastrous. This was because the cultivators, contrary to instruction, decided among themselves that if the use of one ounce of the chemical in treating grain (as instructed) was good, two ounces would be better. Individually and in groups, human beings have their own ideas about how to act.

7. FEED BACK:

Extension communication is never complete without feedback information. ***FEEDBACK*** means carrying some significant response of the audience back to the communicator. . Communication work is not an end in itself. The extension agent should know what has happened to the audience after the message has reached them.

Feedback has the following characteristics.

CHARACTERISTICS OF FEED BACK

1. Feed back is source oriented
2. Varies in different communication situations.
3. Affects the source or communicator.
4. Exerts control over future messages
5. Affects communication fidelity.
6. Maintains the stability and equilibrium of the communication system.

Feedback should be a continuous process as audience and communicators are neither always the same persons nor they are interacting in the same situation. The extension agent shall take steps to analyse the responses of the audience, which may be positive, negative or no response. If there has been no response or negative response, the extension agent shall find reasons for the same. If it pertains to research, the problem should be referred as feedback information to research to find out the solutions for the same. If it pertains to extension then it has to looked from that angle and shall take appropriate steps immediately in a season or next season. Adequate and correct feedback are essential for purposeful communication.

Lecture 3:Types of Communication – oral, written and non-verbal: non – verbal communication – types and functions – barriers / problems in communication – some concepts relating to communication – frame of reference, perception, communication fidelity, communication gap, time lag in communication, empathy, heterophily and homophily:

TYPES OF COMMUNICATION

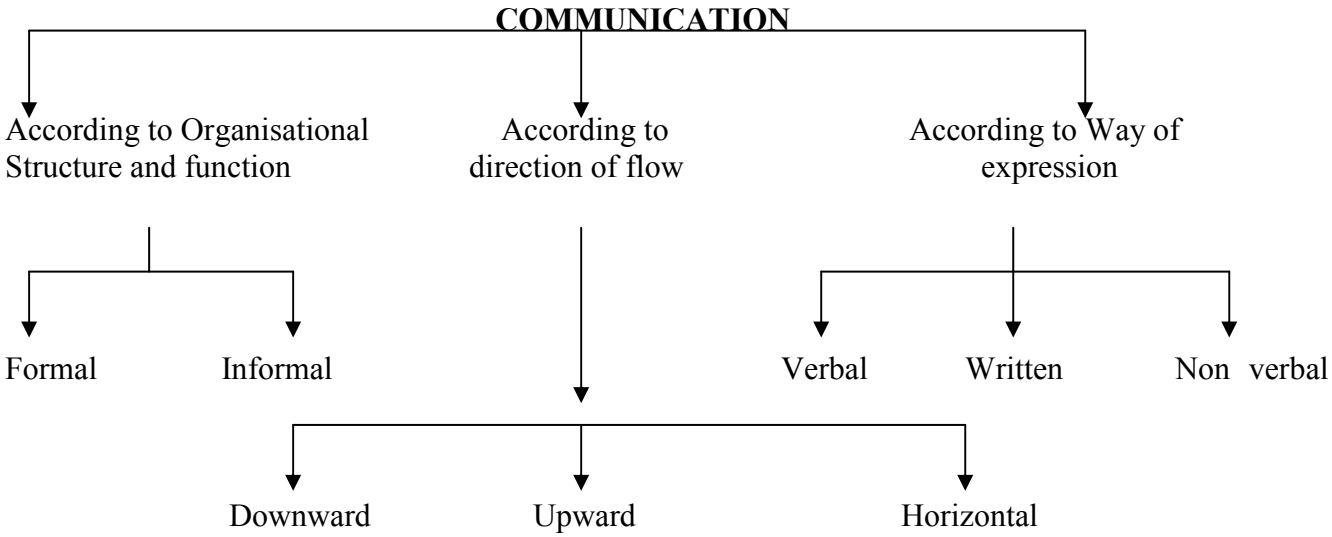
Types of communication may be different according to media and means adopted. Communication is the flow of messages from communicator to the receiver. The organization is concerned with flow of communication. As such, it may flow by words, letters, symbols or messages.

Thus, the total communication set up is broadly classified as follows:

1. According to organizational structure and function
   a. Formal b. Informal
2. According to the directions of flow
   a. Downward communication b. Upward communications
   c. Horizontal Communication or lateral communication or cross wise Communication
3. According to way of expression
   a. Oral or verbal communication
   b. Written communication or black and white communication

c. Non-verbal communication

Chart showing various types of communication



ACCORDING TO ORGANISATIONAL STRUCTURE

A. FORMAL COMMUNICATION

When information is transmitted by virtue of one's status, placement in the organization it is termed as formal communication. It flows through officially prescribed route in which there are officially recognized positions.

E.g.: Executive instructs his subordinates.

It is a two way communication

B. Informal or grapevine communication

When an informal channel is used to communicate it is termed as grapevine or informal communication.

It is information communication network formed out of personal relationship, social and group relations but not out of position of line of authority, superior and Subordinate or based on organisational hierarchy.

IT IS A QUICK VEHICLE FOR MESSAGE. E.g.: RUMOURS

Informal communication may be conveyed by a simple glance, gesture, smile or mere silence.

II. According to direction of flow

a. Down ward communication

When information comes from higher level to a lower level in the orgnisation structure, it is termed as downward communication.

E.g. Information passes through written orders, reports, rules, Instructions, manuals, policy directives etc,

Down ward communication is needed

- To get things done
- To prepare for changes
- To discourage misinformation and suspicion
- To let the people feel the pride of being relatively well informed.

b. Up ward communication

Whenever information moves from a lower level to a higher level in the organization it is named as upward communication. Through this, executives can know the activities and progress achieved by their subordinates.

c. Horizontal communication / side ways / lateral / crosswise /inter scalar communication

A communication is said to be horizontal when it takes place between two subordinates of the same superior.

III. According to the way of expression

a. Verbal or oral communication

The process is a face to face conversation through oral words or words of mouth. It is the most widely practiced medium of communication

b. Written Communication

The process involves sending message by written words. Media for written communication are letters, circulars, notes, explanation and memorandum.

c. Non – Verbal communication

One of the multimedia of communication is non-verbal communication or communication by implication. Communicating a message without using arbitrary symbols i.e., words or meaning of words is termed as 'non-verbal communication or word-less communication.

Non – verbal messages consists of hidden messages. It is the **cues** which convey message. These messages are necessarily wordless or non-verbal, conveyed through without resorting to words or meaning of words, but conveyed through other media like spatial, Kinesics, oral cues, objective language, action etc., Kinesics is the most generally used medium of non-verbal communication.

Non – Verbal communication includes all messages other than those expressed in oral or written words. Smile symbolizes friendliness, in much the same way as cordiality is expressed in words.

Forms or media of Non – verbal communication

1. Sign language:

Marks or symbols used to mean something is termed as signs of language.

E.g.: The language system of deaf people.

2. Action language:

It is a language of movements. Some people do what they say while some others say one thing but do another.

3 Objective language (Artifacts): It is non – verbal message communicated through appearance of objects. i.e., their display and arrangement. This method may include intentional or unintentional communication of material things like clothing, ornaments, books, buildings, room furniture, interior decoration etc., Objective language speaks something. It refers to dress and decoration which communicate a great deal about speaker's feelings, emotions, attitudes; opinions etc., Clocks, jewellary, hairstyle, and interior decorative items communicate something. Their revealing is symbolic, communicating something special about the person

4. Spatial or environmental :

The necessary requirements of environment are lighting, colour, ventilation, temperature, seating arrangement, chalk board, public address system, audio visual equipment etc, would contribute a lot to attract and make listeners more attentive.

5. Silence:

It is also an effective medium of communication through silence, some people evoke response from others.

E.g.: Speaker occupies his position on the dais near the mike – a silent posture to attract the attention of audience.

Silence as a medium of communication is considered as a dangerous mode of communication.

E.g.: legal doctrines

6. Demonstration:

It indicates display / exhibition of how something works.

Non – verbal skills are shown. It is yet another effective method of non-verbal words or meaning of words.

E.g.: Demonstration by sales man & airhostess

7. Inaction:

It explains with illustrations as to how to use or operate a product.

E.g.: Some machinery has been removed from the production floor under the orders of the manager, without telling the workers the reasons for the same.

8. Proxemics: (Science of space)

The distance that the people keep themselves between the speaker and the listener is termed as proxemics. Space between persons indicates relations at the same time and is a dimension of interpersonal communication. Personal space and inpterpersonal distance are important components of communication. Edward T. Hall in his scholarly work identified three components of interpersonal distance. They are 1) Intimate 2) Social and 3) Public. They govern interpersonal relationship.

a) Intimate: The intimate distance ranges from

i) Very close – 3" to 6" (for whispers, secrets are intimate communication)
ii) To Close – 8" to 12" for giving confidential information
iii) Near – Distance from 12" to 20" for speaking in a soft voice

b) Social: Distance range from 20" to 5 feet.

c) Public: Distance from 6 feet to above 100 feet.

Cultural patterns regulate personal space and interpersonal communication. According to Edward T.Hall, the interpersonal distance in different cultures is as follows:

For e.g., In America – the comfortable distance for social conversation is 2-3 ft.

In France, Mexico and Arab Countries it is shorter than 2 ft.

9. Time:

Use of time is also known as CHRONEMICS .Time speaks. Time also conveys the message.

E.g.:A telephone call at too early hours or late night conveys significant message. (1 A. M. or 2 A. M. urgent matters)

10. Paralanguage:

Non – verbal things in communication are called paralanguage. Sounds are the basis for paralanguage. Paralanguage include tone of voice, power or emphasis, pitch, rhythm, volume, pause or break in sentence, speed of delivery, loudness or softness. Paralanguage can be divided into four parts

1) Voice qualities: Pitch, resonance, volume rate and rhythm
2) Vocal characterisers: Embracing laughter, coughing, throat clearing and sighing
3) Vocal qualifiers: Refering to variations in pitch and volume
4) Vocal segregates: Including the silent sound such as 'ahs'and 'ers' and pauses.

These languages do much to influence meaning.

11. Kinesics:

1. Facial expressions
2. Gestures E.g.: Thumbs Up, sitting position
3. Body movements
4. Postures
5. Eye contact: Serves as a signal of readiness to interact.

6. Tactile (touch):- one of the earliest methods of communication of human beings. The science dealing with touch is HAPTICS

E.g.: Infants learn much about environment by touching, feeling, cuddling and tasting. Touch is a powerful communication tool.

The science dealing with speech, sounds in PHONETICS.

Function of non-verbal communication :

There is close relationship between non – verbal cues and words accompanied. Non – verbal cues have certain functions to be performed.

According to Baird, the functions of non-verbal cues fall into six categories as follows.

1. Repeating: It implies to something again which one has heard to someone else. These are helpful to restate the verbal message.

2. Contradiction: :It indicates to saying the opposite of, to argue or disagree with. Discrepancy occurs between a person's words and action.

3. Substituting: These are substitutes for spoken words or messages. Non- verbal cues like O.K., peace sign, victory, clenched fist, a stooped position (submissiveness) serve as substitutes for spoken or verbal messages.

4. Complementing: The cues invariably complement or elaborate upon verbal message. E.g.: when something is said in anger, the feeling is shown not only in the spoken message but in the clenched fists, flashing eyes.

5. Accenting: The function of non-verbal cues is to accentuate the verbal message. Accentuating (word accent) gives more force or importance to certain words.

6. Regulating: It is controlling the flow of communication. Cues act as regulators. E.g.: A Nod or change in eye behaviour indicates that you have finished your statement.

In face to face interaction, the words spoken account for less than 35 per cent of the total meaning produced, while the remaining 65 per cent is obtained by non-verbal cues.

Thus, non-verbal cues perform useful purposes to restate the verbal message, contradicting the spoken messages, complementing verbal messages, accenting and regulating the flow of conversation.

BARRIERS/ PROBLEMS IN COMMUNICATION

Communication is a process. Process is the act of proceeding a series of actions or operations definitely conducting to a desired end**. Each episode of communication has at least three phases:**

1) **Expression**
2) **Interpretation**

3) Response.

These are the crucial points in communication. If the expression is not clear, the interpretation will be inaccurate and the response improper, thus one's effort to communicate will not succeed. In other words, if the source does not have adequate or clear information if the message is not encoded fully, accurately, effectively in transmittable signs; if these are not transmitted fast enough and accurately enough, despite interference and competition, to the desired receiver; if the message is not decoded in a pattern that corresponds to the encoding; and finally if the destination is unable to handle the decoded message so as to produce the desired response, then, obviously, the system is working at less than top efficiency.

MAIN PROBLEMS IN COMMUNICATION:

These are:

I. The problems that the individual has in fulfilling his own goals and adoptive needs – logically they have their origin in the adequacy and the appropriateness of his own strategies or technical communication competence.

II At the inter-personal level, communication problems may be sourced in the relative inadequacy or inappropriateness of the communication competence of any, or all, of the participants. That is, any given problem may be attributable to one or the other, or to both persons engaged in a two-person communication encounter.

III An originator or a receiver may fail to achieve his communicative goals or intentions for reasons other than the skill and comprehensibility involved. There are situations in which intercommunication is satisfactorily achieved but the consequences anticipated by the receiver for doing, thinking, or feeling as intended by the originator are so negative as to preclude the fulfillment of the originator's intentions.

A Communication system which links two or more people together may be more efficacious, more or less, economical, or both. Often the source of this order of communication problem is in the inappropriate designation of criteria by which the system's progress is to be assessed.

Yet another higher-communication problem of some complexity is the organizational level of analysis. It is at this level of analysis that we should contemplate problems which have their source in the relative incompatibilities of communication system at their interfaces. Those incompatibilities may emerge at the interfaces of different levels of systems.

These problems of communication process can be classified by various methods. Some of these methods are:

I. According to phases of communication:

II. According to various types of problems.

III. According to nature of problems

IV. Other classified problems

I a) RELATING TO THE COMMUNICATOR:

1) **Ineffective environment**: The environment created by the communicator (Extension worker) influences his effectiveness. The physical facilities, air of friendliness, respect of other's point of view, recognition of accomplishments of other, permissiveness and rapport in general, are all important ingredients of a climate which is conducive to effective communication.

2) **Disorganized efforts to communicate**: to make sense, the communication effort must be organized according to some specific form or pattern.

3) **Standard of correctness**: This involves the use of correct words or other symbols, correct logic and correct content or facts.

4) **Standard of social responsibilities**: This infers that when one communicates, one assumes responsibility for effect of ones communication on the respondents and the society.

5) **Cultural values and social organization**: Cultural values and social organization are determinants of communication. For effective communication, the communicator must possess knowledge of the cultural values of his listeners.

6) **Inaccurate symbols**: The system of symbols used to represent ideas, objects, or concepts must be accurate and used skillfully. The crucial point in the use of symbols to convey ideas is to select those that accurately represent the idea to be conveyed and are understood by the audience. Symbols are meaningful to a person only when he understands what they stand for.

7) **Wrong concept of the communication process**: A common mistake communicated by the communicator is the identification of the part with the whole or the parts fallacy. A successful communication programme of rural development is not a single unit. It requires a series of unit acts. The way one thinks about communication will influence its quality.

b) RELATING TO TRANSMISSION OF MESSAGE:

Many obstructions can enter at the interpretation level. These are often referred to as, 'noise', that is, some obstruction that prevents the message from being heard by or carried over clearly to, the audience. 'Noise' emerges from a wide range of sources and causes which effect the interpretation of the message.

1) **Wrong handling of the channel**: It can be a meeting, tour, radio programme, or one of the other channels, if is not used according to the correct procedure and techniques, its potential for carrying a message is dissipated.

2) **Wrong selection of channels**: All channels are not equally useful in attaining a specific objective. Failure to select channels appropriate to the objective of a communicator will interrupt the interpretation of the message, in the manner in which it is desired, by the intended audience.

3) **Physical distraction**: Failure to avoid physical distraction often obstructs successful message sending.

4) **Use of inadequate channels in parallel**: The more channels a communicator uses in parallel, or at about the same time, the more chances he has of the message getting through and being properly received.

c) RELATING TO THE RECEIVER:

1) **Attention of the listeners**: There is an unfortunate tendency not to give undivided attention to the communicator. This is a powerful obstruction that prevents the message from reaching its desired destination.

2) **Problem of cooperation, participation and involvement**: Both the communicator and the receiver must be brought into the act. Hence, the listener must work a little hard. Learning is an active process on the part of the listener and unless the respondent is on the same wave length, the character of what is sent out hardly governs the communication process. Thus, it takes two to make communication.

3) **Problem of Homogeneity**: The more homogeneous an audience, the greater the chances of successful communication. Likewise, the more a communicator knows about his audience and can pin-point its characteristics the more likely he is to make an impact.

4) **Attitude of the audience towards the communicator**: An important factor in the effectiveness of communication is the attitude of the audience towards the communicator. It is a function of the communicator to make their attitude favourable. Indirect data on this problem comes from studies of 'prestige' in which subjects are asked to indicate their agreement or disagreement with statements which are attributed to different individuals.

II. According to various types of problems:

These are (1) Technical problems; (2) Semantic problems; and (3) Influential problems.

1) **Technical problems**: These are problems concerned with the **accuracy** of the transference of information from sender to receiver. Certain things that are not intended by the information source are added to the signal. These unwanted additions may be distortions in the shape or shading of a picture or errors in transmission. All these changes in the signal are called 'noise'.

2) **Semantic problems**: Problems regarding the **interpretation of meaning** by the receiver as compared to the intended meaning of the sender. This is a very deep and involved situation even if one is dealing only with the relatively simple problems of communication through speech.

3) **Influential problems**: The problems of influence or effectiveness are concerned with the success with which the meaning is conveyed to the receiver leads to the desired conduct on his part. It may seem, at first glance, undesirably narrow to imply that the purpose of all communication is to influence the conduct of the receiver.

III. According to nature of problems:

1) **Physical problems**: The possible disorders affecting communication fall generally into the following categories. Speech and voice defects; anxiety-tension reaction such as those involved in stage fright, or feeling of inferiority, which noticeably affect speech, paralysis, disease or characteristics of physical appearance which interfere with expressive bodily action or which tend to call forth unfavourable reactions on the part of the listeners; lack of skill in the use of background or staging techniques, together with defects, such as radio station in the means and conditions of transmission.

2) **Psychological:** These psychological difficulties are, in part, a function of the very nature of language; in part, they are due to the emotional characteristics, and mental limitations of human

beings. These general considerations concerning the psychological nature of language are the background against which more specific difficulties in communication can be understood. These specific obstacles merit special attention: (i) the failure to refer language to experience and reality, (ii) the inability to transcend personal experience in inter-group communication, (iii) stereotypes, the assimilation of material to familiar frames of reference, (iv) the confusion of precept and concept, ramification and personification.

3) **Cultural**: Cultural differences pose serious barriers in the communication process. Within this expanding field of activity, we may distinguish three small questions: (i) the way in which communication systems are related in given cultural values, (ii) the particular ethical problems of responsibility raised by our current use of communication systems and (iii) problems of communication when cultural boundaries have to be transcended.

IV. Other classified problems:

1) **Entropy and redundancy**: Information is defined in terms of its ability to reduce the uncertainty or **disorganization of a communication situation at the receiving end.** Entropy simply means the uncertainty or disorganization of a system, redundancy is the opposite.

2) The idea of noise is another information theory concept which intuitively makes sense in the study of communication. **Noise is anything in the channel other than what the communicator puts there.**

3) Error can be reduced as much as desired by keeping the rate of transmission below the total capacity of the channel. If the channel is overloaded, errors increase very swiftly.

4) One of the major problems of communication policy and techniques is to find way of controlling the interpretation which an audience will place upon events and notions.

Coupling: Is another point at which information theory comes very close to our way of thinking about human communication. We are accustomed to think of gate keepers. Every system that couple two other systems is a gate-keeper. How likely are they to pass on the information that comes to them? How faithfully are they likely to reproduce it? This all depends upon their gatekeeper.

Message Distortion:

When the transmitted message by the communicator is not reproduced by the receiver in a pattern that corresponds to its original form it is distortion.

According to Kirk (1963), the distortion of information may be of three fundamentally different kinds. 1) Systematic or stretch distortion, 2) Fog distortion and 3) Mirage distortion.

1) **SYSTEMATIC or STRETCH** - Some part of information will be given too much importance. No information is lost rather it is changed or recorded.
2) **FOG** - Some part of the information (information is lost) will be masked away.
3) **MIRAGE** - Some part of information (extra and unwanted) will be added as an extinct

\

SOME CONEPTS OF COMMUNICATION:

FRAME OF REFERENCE

Each person has stored experience of beliefs and values as an individual and as a member of the society. This provides the background of stimulation which influences a person's behaviour in a particular situation and is called the individual's Frame of Reference

The functionally interrelated external and internal factors operating at a given time constitute the frame of reference of the ensuing reaction.

A message received by an individual is interpreted in terms of the frame of reference of the individual. The message which challenges these beliefs and values may be rejected or misinterpreted. The tendency on the part of the receiver obstructs communication, in case the receiver and the sender do not have a common frame of reference

PERCEPTION

Gibson (1959) has defined PERCEPTION as the process by which an individual maintains contact with the environment.

Kollar, Blackwell and Engel (1970) explained PERCEPTION as the process whereby an individual receives stimuli through the various senses and interprets them

Perception is influenced by the environment in which communication takes place. It is not the intrinsic quality or attribute of an object, individual or message, but how people individually and collectively perceive them is important for extension.

CREDIBILITY

Credibility is the degree to which a communication source is perceived as trustworthy and competent by the receiver. It means trustworthiness and competence before the audience accepts any message

COMMUNICATION FIDELITY

According to Berlo (1960), Fidelity is the faithful performance of communication process by all its elements: Communicator, message, channel and receiver.

Noise and Fidelity are two sides of the same coin. Eliminating noise increase fidelity, the production of noise reduces fidelity.

The communication fidelity finally can be explained as the extent of desirable changes in receivers' behaviour as a result of communication. The desirable changes are in receiver's knowledge, attitude and action.

TIME LAG IN COMMUNICATION

LAG means delay

Communicator shall compute this time lag. The communicator shall plan and initiate the communication action well in advance so that the intended message reaches the audience in time.

COMMUNICATION GAP

Communication gap refers to the difference between what was communicated by the extension agent (communicator) and what has actually been received by the audience.

EMPATHY

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

Empathy can be 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. (Rao, 1993)

HOMOPHILY and HETEROPHILY

According 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 pair of individuals who interact are similar in certain attributes such as belief, attitudes, values, education, social status and the like.

HETEROPHILY

is the degree to which pairs of individuals who interact are different in certain attributes such as belief, attitudes, values, education, social status and the like.

ENTROPY

Entropy is defined as the ability to reduce the uncertainty or disorganisation of a system at the receiving end

Lecture No. 4: Extension Teaching Method – Definition – functions and classification according to use and form – strong and weak points of individual – group and mass contact methods – Individual contact methods: Farm and Home Visit – meaning – purpose – procedure – advantages and limitations.

Extension Teaching Method:

Definition of Teaching Method: Teaching methods may be defined as the devices used to create situations in which communication can take place between the instructor and the learner.

Functions of extension methods are:

1. to provide communication so that the learner may see, hear and do the things to be learnt;
2. to provide stimulation that causes the desired mental and / or physical action on the part of the learner;
3. To take the learner through one or more steps of the teaching-learning process, viz., attention, interest, desire, conviction, action and satisfaction.

CLASSIFICATION OF EXTENSION METHODS [1] (GIVEN BY WILSON AND GALLUP, USA)

1. According to Use:

(a) Individual contacts

- i. Farm and home visits;
- ii. Office calls;
- iii. Telephone calls;
- iv. Personal letters:
- v. Result demonstrations.

(b) Group contacts

- i. leader training meetings,
- ii. Lecture meetings
- iii. Conferences and discussion meetings,
- iv. Meetings at result demonstrations,
- v. Meetings at Method demonstrations
- vi. Tours;
- vii. Schools;
- viii. Miscellaneous meetings.

(c) Mass contacts

- i. Bulletins,
- ii. Leaflets
- iii. News stories;
- iv. Circular letter;
- v. Radio
- vi. Television;
- vii. Exhibits;
- viii. Posters.

Indirect influence

2. According to Form

(a) Written
i. Bulletins; ii. Leaflets; iii. News articles;
iv. Personal letter; v. Circular letters.

(b) Spoken
i. General and special meetings of all kinds;
ii. Farm and home visits; iii. Office calls;
iv. Telephone calls; v. Radio

(c) Visual or Objective
i. Result demonstrations, ii Exhibits,
iii. Posters; iv. Motion pictures, charts, slides
and other visual aids.

(d) Spoken and visual
i) Method demonstration meetings;
ii) Meetings at result demonstrations;
iii. Meetings involving motion pictures,
charts and other visual aids;
iv. Television.

Indirect Influence

In addition to the conscious dissemination of information through the various methods listed above, the indirect (or natural) spread of information, resulting from specific activities and from the total teaching effort is very substantial. This is what is meant by indirect influence.

Leaders in extension education all over the world have concluded that the principles and techniques fundamental in extension teaching are applicable to any country, community, locality or village. However, adjustments or variations in the selection and use of methods and techniques have to be made to fit existing conditions and situations. Accordingly a somewhat different classification of extension methods is adopted by some authors in India, on the following lines, depending on the way in which they are used by the extension workers.

1. Direct contact.
2. Demonstration – Result and Method
3. Working with village leaders.
4. Village group action.
5. Visual aids – Photographs, Posters, Black boards, bulletin boards, flash cards, flannel graphs, Puppets, Slides, Filmstrips and Films.
6. Literature – News Paper, wall news paper, Leaflets, Pamphlets and circular letters.
7. Tours.
8. Songs and Dramas.
9. Specimens, Models and Exhibits.

One of the important functions of extension methods is to provide communication.

STRONG AND WEAK POINTS OF INDIVIDUAL, GROUP AND MASS CONTACT METHODS:

Individual Contacts:

STRONG POINTS

1. Useful in contacting the "stay-at-home" type of people.

2. For teaching complex practices.
3. For selecting local leaders, cooperators, demonstrators.
4. To increase confidence of farmers in Extension.
5. To gain first-hand knowledge of farm and home conditions.
6. The farmer feels a sense of personal importance which is conducive to bring about the desired changes.
7. Enhance effectiveness of group methods and mass media. Effectiveness of group responsibility depends on willingness of individuals to share in it.
8. It is individuals, not groups, who learn, who make choices and accept responsibilities.

WEAK POINTS

1. Relatively expensive, because time-consuming.
2. Low coverage of farmers.
3. Possibility of extension worker being charged with favouritism.

Group Contact Methods:

STRONG POINTS

1. Enable face-to-face contacts with large numbers at a time.
2. Facilitate sharing of knowledge and experience, and thereby strengthen learning.
3. Meetings are adaptable to almost all lines of subject matter.
4. Satisfy basic urge of people for social contacts.
5. Less expensive than individual contacts, due to saving of time.
6. More effective in stimulating action than mass contacts.
7. Group influence facilitates individuals to accept changes.

WEAK POINTS

1. Wide diversity in interests of audience creates a difficult learning situation.
2. Holding meetings may become “real objective”.
3. Pitfall of working with caste groups or groups with vested interests should be avoided.

Mass contact Methods:

STRONG POINTS

1. They reinforce individual and group contacts by complementing or supplementing them.
2. They reach much larger and different audiences.
3. They save time and expenditure in reaching large numbers.

WEAK POINTS

1. Less intensive and less effective than individual and group contacts in bringing about changes in practices.
2. Lack the advantages of “social contacts” or “personal touch”.
3. Recommendations being general may not apply to special situations or individual needs.
4. Difficult to evaluate the results.

INDIVIDUAL CONTACT METHODS

FARM AND HOME VISIT:

What is it? – It is a face-to-face type of individual contact by the extension worker with the farmer and/or the members of his family on the latter's farm or at his home for one or more specific purposes connected with extension.

Objectives or Purposes:

1. Obtain and/or give first hand information on matters relating to farm and home conditions.
2. Give advice or otherwise assist to solve a specific problem; or to teach skills.
3. Arouse the interest of those not reached by other methods.
4. Select local leaders, demonstrators or co-operators.
5. Promote good public relations.
6. Otherwise contribute to strengthening the extension organization or facilitate extension programme.

Principles or procedure to be followed:

1. **Decide upon the place of the farm and home visit** in the teaching plan outlined to advance a particular phase of the extension programme.
    a. Consider alternative methods which might be employed.
    b. Decide whether the visits are primarily for direct teaching or are needed to increase the effectiveness of group methods and mass media.

2. **Clarify the purpose of the visit –** Which of the purposes mentioned above are expected to be achieved by the visit?

3. **Plan the visit:**
    a. Review previous contacts with members of family.
    b. Check subject matter information likely to be needed - leaflets or bulletins etc.
    c. Work out schedule of visits in the community to save time.
    d. Remote and unfrequented farms and homes should always be kept in view.
    e. Consider best approach in view of individual family situation.

4. **Make the visit:**
    a. Punctuality and consideration for the time of the farmer should always be borne in mind. Contact the man preferably when he is on the job: e.g.; discuss about improved plough when he is ploughing.
    b. Be friendly, sympathetic and complimentary.
    c. Gain and deserve interviewee's confidence.
    d. Let the farmer do most of the talking.
    e. Speak only when he is willing to hear.
    f. Talk in terms of his interest.
    g. Use natural and easy language, speak slowly and cheerfully.
    h. Be accurate in your statements.
    i. Don't prolong arguments.

j. Compliment the farmer for good ideas.
k. Be sincere in learning as well as teaching.
l. Arouse interest and create a desire to take action.
m. Render the farmer a real service.
n. Leave clear impression as to object of visit.
o. If possible, hand over a folder or bulletin etc., pertaining to the topic discussed, or a packet of seeds if necessary. This will help in developing friendship.
p. Leave the farm or home as a friend.

5. Record the visit:

a. Date, Purpose of visit, what was accomplished, and follow-up commitments made.
b. Make sure through appropriate office device that follow-up at appropriate time is not overlooked.

6. Follow up the visit:

a. Send applicable literature or other things by post or other-wise.
b. Extend invitation to attend a meeting; if any; on the concerned topic.
c. Make subsequent visits if and when required.

Advantages:

1. Provides extension worker with first-hand knowledge of farm and home conditions, and the view points of farm people.
2. If made on request, the farmer or home-maker is likely to be ready to learn.
3. The ratio of "takes" (acceptance) to "exposures" (efforts) is high.
4. Builds confidence between the extension worker and the farmer.
5. May increase greatly the effectiveness of group methods and mass media.
6. Contributes to selection of better local leaders, demonstrators and co-operators.
7. Develops good public relations.
8. Useful in contacting those who do not participate in extension activities and who are not reached by mass media.

Limitations:

1. Requires relatively large amount of extension worker's time.
2. Number of contacts possible is limited.
3. Comparatively costly.
4. Time of visit may not be always opportune from the standpoint of farmer.
5. Danger of concentrating visits on the progressive farmers, and neglecting those who are mostly in need of such personal contacts.

Lecture No. 5: Individual contact methods – field trial – meaning – objectives – procedure – advantages and limitations – result demonstratin – meaning – principles –purpose – procedure – advantages and limitations.

Field Trial or Observation Plots or District trial or minikits or adaptive trial:

This is the first stage which any new improved variety of seed, fertilizer, pesticide or any new practice for that matter, must pass through, before it is taken to the stage of result demonstration or method demonstration and before advocating its large scale adoption. This is not an Extension Method in the strict sense of the term. However, the need of sort of adaptive research as a prerequisite for successful extension work has been widely recognized. So, it is essential for extension workers to understand the important features of this method. It must be remembered that unlike trial plots which are laid out systematically to satisfy the requirements for statistical analysis, the observation plots are designed to give rough and ready, nevertheless, reliable indications about the performance of a new variety or practice. In the case of Minikit trials the small sized observation plots are laid out simultaneously in a wide geographical area comprised of several agro climatic zones.

What is it? It is a method by which the suitability or other wise of a new practice to a given locality under farmer's conditions, is determined.

The new practice may mean (i) the introduction of a practice not existing hitherto; e. g., planting sesbania along paddy field bunds or (ii) the introduction of an improvement over local practice; e. g., replacing cultivation of open pollinated maize with hybrid maize, or (iii) replacing an already established improved practice with a more improved new practice; e. g., Adonicum cotton replacing Laxmi cotton which had replaced H_1 cotton earlier.

The new practice may be a varietal, manurial or cultural improvement, or a combination of two or more of these types of improvement.

Objectives or purposes:

1. To test the performance under ryots' conditions, of a new practice, which has been found to be promising on a research station.
2. To avoid possible losses to farmers and consequent loss of their confidence in extension due to large scale introduction of new practices without prior observations on a small scale.
3. To build the confidence of both the extension worker and the farmer in the utility as well as feasibility of a new practice.

Principles or Procedure to be followed:

1. Determine the need for arranging the observation plot i.e., whether there is a prima facie case for undertaking the trial, taking local conditions into consideration.
2. Be clear about the specific purpose of the trial.
3. Select about six representative centres in your jurisdiction for conducting the trial.
4. In these centres, select the co-operators in consultation with the local farmers.
5. It is desirable to select as co-operators for this purpose; such farmers who have confidence in extension and who also can afford to take the risk of possible failures (in rare instances).

6. Select in the co-operator's holding an average field, representative of the tract (i.e. neither too rich nor too poor) and also easily accessible.

7. Make it clear to the co-operator and to the other farmers that it is a trial or a rough and ready experiment only, and not a demonstration plot.

8. It is important that all operations right from preparatory cultivation to harvesting, threshing and weighing are done under the personal supervision of the extension worker.

9. Restrict the size of the "control" and "treated" strips to the minimum possible, so as to have a large number of replications.

10. Visit the plot as frequently as possible and record on the spot, your observations regarding the relative performance of "control", and "treatment" in the three phases, viz., vegetative phase (growth, tillering etc.,) flowering stage (late, early, uniform, uneven etc.,) and harvesting stage (uniform or uneven ripening, late or early, lodging or non-lodging, shedding or non-shedding etc.)

11. Accurate records should be maintained, showing the dates of important operations, the yields per acre, the cost of production, the net income per acre, and other relevant observations.

12. The average performance of the new practice should be observed for at least three seasons consecutively, before you think of recommending it for large scale adoption. (This time lag is minimized in the case of minikit Trials.).

Advantages:

1. Avoids the pitfalls of hasty recommendation and/or adoption of new practices.
2. Constitutes the first step towards the spread of a new practice after thorough testing.
3. Obviates the technicalities, difficulties, and delays involved in laying out regular trial plots, and analyzing the results statistically.
4. Builds confidence of the extension and research workers on the one hand and of the farmers on the other, in the utility and feasibility of a new practice.

Limitations:

1. Makes heavy demand on the time and energy of extension worker.
2. Seasonal failures delay the assessment of the worth of a new practice, leading to consequent delay in its adoption.
3. Difficult to secure suitable co-operators sometimes.
4. Risk of failure of a new practice resulting in financial loss to the co-operating farmer.
5. Conclusions may not always be unassailable because of the lack of statistical analysis of the data.

RESULT DEMONSTRATION.

What is it? A result demonstration is a method of teaching designed to show by example the practical application of an established fact, or group of related facts. In other words, it is a way of showing people the value or worth of an improved practice whose success has already been established on the research station, followed by district trials or observation plots.

In this method the new practice is compared with the old one on ryot's holdings so that the villagers may see and judge the results for themselves. Such demonstration requires a substantial period of time and records need to be maintained. It is in no sense an experiment or a trial except perhaps in the mind of the co-operator (demonstrator).

The result demonstration may (i) deal with a Single practice, such as the use of improved strains of paddy seed; or (ii) it may be concerned with a *series of related practices* as in the case of Japanese method of paddy cultivation; or (iii) in some instances it may include the entire farm, as in the case of balanced farming. (i.e. *Whole Farm Demonstration*).

The result demonstration may be (i) varietal (ii) manurial (iii) cultural (iv) combination of two or more of the afore-said three types, or (v) Composite demonstration in which all the essential improved practices in respect of any crop are included as a package of improved practices.

Principles of result demonstrations:

There are two common sense **principles** underlying this method.

(a) What a farmer himself does or sees, he will believe.

(b) What is good for one person will have general application to others (under similar conditions).

Objectives or Purposes:

1. To show the utility and feasibility of a recommended practice under village conditions.
2. Chiefly to establish confidence on the part of the farmer as well as the extension teacher.

Procedure or Technique:

1. ***Analyse situation and determine need:*** (Determine the place of the result demonstration in your teaching plan)

(a) Is it necessary to establish further confidence in local application of research findings and results of observation plots?

(b) What has been the experience of the extension worker in guiding the carrying out of the practice under similar conditions?

(c) Is it possible to locate good illustration of the practice locally, obviating the necessity of expensive result demonstrations?

(d) Is the need for result demonstration felt by the farmers?

2. ***Decide upon specific purpose:***

(a) Which particular audience should have the learning experience?

(b) What specifically do you want them to learn?

(c) Is it to give confidence to the extension worker and provide him with teaching material?

(d) Is it to establish confidence of farmer in the new practice?

(e) Is it to develop confidence in extension on the part of a community or of a minority group with whom extension worker is not known well and favourably?

3. Plan the result demonstration:

(a) Consult subject matter specialist.

(b) Make as simple and clear-cut as possible. (The more complex the demonstration, the greater the difficulty in evaluating the results attributable to each of the practices involved.)

(c) Decide upon evidence needed and how local proof will be established.

(d) Determine number of demonstrations needed to accomplish purpose.

(e) Locate sources of material.

(f) Reduce plans to writing (calender of operations etc.)

4. Select demonstrators:

(a) Consult with local leaders and select a demonstrator who commands the confidence and respect of his neighbours, and who is interested in improving his practices.

(b) Visit the prospective demonstrator to make sure that all conditions for success of demonstration are favourable.

(c) The demonstrator should be conscious of his responsibility for the successful completion of the demonstration and its effect upon the community.

(d) The demonstrator should be willing for the demonstration to be used for teaching purposes such as publicity; pictures, meetings, tours and personal enquiries.

(e) The demonstrator should have to secure the necessary physical equipment, supplies and materials to carry the demonstration to a successful conclusion.

(f) Explain and agree upon procedure with demonstrator and leave written instructions preferably.

5. Select the plot:

(a) The plot should be located preferably in a roadside field for easy accessibility and publicity.

(b) The field should be representative or typical of the soils in the village (neither too rich nor too poor).

6. Start the demonstration:

(a) Give wide publicity before starting the demonstration.

(b) Get all the materials ready.

(c) Start the demonstration in the presence of the villagers.

(d) Assist in getting the demonstration under way to make certain that the omission of some key point will not make later work fruitless.

(e) Arrange for a method demonstration meeting where a skill may be involved in the beginning stage of demonstration, or later.

(f) Make the demonstration plots with large signs, so that all can see.

7. Supervise the demonstration:

(a) Visit the demonstration plot with sufficient frequency to maintain demonstrator's interest, check on progress, and see that succeeding steps are performed as outlined.

(b) Maintain records and assist the demonstrator also in keeping proper records.

(c) Give publicity to the demonstration and the farmer at suitable stages.

(d) Conduct tours to successful demonstrations at proper times.

(e) Let the demonstrator himself explain to visitors, as far as possible.

(f) Mention in news stories, circular letters, radio talks etc., at critical stages.

8. Complete the demonstration:

(a) See that final steps to complete the demonstration are taken.

(b) Take photographs.

(c) Hold meetings at demonstration where visual evidence will contribute to confidence.

(d) Summarise records. Analyse and interpret data.

9. Follow-up:

(a) Give wide publicity to results of demonstration.

(b) Encourage demonstrator to report at meetings.

(c) Prepare visual aids based on the results of demonstration.

(d) Get other farmers to agree to demonstrate during the next season.

Advantages:

1. Gives the extension worker extra assurance that recommendation is practical and furnishes local proof of its advantages.
2. Increases confidence of farmers in extension worker and his recommendations.
3. Useful in introducing a new practice.
4. Contributes to discovery of local leaders.
5. Provides teaching material for further use by extension worker.

Limitations:

1. Requires lot of time and preparation on the part of extension worker.
2. A costly teaching method.
3. Difficult to find good demonstrators who will keep records.
4. Teachings value frequently destroyed by unfavorable weather and other factors.
5. Few people see the demonstration at the stage when it is most convincing.
6. Unsuccessful demonstrations may undermine the prestige of Extension, and entail loss of confidence.

Lecture No. 6: Group Contact Methods – method demonstration – meaning – objectives – procedure – advantages and limitatins – basis for demonstration – differences between result deonstration and method demonstration: Group discussion – meaning – purposes – procedure – roles of chairman, members and expert – advantages and limitations

GROUP CONTACT METHODS:

Method demonstration:

Meaning: It is a relatively short – time demonstration given before a group to show how to carry out an entirely new practice or an old practice in a better way. It is not concerned with proving the worth of a practice but **how to do** something; e.g.,: pruning grape vine, seed treatment. It is definitely not an experiment or trial but a teaching effort. A result demonstration is conducted by the farmer (demonstrator) under the supervision of the extension worker to prove that the recommended practice will work locally whereas the method demonstration is given by the extension worker himself or a trained leader for the purpose of teaching a skill to a group.

In the role of a skilled technician the extension worker or leader shows the step-by-step procedure in the operation, explaining each succeeding step as he proceeds. The learners watch the process, listen to the oral explanation, and ask questions during, or at the close of the demonstration to clear up points about which there is uncertainty. The members of the group repeat the demonstration in the presence of the others. This helps to fix the process in the minds of the audience and increases confidence in their ability to master the technique.

The method demonstration is the oldest form of teaching long before language was developed, men taught their children how to hunt, how to cultivate etc., through method demonstration. In the jungle, the tiger cub learns to hunt by following and playfully mimicking the tigress.

Objectives or purposes:

1. To enable the people to acquire new skills.
2. To enable people to improve upon their old skills.
3. To make the learners do things more efficiently, by getting rid of defective practices.
4. To save time, labour and annoyances and to increase satisfaction of learners.
5. To give confidence to the people that a particular recommended practice is a practicable proposition in their own situation.

Procedure or steps to be followed:

1. ***Analyse the situation and determine the need:***

a) Determine that the subject-matter practice involves skills which need to be demonstrated to many people.
b) Is the demonstration for new skills developed through research, or for old skills not being performed successfully?
c) Is it suitable for visual presentation to a group?
d) Can the demonstration be repeated satisfactorily by local leaders?
e) Is the practice really important from the farmers view point?
f) Can people afford to follow the practice?
g) Are supplies and equipment available in sufficient quantities to permit wide- spread use of the practice?

2. ***Plan the demonstration in detail:***

a) Gather all the information about the practice. Familiarize yourself with the subject matter. Check on research findings.
b) Talk over the problem with a few village leaders. Let the villagers help you plan the demonstration. Let them provide land and other requisites.
c) Have a time table, depending on how much skill is required and how soon it is to be acquired.
d) Have a job break-down or a demonstration outline giving the operations in logical steps.
e) Identify the key points to be emphasized under each step.
f) List out and select demonstration materials and equipment most likely to be available or readily obtainable.
g) Arrange for diagrams, directions, and other teaching materials to be distributed.
h) Prepare kits of special material needed by local leaders if they are to repeat the demonstration.
i) Make sure that the work place is properly arranged: (lighting, no odours, and no distracting noises).

3. ***Rehearse the demonstration:***

a) Practice demonstration until you are thorough with all the steps and know exactly what you should say or do at each step, so that the operation can be performed in a manner to inspire confidence.
b) Make sure steps and points will be clear from audience's point of view.
c) Check time required, to make sure there is opportunity for audience's questions and other expected participation.

4. *Give the demonstration*:

a) Prior publicity should have been given about the place and time.
b) Be at the spot early to check up equipment and material.
c) Make physical arrangements so that all participants can have a good look at the demonstration and take part in the discussion.
d) Explain purpose, and how it is applicable to local problem.
e) Find out what they already know about the practice.
f) Show each operation slowly step by step, repeat where necessary.
g) Use simple words to explain each step of the operation.
h) Make sure the audience can see and hear clearly.
i) Emphasise key points and tell why they are important.
j) Solicit questions at each step before going on to next step.
k) Give opportunity to learners to practice the skill.
l) Distribute supplemental teaching material (bulletins, leaflets etc.) pertaining to the demonstration.
m) Summarise steps covered in demonstration.
n) Get the names of participants who propose to adopt the practice. This helps follow – up.
o) If demonstration is given before local leaders who will repeat it, emphasise teaching points to be made. Explain contents of demonstration kit.

5. Follow – up:

a) Give publicity on the demonstration through press, radio, meetings etc.
b) Arrange for reports on number of, and attendance at demonstrations given by local leaders.
c) Make a sample check to assess the extent of use of the skill, and satisfaction derived by those attending the method demonstration.

Advantages:

1. Peculiarly suited in teaching skills to many people.
2. Seeing, hearing, discussing and participating in a group stimulates interest and action.
3. The costly 'trial and error' procedure **is** eliminated.
4. Acquirement of skills is speeded.
5. Builds confidence of extension worker in himself, and also confidence of the people in the extension teacher, if the demonstration is performed skillfully.
6. Simple demonstrations readily lend themselves to repeated use by local leaders.
7. Introduces changes of practice at low cost.
8. Provides publicity material.

Limitations:

1. Suitable only for practices involving skills
2. Needs good deal of preparation, equipment and skill on the part of extension worker.
3. May require considerable equipment to be transported to the work place.
4. Requires a certain amount of showmanship **not** possessed by some extension workers.

<u>Basis of demonstration</u>

1. Most people retain 10-15% of what they READ, if the subject is explained in clear and simple language or in particular technical terms.

2. The majority remember about 20-25% of what they HEAR, if their concentration is not limited through listening "with one ear" to a speaker who perhaps fatigues them with a tedious lecture.

3. About 30-35% of what they have SEEN, is kept in mind by the majority: even more if what is offered is well arranged and selected.

4. The majority remember 50% and more of what they have SEEN and HEARD at the same time, provided both presentations complement one another.

5. Up to 90% of what is taught is kept in mind by the majority of people, if they participate actively, and if ALL THE SENSES are involved.

"Only the demonstration can make teaching perfect."

DIFFERENCES BETWEEN RESULT DEMONSTRATION AND METHOD DEMONSTRATION

Particulars	Result Demonstration	Method Demonstration
Purpose	To show locally the worth or value of a recommended practice.	To teach how to do a job involving skill (to teach 'doing' skills)
Conducted by	Farmer (demonstrator) under the guidance of extension worker	Extension worker himself or local leader specially trained for the purpose.
For the benefit of	The demonstrator as well as other farmers.	Persons present at the demonstration.
Comparison	Essential (not necessary to have replications in the same field.)	Not essential
Maintenance of records	Necessary	Not necessary.
Time required	Substantial period.	Relatively very little.
Cost	Costly	Relatively cheap
Contact method	Individual contact method	Group contact method
Interrelationship.	Usually follows observation plots; may involve one or more method demonstrations.	Often paves the way for result demonstration.

GROUP DISCUSSION, (GROUP THINKING CONFERENCE):

Definition: It is that form of discourse which occurs when two or more persons, recognizing a common problem exchange and evaluate information and ideas, in an effort to solve that problem. Their effort may be directed towards a better understanding of the problem or towards the development of a programme of action relative to the problem. Discussion usually

occurs in a face – to – face or co-acting situation, with the exchange being spoken. And when more than two people are involved, it usually occurs under the direction of a leader.

Purposes:

1. To solve a problem (decision – making).
2. To exchange information (improve understanding)
3. To motivate.
4. To plan a programme of action
5. To elect or select a person for a position etc.
6. To entertain.
7. To hear and discuss a report.
8. To form attitudes.
9. To release tensions.
10. To train individuals.

Procedure:

1. Understand and adopt the proper technique. The technique of a problem – solving group discussion consists of the following **six steps** based on the "**reflective thinking**" pattern.
   I. Recognition of the problem as such by the group.
   II. Definition of the problem, its situation and diagnosis.
   III. Listing of as many solutions as possible.
   IV. Critical thinking and testing of these hypotheses to find the most appropriate and feasible solution or solutions.
   V. Acceptance or rejection of the solution or solutions by the group.
   VI. Lastly, considering how to put the accepted solution into practice.

2. See that one of the group members takes up the role of the discussion leader (or chairman). Extension worker should avoid this role as far as possible, because in such a case, a situation is likely to develop where the group listens and the chairman does all the talking.

3. The size of group should never exceed 30 persons.

4. ***The role of the chairman***:

   a) Make physical arrangement for the meeting, so that all members feel comfortable. Seating arrangement should be such that every one can see the faces of all other members. Circular seating is preferable. (Square, rectangle, U or V shape also used sometimes.)

   b) Introduce members, if they are new to one another.

   c) Announce the topic and purpose of discussion.

   d) Follow a plan.

   e) Hear all the contributions made, and from time to time give short summaries of the discussion up to that particular moment, especially when the group moves form one step to another (of the reflective thinking pattern).

   f) Build a permissive climate.

g) Keep the group moving at the rate at which their thinking progresses.

h) Give or get clarification of vague statement.

i) Promote evaluation of all generalizations.

j) Protect minority opinion.

k) Try to get balanced participation.

l) Promote group cohesion.

m) Remain personally neutral.

n) Give a final summary of discussion.

Some Don'ts for chairman:

a) Never ask questions that suggest answers or can be answered with a Yes or No. (put only thought – provoking questions)

b) Don't favour one view against another when there is a conflict or difference of opinion among members.

c) Never become emotional about the discussion.

d) Don't become impatient with the group.

e) Don't dominate the discussion or answer all the questions raised by the members.

5. The roles of members:

a) Talk one at a time. No private conversation with neighbors. No speech making.

b) Supply as much pertinent information as possible.

c) Contribute one point at a time.

d) Answer questions directly, specifically and briefly.

e) Test all thinking by critical analysis.

f) Listen attentively.

g) Stay on the subject.

h) Exhibit willingness to change his opinion when change is justified (i.e., open minded). A person may hold opinions, but opinions should not hold a person.

i) Support the needed leadership.

j) Promote group harmony even while criticizing or disagreeing.

6. ***The role of the expert (Extension worker or Specialist)***

There may be occasions when a group confronted with a problem does not have sufficient information to enable them to discuss intelligently. In such cases, the role of the expert is not to dominate the meeting, nor to suggest his own solution. He should only supply information, that group does not have, furnish technical information, present ways other groups have met similar situations, and present the immediate problem in its larger setting, with implications for integrating the solution of the problem with other group policies and action programmes.

Advantages:

1. It is a democratic method, giving equal opportunity for every participant to have his say.
2. It appeals to the practical type of individuals.
3. It creates a high degree of interest.
4. The strength of group discussion lies in the fact that the discussants approach the problem with an open mind and suspended judgment in a spirit of enquiry.
5. It is a co-operative effort and not combative or persuasive in nature.
6. Combined and co-operative thinking (Pooling of wisdom) of several persons is likely to be superior to that of isolated individuals.
7. A small group can think together on a problem in an informal fashion and work out solutions better and faster by using this method than by following rigid parliamentary procedure. (Even parliament and legislatures recognize this when they appoint adhoc committees)
8. Develops group morale. When a group discusses a question and then comes to a decision that is "our" decision for the group and they will see that our decision is carried out. (Group action encouraged)
9. It is a scientific method (employing the reflective thinking pattern).
10. Participants need not be good speakers or debaters.
11. Continued experience with such group discussions improves one's capacity for critical and analytical thinking.

Limitations:

1. Factions in villages may hinder the successful use of this method
2. The ideal discussants with self-discipline (open mind and suspended judgment) are difficult to find. So, also, it is difficult to find an ideal chairman or leader for group discussion.
3. It is not suitable for dealing with topics to which discussants are new.
4. In large groups especially, and even in small groups to some extent, it is difficult to achieve group homogeneity or cohesion.

5. The size of the group has to be limited, because the success of the method is perhaps inversely proportional to he size of group other factors being constant.

6. It is not a good method for problems of fact.

7. It is not suitable for taking decisions in times of crisis or emergency, as it is a slow process.

8. Due to its informal conversational style, the scope for orderly or coherent arrangement of ideas is limited.

Lecture No. 7. Group Contact methods – Field trips and field days – meaning – objectives – procedure – advantages and limitations – Farmers Field School (FFS) – meaning – concept - objectives – steps in organising FFS.

FIELD TRIPS / CONDUCTED TOURS / STUDY TOURS/EXPOSURE VISITS:

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

It is very difficult to convince the farmers with oral explanation and they will not believe unless they see and interact with the farmers those who have adopted the recommended practices. It is well said that SEEING IS BELIEVING. This method satisfies and motivates the farmers who are not convinced and believe in the said concept.

Purposes:

1. To stimulate interest, conviction and action in respect of a specific practice, e.g., preparing rural compost. The cumulative influence of several ideal compost pits is more likely to provide such stimulation than a single illustration.

2. To impress the group about the feasibility and utility of a series of related practices, e.g., proper preservation of farm yard manure, rural composting, urban composting and green manuring which are all included under the item "development of local manurial resources".

3. To induce a spirit of healthy competition by showing the accomplishments in other villages.

4. In short, to help people to recognize problems, to develop interest, generate discussion and to promote action.

Procedure:

1. Provide for field trips at opportune time in the over-all teaching plan.
2. Prepare an outline of specific aims of the trip.

3. Plan the trip:

a) Decide upon the places to be visited and the things to be seen and learnt. Do not crowd the programme.

b) Then arrange for necessary permission from the concerned authorities to make the trip.

c) Fix up date, time, means of transport, number of participants to be taken number of stops, arrangements for rest and refreshments in consultation with the village leaders.

d) Accompanying staff should pay an advance visit to the actual sites before conducting the party.

e) Give definite instructions to participants where and when to meet, insist on punctuality in arrival and departure timings at each stop.

4) Conduct the trip:

a) Give guide sheets in simple language (if the majority are literate)

b) Focus attention on the purpose of the trip.

c) Let every one see, hear, discuss and if possible participate in the activities at the places of visit.

d) Allow time for questions and answers.

e) Help them to make notes of interesting information.

f) Follow the general instructions regarding conversation applicable to all direct contact methods.

g) Avoid accidents.

h) Adhere to schedule all through.

5) Record the trip:

Accompanying staff should note the details of the trip, the names of participants etc., to facilitate follow-up.

6) Follow – Up:

a) Contact the participants individually and in groups.

b) Arrange for necessary supplies and services.

c) See that the desired action results.

d) Give due recognition to the successful learners.

e) Build up publicity material

Advantages:

1. Participants gain first-hand knowledge of improved practices, and are stimulated to action.

2. Eminently suited to the **"show me"** type of people.
3. Percentage of "takes" to 'exposures' is high.
4. Widens the vision of farmers.
5. Caters to group psychology and leadership.
6. Has an incidental value of entertainment and sight-seeing.

Limitations:

1. It is costly.
2. Difficult to fix up season and time suitable for all.
3. Bottlenecks of transport and accommodation at halting places.
4. Possibility of subordinating educational aspect to the sight-seeing aspect.
5. Risk of accidents.

FIELD DAY:

In general the extension worker conducts various demonstrations and at times when its more convincing, the extension worker organizes field day so that it can be shown to many of the farmers for convincing and motivate the farmers to adopt the recommended practices.

Meaning: FIELD DAY is a method of motivating the people to adopt a new practice by showing what has actually been achieved by applying the practice under field conditions. A field day may be held in a research farm or in a farmer's field or home. If the number of participants is large, they should be divided into small groups of about 20 to 25 persons each, who shall visit the spots in rotation.

Objectives

1. To convince the participants about the applicability of the practice in their own situations.
2. To motivate them to adopt the practice by showing its performance and profitability under field conditions.
3. To remove doubts, superstitions and unfavourable attitude about the new practice
4. To reinforce previous learning about the practice.

Technique

Planning and preparation

- Decide about the practice, location, date, time and the participants. Involve media persons.
- Contact subject matter specialists and ensure their participation.

- Make festoons and colourful labels for display.
- Arrange a place of meeting close to the site where the practice has been applied.
- Make arrangements for display of exhibits, including diagrams, charts etc. near the place of meeting.
- Collect relevant publications and prepare a special handout for the occasion.
- Inform participants, workers and media persons in time.
- Make arrangement for registration of the participants.
- Arrange for public address system, vehicles and other facilities.
- Make a written programme and divide the responsibility to suitable persons.

Implementation

- Assemble the participants and welcome them on arrival. Give a short introduction about the purpose of field day and how the groups shall move.
- Where the field day is held in the farmer's field, the demonstrating farmer shall play this role, aided by the scientists and if it is at the research station, the scientist has to explain .
- On completion of the visit, make the specialists and participants seated at the meeting place. Distribute publications to the participants.
- After a brief formality of addresses, emphasize again on the important points of the practice.
- Invite a few visitors to give their reactions. Answer to the questions raised.
- End the meeting by thanking the participants and those who have helped.
- Distribute sample packets relating to the practice, if any.

Follow-up

- Maintain contact with the participants.
- Reinforce learning through mass media.

Limitations

- Field days cannot be held frequently.
- Does not facilitate in-depth learning.

FARMER FIELD SCHOOL (FFS)

A: Farmers Field School (FFS) is a participatory extension group method was introduced and established first in **Central Java in Indonesia in 1989**, under the assistance provided by Food and Agriculture Organisation (FAO) of the United Nations to Indonesia. The term "Farmer Field Schools" came from the Indonesian expression *Sekolah Lapangan* meaning just *field schoo*l.

Meaning of FFS: The Farmer Field School is a form of adult education, which evolved from the concept that farmers learn optimally from field observation and experimentation. In regular sessions from planting till harvest, groups of neighboring farmers observe and discuss dynamics of the crop's ecosystem Simple experimentation helps farmers further improve their understanding of functional relationships (e.g. pests-natural enemy population dynamics and crop damage-yield relationships). In this cyclical learning process, farmers develop the expertise that

enables them to make their own crop management decisions. Special group activities encourage learning from peers, and strengthen communicative skills and group building

The Farmer Field School (FFS) is a group-based learning process. During the FFS, farmers carried out activities that helped them understand the ecology of the rice fields. These activities involve simple experiments, regular field observations and group analysis. The knowledge gained from these activities enables participants to make their own locally-specific decisions about crop management practices. This approach represents a radical departure from earlier programmes, in which farmers were expected to adopt generalized recommendations that had been formulated by specialists from outside the community.

FFS is a place where farmers undergo a field oriented, discovery based training that enable them to become field experts and be able to grow a healthy crop.

FFS is an effective extension tool, which can be used for empowering the farming community, developing self-confidence, increase in social and human capital and promote better living through awareness of Health Environmental concerns (issues on sustainable agriculture).

Concept of FFS

- FFS consists of group of people with a common interests who get together on a regular basis to study the "how and why" of a particular topic. The topic covered can vary considerably from IPM, organic agriculture, animal husbandry, and soil husbandry to income generating activities such as handicrafts.
- FFS is participatory extension methodology recognizes the need to involve farmers in technology development and transfer.
- In this process, farmers are central in the process of technology development
- FFS emphasizes building on the farmers' ability to experiment and draw conclusions and it empowers farmers to improve their socio-economic conditions.
- FFS is basically ***"school without walls"***
- FFS however, is particularly adapted to field's study, where specific hands on management skills and conceptual understanding are required.
- **As the name suggests FFS are the schools for the farmers outside the classrooms and on the farms**.
- It operates with the principle of ***non-formal education*** (non-formal learner centred educational process) and most of the session and contents are based on the ***adult learning principle.***
- FFS is seen as a process that takes place in the learner not in teacher/facilitator.
- It seeks to empower people to solve their problems actively by fostering participation, interaction, dialogue, joint decision-making, self confidence and self determination.
- Farmers learn, by carrying out for themselves various activities related to a selected farming technology and through constant observation of the technology performance in the field because of his practical knowledge based on generation long experience.
- The lessons learnt in FFS can be applied directly in fields as curriculum follows the natural cycle of the crop/technology selected. Field operations in FFS plots take place in parallel with the operations carried out to the farmers' fields.

- The FFS is a tool to build the capacities of farmers groups and NGOs staff in managing crop ecosystems, to make them better decision-makers in promoting sustainable use of resources at the cropping, farming and watershed system levels.
- In FFS, farmers learn about sustainable agricultural practices on the field. The fields belong to an experiment station or to a community. There, farmers meet regularly for the duration of an entire cropping season. They learn by observing what is happening on the field, by considering what they have observed in small groups, and by hands-on management of the field from pre-planting to harvest.
- The basic concept of Farmers Field School is

If I hear it, I forget it
If I see it, I remember it
If I discover it, I own it for life

Objectives of FFS

- To empower farmers on decision-making
- To educate farmers with science based learning
- To make farmers the experts and evaluators instead of passive acceptors of technology
- To facilitate confidence building with field interaction and discovery based learning
- To encourage experimentation with skill orientation
- To facilitate farmers to grow healthy crop

STEPS IN ORGANISING THE FFS:

1. Collection of basic information and enlisting cooperation
2. Sensitizing about FFS
3. Selection of FFS participants and collaborator and of their approval
   - Selection of FFS participants
   - Selection of FFS collaborator
   - Development of norms for FFS
   - Approval of candidates, collaborator and norms for FFS
4. Planning
   - Problem analysis
   - Prioritizing solutions to solve problems
   - Development of treatment plan
   - Scheduling the visits to FFS
   - Preparation of calendar of operations
5. Development of MOU for organizing FFS
6. Execution of FFS
   - Get the FFS activities implemented by FFS candidates as per calendar of operations developed

- Organise Educational activities like field day/ field visit / group discussion meets

7. Analysis of results

8. Withdrawal

Lecture No.8: Small group discussion techniques – lecture / extensin talk – meaning – characteristics – advantages and limitations – difference between lecture and extension talk – debate – symposium – panel – forum – buzz grop – brainstorming – workshop – seminar – conference- meaning.

SMALL GROUP DISCUSSION TECHNIQUES

LECTURE: Lecture is a method of verbal presentation of a topic by a speaker to a group of audience**.** The lecture method is extensively used to present **authoritative** or technical information to develop back-ground, appreciation and to integrate ideas. The range of subjects that can be covered by this method is unlimited. But the speaker presents a specific subject to a particular audience. The speaker can use Audio visual aids in support of speech. 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 much of the information as the speaker is likely to assume; It is a one-way communication. Members of audience listen in terms of their interests and remember in terms of motivation and memory. The chief limitation of this method is passive role of the audience. To compensate some what for this weakness, a discussion or **a** question-and-answer period may be held following the speech. This is generally called a forum**.** However, lectures designed to entertain or commemorate (e. g., humorous talks; patriotic addresses etc.,) are more-effective without a forum.

The chief characteristics of the "Lecture Method" are:

(1) It is an organized presentation.
(2) It can be used to cover thoroughly the subject matter.
(3) It is adaptable to large groups.
(4) It appeals to the "ear-minded".
(5) It conserves time.
(6) Results are easy to check.
(7) Listeners absorb information without thinking.
(8) Material gained through lecture is not really learned.
(9) The lecturer may "lose" his group or go over the heads of his group.

Advantages:

The Lecture method can be used advantageously

(1) With large groups where the individuals have some common back-ground of information and experience;

(2) When it is necessary to cover a large quantity of material in a given time;

(3) When it is necessary to arouse enthusiasm in initiating a new programme or in further development of a programme;

(4) When giving factual information;

(5) When providing a common back-ground of information as a basis for further study;

(6) Where there is need to supplement other methods.

The lecture method is not effective:

(1) When skills are to be developed;
(2) When no testing is done;
(3) When group participation is desired;
(4) When problems are to be solved;
(5) When "doing" ability is to be acquired.

EXTENSION TALK:

` Extension Talk is verbal explanation / presentation / communication to a group of people for sharing a common interest to impart knowledge by activating listeners. This method focusses on the involvement of the participants in the talk.

Characteristics:

- Effective for covering lot of material in short time.
- Imparts messages involving knowledge
- Method is suitable when the learners are active.
- Emphasizes more on informality and involvement of audience.
- Transforms the people in terms of change in behaviour.

Differences between Lecture and extension Talk

	Lecture	Extension Talk
1	Flow of information: It is one way i.e., from communicator to receiver	Flow of information is two way between communicator and receiver.
2	Interaction between communicator and receiver / audience is very less.	Interaction between communicator and receiver is much higher than in lecture method.
3	It deals with ``groups of individuals who have common background of information and experience	It deals with adult learners who have varied knowledge and experience.
4	Learners may be treated as passive listeners	Learners should not be treated as passive listeners.
5.	Learners do not get opportunity to participate.	Learners get opportunity to participate.
6	There is no scope for utilization of learners knowledge and experience	There is scope for utilization of their (Learners) valuable experience and knowledge.

DEBATE: The common pattern is to have two teams, one representing the affirmative, and the other the negative side of the question. Usually there are two speakers for each side. Each

speaker is allowed a definite amount of time to make his main speech and rebuttal after the main speeches have been completed**.**

In this case, there is two-way communication between the debaters, but one-way communication for the audience. The range of subject for debates is limited to controversial topics. The big advantage in a debate is that more than one side of a question is presented. There is, however, one danger. If it is a decision debate; there is the temptation for the debate to become highly antagonistic. In such a case, the motive to win the debate by any means may lead to distortion of information, ignoring the primary need to inform the audience. This objection to the debate is over-come by holding non-decision debates or by having a forum after the debate.

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 latter.

PANEL: It is an informal conversation put on for the benefit of the audience, by a small group of speakers, usually from **2 to 8** in number. They are selected on the basis of the information and experience they have. Members are seated so that they can see one another and also face the audience. The panel is generally rehearsed before it is presented to the public. The leader introduces the members of the panel to the audience and announces the topic. He has the responsibility to see that the conversation keeps going, by asking questions or making brief comments, and encouraging the less talkative members. There are usually 3 types of panel: (a) the **question-answer panel** in which the presentation is actually a series of questions by the leader (or chairman) and answers by the members; (b) **Set-speech panel**, each one making a prepared speech; (c) **the conversational panel** in which members hold a conversation among themselves on the topic, with questions and comments going from one member to another. This third type is more nearly in line with the definition of a panel than the other two, and is the pattern to be achieved.

The panel may be used to present almost any topic that may be used for a lecture, debate or symposium. The special advantage of a panel is that a spontaneous conversation about some subject may have more interest for the audience than a lecture. For better mastery of information the panel should be followed by a forum.

FORUM: Question – answer period - It is a **discussion period** that may follow any one of the above methods of presentation. It consists of **question period** in which members of the audience may ask questions or make brief statements. The forum provides an opportunity for the audience to clear up obscure points and to raise questions for additional information. It also gives individuals an opportunity to state briefly their understanding of a point and see whether they have interpreted correctly the material presented. It is primarily a means of understanding information.

BUZZ SESSIONS:(Phillips 66 format): 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 reassembled. This is actually a device to get more people to participate in a forum than would be the case otherwise.

BRAIN STORMING: 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 problem 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.

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. In the workshop method, the participants share their ideas, experiences and skills and on this basis produce something in the end a report or a programme for future action, a publication, a visual or any other material objects.

SEMINAR: It is one of the most important forms of group discussion and is more formal in nature. The seminar enables a study in depth to be made in specific areas under the guidance of experts. The discussion leader introduces the topic to be discussed. In seminar, the discussion papers prepared by the participants on the basis of their study and research are presented. 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. At the end some conclusions and recommendations are arrived at, for future action.

CONFERENCE: Pooling of experiences and opinions among a group of people who have special qualifications in an area.

Lecture No.9: Mass contact methods – compaign – meaning - objective – procedure – advantages and limitations – exhibition - – meaning - objectives – procedure – advantages and limitations – kisan mela – meaning – objectives – dimension of activities – procedure and limitations

MASS CONTACT METHODS

CAMPAIGNS:

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, block or other geographical area. 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 etc.

Co-ordinated communication and educational efforts are often called as campaigns. A campaign may take many forms (sales campaign, political campaign or image type campaign) but the kind used most widely in extension is the self help campaign. It is intended to provide information and education which people can use to improve their lives.

The duration of a campaign may be for a single day on a theme like "water for life", for a few weeks as in Rat control or family planning, for a few months as in Vanamahotsava (tree planting) and for a few years as in "Grow More Food Campaign". A campaign may be held by involving a small number of people in a few villages, or by involving an entire community or the entire nation over the whole country as in "Pulse Polio" campaign. Campaign on certain themes (say, environment, disease control etc) may be organized over the whole world. Campaign around a theme may be organized only once, or may be repeated year after year, till the goal is satisfactorily reached.

Purpose or Objective:

To encourage emotional participation of a large number of people and to foster a favourable psychological climate for quick and large scale adoption of an improved practice.

Procedure:

1. Determine the need for a campaign.

2. Be clear about the purpose. Make sure that it fulfills the need of local people.

3 Plan the campaign:

a) Consult local leaders and organizations.

b) Consult specialists

c) Ensure timely supply of men and materials,

d).Select a suitable time for launching the campaign.

e) Give wide publicity in advance.

f).Builds up enthusiasm of the people.

g) Allot specific areas and items to each service personnel and local leaders.

4.. *Conduct the campaign*:

a. Ensure that campaign is carried out as per plan.

b. Work with and through local leaders.

c.. Watch the campaign closely throughout.

d.. Avoid failures.

5. Follow-up:

a) Make individual and group contacts to find out reactions

b)Assess extent of adoption

c) Find out and analyse failures

d) Publicise successful items

e) Give due recognition to local leaders responsible for success

Advantages:

a) Specially suited to stimulate mass scale adoption of an improved practice in the shortest time possible. Eg: Rat control, organizing Vanamahotsava
b) Facilitates exploitation of group psychology for introducing new practices.
c) Successful campaigns create conducive atmosphere for popularizing other methods.
d) Builds up community confidence.
e) This method is of special advantage in the case of certain practice which are effective only when the entire community adopts them.

Limitations:

a) Applicable to only a few topics of common interest; but not suited to solve individual problems.
b) Successful only when all participants co-operate in the campaign.
c) Not useful when advocated practice involves complicated technicalities.
d) Required adequate preparation and close association of officials and non-officials, concerted efforts and propaganda techniques.

EXHIBITIONS:

Exhibitions are the mass communication media. These inform, educate and entertain the masses. They are of educational value but the maintenance of the exhibition is relatively a costly and difficult venture. However, careful planning and execution can achieve the objectives of educating the viewers who learn a lot from these exhibitions.

Meaning: Exhibition is a planned display of models, specimens, charts, posters etc. presented to public view for instruction, judging in a competition, advertising or entertainment.

An Exhibition is a systematic display of models, charts, photographs, pictures, posters, information etc. in a sequence around a theme to create awareness and interest in the community.

Exhibition method is suitable for reaching all types of people Exhibitions may be held in the village, block, sub-division, district, state, national and international levels. Though an exhibition is organsed around a major theme, other related themes and unrelated items like entertainment may also be included. Field days, farmers' fairs, kisan melas, held by the agricultural universities, institutions and other various organizations in which field visit, training programmes etc are combined with exhibition are effective and popular. Exhibitions may also be organised by taking advantage of local fairs and festivals. In fixing dates for exhibition, the weather condition and farm operations may be kept in view.

Sometimes, a distinction is made between exhibits and displays: Exhibits tend to use more of 3 – dimensional materials, while displays use more of 2-dimensional (flat) materials.

Purposes:

1. To influence people to adopt better practices by
   a) arousing interest b) stimulating thought c)getting action
2. To acquaint the public with better standards by teaching facts or showing a process.
3. To promote participation in or to raise money for some public cause or activity
4. To give recognition to people or institutions by enabling them to display their products etc.
5. To promote understanding and create good will towards extension.
6. To create market for certain commodities.

Procedure or Technique

Technique:

Planning and preparation:

1. Form a Steering Committee and suitable Sub-committees with the specialists, local leaders, and administrators.
2. Decide on the theme and the organizations to be involved.
3. Prepare a budget estimate and procure funds.
4. Decide on the venue, time and duration.
5. Prepare a written programme and communicate to all concerned in time. Keep some cultural and recreational programmes in the evening.
6. Get the site ready within the scheduled date. Make provision for essential facilities.
7. Earmark a stall for display of exhibits to be brought by the farmers.
8. Arrange a pandal for holding meeting, training and entertainment programmes.
9. Display posters at important places. Publicize about the exhibition through mass media.
10. Decorate the stalls simply and tastefully. Make adequate arrangements for lighting. Use special-effect lights where necessary.
11. Prepare good quality and colourful exhibits which shall convey the desired message to the visitors. Use local materials as far as possible. Label the exhibits in local language with bold letters.
12. Display exhibits about 50 to 60 cm. above the floor of the stall, upto a height of about 2 metres and not more than 7 feet from the floor. Maintain proper sequence. Avoid overcrowding of exhibits. Take precaution against display of insignificant and unrelated exhibits.
13. If possible, arrange action and live exhibits.

14. Train up interpreters and allot specific duties. For a long duration exhibition, arrange rotation and replacement of personnel.

Implementation:

1. Organize formal opening of the exhibition by a local leader or a prominent person.
2. Arrange smooth flow of visitors.
3. Let the interpreters briefly explain the exhibits to the visitors so that the intended message is clearly communicated. Distribute publications during visit.
4. Organize a panel of experts to be present nearby, so that the visitors who would like to know more or discuss some problems could get the desired information.
5. Conduct meeting, training programmes etc. as per schedule during the day time. Use the pandal at night for entertainment programmes.
6. Arrange judging of exhibits brought by the farmers and give away prizes and certificates.
7. Keep the exhibits and the premises clean. Replace exhibits as and when necessary.
8. If desired, judge the stalls on the basis of their quality of display, ability to draw visitors and effectiveness in communicating message, and award certificates.
9. Conclude the exhibition as scheduled by thanking the participants and those who have helped.

Follow-up

1. Meet some visitors personally and maintain a visitors' book for comments during the exhibition to get feedback information.
2. Talk to the local leaders and assess success of the exhibition.
3. Ensure availability of critical inputs and facilities emphasized during the exhibition.
4. Look for changes in practice in the community in the coming years.

Attention getters:

1. Labelling (or) captioning: Captioning should be brief. If possible, in telegraphic from.
2. Colour – Red attracts more attention than blue colour. Yellow is able to be seen from a long distance. Yellow background and black letters are good combination.
3. Brightness: Attention increases with greater intensity of light and colour.
4. Movement – If eyes sees the displacement of an object from one position to other.
5. Size – Anything large relative to its surroundings.
6. White space – Surrounding of white space brings attention.
7. Shape – Asymmetrical and irregular shapes.
8. Unusual – some of the unusual objects get attention.

Advantages.

1. Best suited to teach even illiterates.
2. Promotes public relations.
3. It serves recreational purpose.
4. It develops competitive spirit.

5. Can create market for certain products.

Limitations:

1. Requires much preparation and investment.
2. Cannot be used widely.
3. Cannot be used frequently.
4. Sometimes most – visitors seek amusement in events rather than education.

III. KISAN MELAS:

Kisan mela is an organized educational activity for involving and educating farmers by bringing together the farmers, scientists, extension workers, input agencies, developmental departments and non-governmental agencies on agriculture or allied aspects at a Research Station or an agriculturally important educational center, where the farmers can see, interact and gain first hand knowledge about the latest technologies and developments in agriculture and allied aspects. It integrates several educational activities specifically directed to the farmers of a region, state or country. In the case of Acharya N.G.Ranga Agricultural University, it may be limited to the agro-climatic zones and the jurisdiction of the Research Stations coming under the aegis of ANGRAU.

Objectives:

1. To provide an opportunity for the farmers to practically witness the new production technologies demonstrated on the Agricultural Research Station and also to inform them about the on-going research in different aspects.
2. To enable the farmers to discuss with the University Scientists about the problems relating to agriculture and allied aspects directly.
3. To provide an opportunity for the farmers to directly come in contact with input manufacturers, dealer in agricultural machinery and implements to help the farmers know about the latest agricultural inputs, machinery, equipment etc. available in the market.
4. To help scientists to get feed back on recommended technologies as well as to sensitize them about the farmer's current problems on agriculture and allied aspects.
5. To develop a habit among farmers to visit Research Stations frequently to learn about latest technologies.
6. To convince the participants about the applicability of the practice in their own situation
7. To motivate them to adopt the practice by showing its performance and profitability under field conditions.
8. To remove doubts, superstitions and unfavourable attitude about the new practices
9. To reinforce previous learning about the practice.

Dimensions of Activities:

1. Organization of crop cafeteria and demonstrations on the Research Station.
2. Organization of exhibition.
3. Organization of field visits.
4. Organizing Quiz and competitions for farmers.
5. Organization of 'Rytu Sadassu' (Question-Answer Session).
6. Organization of recreation and entertainment.
7. Arranging sale of seeds / seedlings, publications, processed products etc.

Duration:

Two to three days. Dates should be fixed at least one month in advance.

Steps in planning and Organization of Kisan Mela.

Kisan Mela involves considerable expenditure on the part of organizing institution. It needs a meticulous planning and involvement of State Extension agency, input firms and the research organizations.

a) Deciding the theme.
b) Fixing the Mela date based on convenience of farmers, facilities, climatic conditions and a good standing crop.
c) Setting up steering / planning committee with head of the institution / Research station as Chairman.
d) Appointing Mela Officer i/c of all activities.
e) Venue for Mela – decide well in advance to grow trial plots, to erect structures etc. on the spot. As far as possible better decide a permanent spot for each Station.
f) Constitution of Sub-Committees:
    i. Reception Committee
    ii. Publicity Committee
    iii. Guided visit committee
    iv. Competition committee
    v. Programme committee
    vi. Exhibition committee
    vii. Conference committee
    viii. Control room committee
    ix. Accommodation and transport committee
    x. Health care committee
    xi. Security and service committee
g) Providing finances to various sub-committees
h) Publicity
i) Inviting dignitaries, if any
j) Exhibitions
k) Mailing list.

Organising:

a) Registration of farmers
b) Form into groups and guide them to the spots on rotation
c) Scientists are to be available at the spots to explaining the technology and practices and to answer queries.
d) On completion of the field visit, guide them to visit exhibition stalls, where they get some more information on practices with the help of scientists

e) The participants, officials and scientists are seated for the meeting and arrange for distribution of publications.
f) After a brief formality of addresses emphasise again on the important points of the practices
g) Invite a few visitors to give their reactions, answer to the questions raised by arranging rythu sadassu. Give question formats before beginning of rythu sadassu.
h) End the meeting thanking all for their participation
i) Distribute the seed packets related to the practice

Follow-up:

a) Maintain contact with the participants

b) Reinforce learning through mass media

Limitations:

1. Cannot be held frequently

2. Does not facilitate in depth learning

Lectire No.10:Radio – meaning – purposes – advantages and limitations – rural and farm broadcasting – farm and home units – objectives – rradio rural forums – farm school on All India Radio (AIR) – meaning and procedure and agricultural programmes: Television – meaning – objectives – agricultural programmes – advantages and limitations- factors influencing selection and combination of extension teaching methds/.

RADIO:

Radio is an electronic audio medium for broadcasting programme to the audience.

Radio is a system of wireless communication. It is a medium for mass communication, a tool for giving information and entertainment. It is an electronic medium for broadcasting to the audience. This medium is cosmopolite in approach and is suitable for communication to millions of people widely dispersed and situated in remote areas. Availability of low cost transistor sets has helped radio to penetrate deep into the rural life. Radio is suitable for creating general awareness amongst the people, help change their attitude and reinforce learning. The medium is extremely convenient for communication in times of crises and urgent situations. People with no education or very little education and those who are not in a position to attend extension programmes personally, can take advantage of this medium and can build up knowledge and skill. It reaches very large number of people at very low cost (cheapest medium). The accessibility to farm radio depends on the extent of radio ownership, the reception of radio signals, understandability of the message and convenience of listening time.

Sound broadcasting started in India in 1927 with the proliferation of private radio clubs. The operations of All India Radio began formally in 1936, as a government organization.

Purposes:

- To create general awareness amongst the people
- To help change their attitude
- To reinforce learning

- To stimulate participation in extension through all other media.
- To build enthusiasm and maintain interest.

Advantages:

1. Can reach more people more quickly than any other means of communication
2. Specially suited ot give emergency and timely information (e.g. weather, pest out - break etc.)
3. Relatively cheap
4. Reaches many who read little or none at all
5. Reaches people who are unable to attend extension meetings
6. A means of informing non-farm people (tax payers, about agricultural matters
7. Builds interest in other extension media
8. Possible to do other things while listening

Limitations:

1. Limited number of broadcast stations
2. Not within reach of all farmers
3. Time assigned to agriculture extension is limited
4. Recommendations may not apply to individual needs
5. No turning back if not understood
6. Frequently loses out in competition with entertainment
7. Requires special techniques
8. Difficult to check on results
9. Influence limited to people who can listen intelligently

Rural and farm hroadcasting:

According to Baruah (1983), the vast changes that have taken place in the countryside particularly the 'green revolution' could not have come about so quickly without the use of radio. The educational and developmental role of radio has been nowhere more evident of radio in its prgrammes for the rural listeners. The All India Radio (*Akasavani*) has played a significant role in bringing the new technology in agriculture to the door of the farmers. The Farm and Home Units of *Akasavani* were started in 1966 to support the Intensive Agricultural District Programme and the coming of the new 'wonder' seeds - the high yielding varieties.

The objectives of the Farm and Home broadcasts were two fold: (a) to broadcast technical information on a continuing basis in alignment with the package of practices in respect of important crops of a particular area along with the information about services and (b) to inform and educate the rural women on their efficient partnership in this process of change from traditional to modern farming and modern home making in line with the overall objective of the Intensive Agricultural District Programme. With the coming of scientific agriculture continued reliance on radio for quick guidance and solution of problems became inevitable.

The scope and structure of Farm and Home broadcasts have since changed and enlarged to meet the diversified needs and interests of the rural audience which grew in size over the years. The broad objectives of Farm and Home broadcasts are-

1. To inform the farming community about the latest scientific techniques of increasing production in all important farm enterprises.
2. To inform the non-agricultural rural population about the subsidiary and agro-based enterprises for improving their earnings
3. To help the rural people to participate in constructive agricultural and social programmes for betterment of rural life
4. To inform the rural women on important home making on supporting their male counterparts on improved farming and to encourage them to participate in decision-making for progress of scientific farming

The involvement of the extension agent with the radio may be of two types – when a programme is made for field recording and when the extension agent is invited to deliver a talk or participate in a discussion at the radio station.

Radio Rural Forum

It is a combination of mass medium and inter-personal communication is more effective in reaching people with new ideas and persuades them to adopt innovations than mass media alone. Such combinations are known as media forums, where small organized groups of individuals meet regularly to receive a mass media programme and discuss its contents. Media forums developed originally in Canada among farm families and later spread to India, Nigeria, Ghana, Costa Rica and Brazil.

In India, an experiment called Radio Rural Forums was sponsored by jointly by the Ministry of Information and Broadcasting and the UNESCO in 1956. The forum members listened to bi-weekly broadcasts and related subject, held post-broadcast discussions and forwarded their queries to be answered by the original broadcaster or the expert. The forum has a chairperson, a convener, and is comprised of 12-20 members. The convener, who acts as secretary, keeps record of attendance and writes the report in the prescribed form seeking answers to queries and follow-up action proposed to be taken on the message. The results of these forums were found greater especially in developing countries.

The reasons for the media having greater effects on individuals when they are members of media forums are as follows

1. Interest in attendance and participation is encouraged by group pressure and social expectations.
2. Attitude change is readily achieved when individuals are in groups
3. Group decisions are more likely to be accepted by the individual if one participates in making decisions, as usually occurs in media forums.
4. High credibility of the medium (in the case the All India Radio) may account for some of the success of media forums.

Farm School on AIR:

Farm School on the air is a method of providing systematic education on farming to the farmers through the process of distance learning. The following are the steps involved in the broadcast of Farm School on AIR.

1. Planning of a comprehensive syllabus through selection of topics by a subject committee

2. Selection of the trainer to prepare the lessons, usually 15-20, on the selected topic
3. Registration of names by the trainee listeners with the radio station
4. Broadcast of lessons by the trainer on pre-announced fixed days, once every week, with provision for repeat broadcasts
5. Lecture-cum-discussion and question-answer format is used. Training session in the studio is participated by the trainer, an extension agent and a few farmers
6. Broadcast of the summary and relevant questions with answers from the trainer at the end of each lesson
7. Trainee listeners mail answer sheets containing answers to the questions on each lesson
8. Trainer evaluates the answer sheets and allot the marks
9. Announcement of results over radio and issue of certificates of participation by the radio station to the trainee farmers

Agricultural Programmes being broadcast through Radio

Programme	Time of broadcast	Duration	Content and involvement
Polam Panulu	6.35 am to 6.45 am	10 minutes	Field operations
Padi - Panta	1.20 pm to 1.30 pm	10 minutes	In the form of dialogue by male and female roles covering various important agricultural practices
Vyavasaya Soochanalu	6.50 pm to 7.00 pm	10 minutes	ANGRAU feed the background information on latest technologies of cultivation
Illu-Vakili	7.15 pm to 7.45 pm	30 minutes	Involves farmers, farm youth, charcha mandals, subject matter specialists, and scientists of ANGRAU, ICAR etc. covering various topics to meet the diversified needs of farmers

Presently "KISAN VANI" is being broadcast through FM radio stations. and location specific technologies are broadcast.. Community Radio is drawing attention to broadcast location specific problems and solutions related to agriculture and rural development. The University of Agricultural Sciences, Dharwar has established community radio.

TELEVISION:

Television is an electronic audio-visual medium which provides pictures with synchronized sound.

Television is one of the most important mass media for dissemination of information in rural areas. This medium is cosmopolite in approach and can be used to create instant mass

awareness. Television has unique advantages over other mass media. While it provides words with pictures and sound effects like the movies, it scores over the latter by its high intimacy and reaches the largest number of people at the shortest possible time. The visual in it has the advantage over the radio. Television can deal with topical problems, and depict known persons who can provide the solutions. People learn through the eye, and will remember things better if they see them. Television-viewing does not demand the strain and discipline needed to read the printed medium. The messages on the TV screen are preselected, sorted out and then presented in the simplest manner possible. Live/ true transmission of the events is possible only with this medium i.e Television.

Demonstrations, "the need" in farm extension, are brought to the farmer by television. This has great value in making converts to better farm practices. Apart from the evidence by their own eyes, farmers also respond readily to what is said, especially by other farmers, and if the same point as extension people make in their inter-personal communications are highlighted, the combination is doubly effective. It is within the power of television to provide the dynamic presentation to bring idea in a compelling way into the receptive environment of the farmers' home or community.

Awareness creates curiosity about a new idea in the minds of farmers, leading them to seek more information on it. Before the idea is adopted in practice, the farmer undergoes two more important stages of evaluation and trial. Television every where is concerned very strongly with the first stage of awareness. Apart from that it speeds up the entire process of adoption. Television is strong in providing the stimulus, and exposing the audience to a whole range of ideas and experiences.

Programmes in agriculture have an immediate effect, if the ideas put forward come along at a time when the farmer needs them most, deal with subjects of which he had no fixed idea but was groping in the dark, and will speed up changes already taken on hand by the farmer.

Television combines the immediacy of radio with the mobility of cinema and can carry messages over long distances at a relatively low unit cost. Television is a multi-media equipment as it can include motion picture, recording, slide, photograph, drawing, poster, etc. Television can show recorded as well as live programmes. Both recording and playback equipment are transportable, allowing flexibility of use. A new television atmosphere has been created by satellite and cable technology.

Television programmes may be broadly classified as commercial and non-commercial. Commercial or general telecasts are revenue earning and include music, dance, drama, serials, cinema and also news, current affairs etc. Non-commercial or educative programmes are aimed at education and development rather than entertainment.

Farm telecasts

According to the Research and Reference Division of the Ministry of Information and Broadcasting (1984), the television era in India began modestly on September 15, 1959 by a UNESCO grant to study the use of TV as a medium of education, rural uplift and community

development. The service was started by the All India Radio, Delhi and programmes were telecast twice a week for duration of one hour each day.

In 1967 came the pilot project of agricultural communication initiated by Dr. Vikram Sarabhai. The programme titled Krishi Darshan was primarily aimed at demonstrating the effectiveness of TV as a medium for propagating improved farming practices. With the introduction of agricultural programmes, a number of teleclubs were organized in the rural areas.

The Satellite Instructional Television Experiment or SITE was an experimental satellite communications project was launched in 1975. The project made available informational television programmes to rural India. The main objectives of the experiment were to educate the poor people of India on various issues via satellite broadcasting, and also to help India gain technical experience in the field of satellite communications. The experiment ran for one year from 1 August 1975 to 31 July 1976, covering more than 2500 villages in six states viz. Andhra Pradesh (Hyderabad, Medak, Mahaboobnagar, and Kurnool districts), Karnataka, Orissa, Bihar, Rajasthan and Madhya Pradesh).. Programmes on education, agriculture, health and family planning were telecast under this experiment. It has proved that TV can be a powerful medium of education.

The Government recognized the imperative role of television in bringing about the desired social change and established a separate organization named Doordarshan in April 1, 1976. August 15, 1982 was a landmark in the history of television in India. The national networking became a reality by the establishment of satellite links through Indian National Satellite, INSAT-1A. This day also marked the introduction of colour television in India. With increased capability of satellite communication and TV transmission in India, agricultural and rural development programmes are being organized in a big way.

Purposes or Objectives

1. To create a general awareness amongst the people about agricultural and rural development programmes.

2. To provide need based programmes to the rural people

3. To show the rural people in general and the farmers in particular what to do, how to do and with what result.

Procedure or Technique

Planning and preparation

- Decide with the producer, agricultural programmes on the topic, location and persons to be involved.
- Also decide on date, time, itinerary, conveyance etc.
- Visit the locations in advance and select shooting materials and spots
- For recording action and ‘how to do’ sequences, prepare a scripts to the minutest details.
- Prepare colourful labels with bold lettering
- Inform participants and others well in advance
- Limit a single day’s shooting to two or three locations.

Implementation

- Take the producer, staff and equipments to the location in time
- In outdoor shooting, take advantage of sunlight and see that no time is wasted.
- Remind the producer, staff and participants about the message to be highlighted.
- Cooperate and assist the T. V personal at work. Take precaution against outside interference.
- See that the main theme is brought out and recorded in an understandable and interesting way.

Follow up

- Check up with the producer whether some studio based recording is to incorporated with the out door shooting already made. If so, arrange
- Obtain date of telecast from the T. V. station and communicate the same to the participants
- Display the date, time and topic of telecast in the information centre and the office of the extension agent
- Inform and encourage as many persons as possible to see the telecast.
- Reply to the queries as a result of the telecast.

Agricultural Programmes:

Sl.No	TV Channel	Name of the Programme	Time
1	Doordarshan Saptagiri	Rythu Nestam	6.25 pm,
2.	E TV	Annadata and Annadata – Velugubata (on Tuesday and Friday)	6.45 am
3	ETV 2	Jai Kisan	6.30 pm
4.	NTV	Eruvaka	5.30 pm (Saturday and Sunday)
5.	TV 5	Annapoorna	5.30 pm
6.	Saakshi	Palle Talli	5.00 pm
7	T news	Chenu chelaka	5.00 pm
8	HMTV	Rythu vartha	5.00 pm

Advantages:

1. Reaches largest number of people at the shortest time possible
2. People learn through eye and will remember things better if they see them.
3. Television viewing does not demand strain and discipline needed to read the printed medium.

4. Messages are presented in a simplest manner.
5. Ideas are presented in compelling way.

Limitations

1. Requires a lot of planning, preparation, trained personnel and availability of equipments
2. Audience participation depends on costly receiving sets and availability of electricity.
3. Rarely, it goes beyond creating general awareness of the audience.

FACTORS INFLUENCING THE SELECTION AND COMBINATION OF EXTENSION TEACHING METHODS

No single "rule-of-thumb" can be given for the selection and use of the various extension methods to ensure success in all situations. However, some guiding principles will be helpful in general.

Basically, the individual contact methods furnish the most direct opportunities for influencing people effectively. All the other methods of group and mass procedures are dilutions or compromises created by the pressure of necessity. We must reach more people, teach them more often, and keep down the cost per contact. In order to get most effective results, the extension worker should (i) select the "appropriate methods (ii) have a suitable combination of the selected methods and (iii) use them in proper sequence, so as to have repetition in a variety of ways.

For doing this, a number of factors should be considered.

A. Selection of Methods

1. THE AUDIENCE:

(a) ***Individual and collective differences:*** People vary greatly in their knowledge, attitudes, skills, their position in the "diffusion process", and in the "adoption categories", their educational training, age, income level, social status, religious beliefs etc. Some are progressively seeking change, others are slow to change. Some are "eye-minded" while others are "ear-minded". These individual and collective differences influence the teaching approach.

For instance, people with little or no education, and low incomes may respond to personal visits and result demonstrations. The better educated and the more progressive elements of the population usually respond well to methods like group meetings and discussions, exhibits and written materials.

A man in "awareness stage" cannot straight away jump to "adoption stage" but can be gradually brought to the adoption stage by using suitable methods. For "late adopters" (conservatives), direct approach may not yield so good results as approaching through the "early adopters" and "informal leaders".

(b) ***Size of Audience****:* It is also a factor influencing the choice of extension methods. For instance, group discussion cannot be used effectively when the number of participants exceeds

thirty; method demonstration can be used for a relatively small audience, while lecture meetings can be used for large audiences.

2. THE TEACHING OBJECTIVE: (or nature of change aimed at). Do you want to bring about a change (i) in thinking or knowledge? (ii) In attitude or feeling? (iii) In action or skill? If you want merely to inform or influence a large number of people slightly, you should use mass media. If you want to influence a relatively small number of people to make maximum improvements resort to individual contact methods. If you want to change attitudes or arrive at a consensus of opinion, arrange group discussion or work through village leaders. If you want to teach a skill, use the method demonstration.

3. THE SUBJECT MATTER: Where the new practice is simple or familiar (i.e., similar to those already being followed) the news article, radio or circular letter will be effective, whereas complex or unfamiliar practices will require face-to-face contacts, written materials and audio-visual aids.

4. THE STAGE OF DEVELOPMENT OF EXTENSION ORGANISATION: In the initial stages of extension, result demonstrations will be necessary to gain confidence of farmers. But if extension work is already well established and the farmers have confidence in extension services, result demonstrations may not be necessary and local illustrations of adoption by village leaders will suffice.

5. SIZE OF EXTENSION STAFF In relation to the size of extension clientele: The larger the number of extension workers, the greater is the scope for direct or personal contact method.

6. THE AVAILABILITY OF CERTAIN COMMUNICATION MEDIA: Such as newspapers, telephones, radio, internet etc., will also have a direct bearing on the extent to which these methods can be used.

7. THE RELATIVE COST OF THE METHOD: (i.e., the amount expended on extension teaching in relation to the extent of practices changed) is also an important consideration in their selection and use.

8. **AN EXTENSION WORKER'S FAMILIARITY:** with, and skill in the use of the several extension methods will also influence his choice and use of the methods.

B. Combination of Methods

Extension field studies conducted in U. S. A. over a long period of years show that people are influenced by extension education to make changes in behaviour in proportion to the number of different teaching methods with which they come in contact. As the number of methods of exposure to extension information increases from 1 to 9, the number of farm families changing behaviour increases from 35% to 98%. Therefore, if widespread response is desired, people must be exposed to teaching effort in several different ways. (i.e., repetition but in a variety of ways).

Similar results have been reported by researchers in India. For instance, Nagoke' concluded that combined use of several different methods is of the utmost importance in extension teaching. The adoption of practices was high when more than five methods were used as compared to single and two to five methods.

The diagram showing the influence of extension methods is shown in the following page.

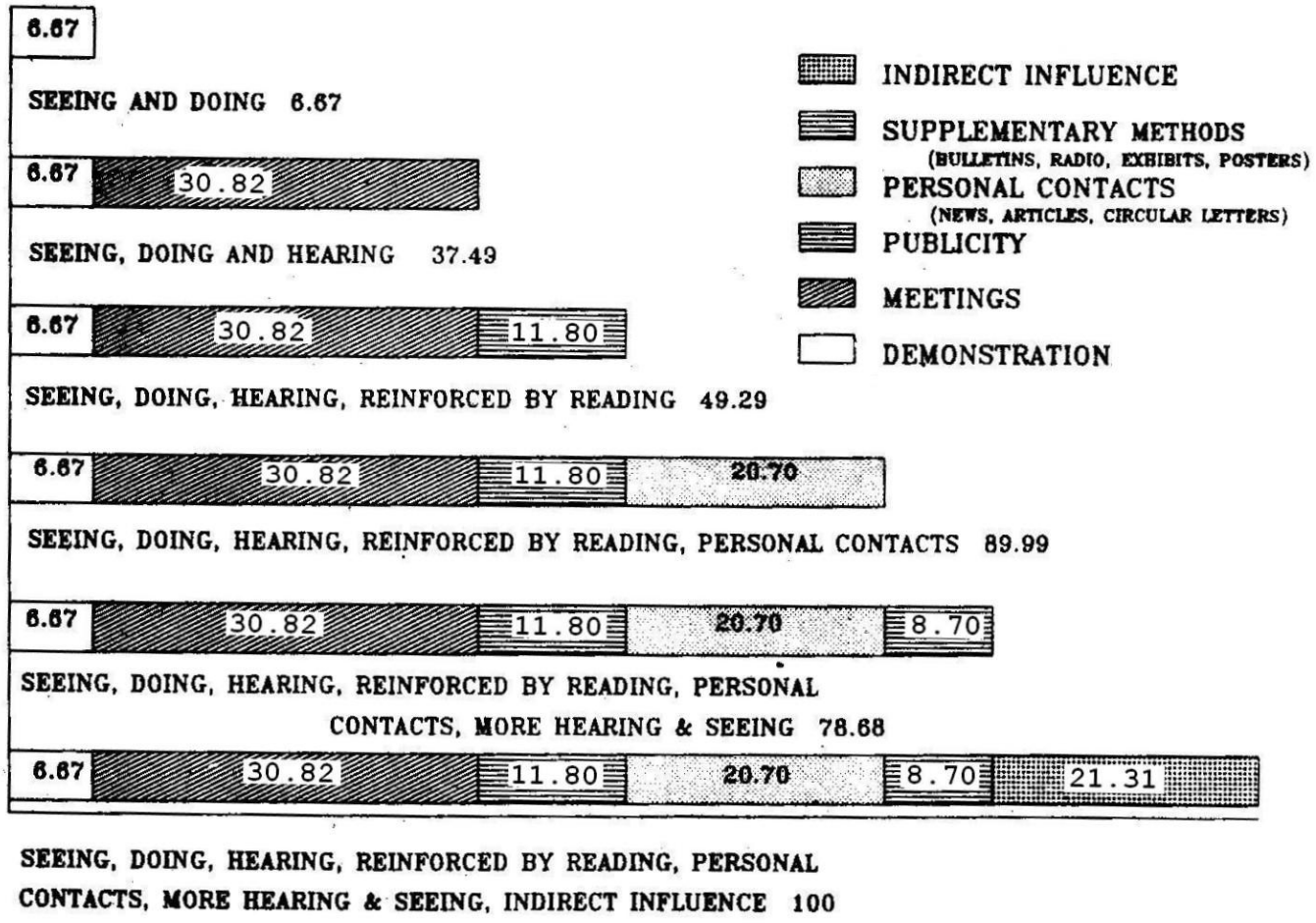


FIGURE INFLUENCE OF EXTENSION TEACHING METHODS

.C. Using the Methods in Proper Sequence

To answer our teaching needs, our extension plans of work must include methods that, (a) enable our farmers to see, hear and do the thing to be learnt ; (b) enable us to reach large numbers of people and (c) create confidence – building situations.

Our completed plans should provide not only for doing each of these three things but must be so organized that the completed plan, as a unit, does all three of these things. For instance, a personal contact is made through an office call or farm visit. A leader is visited. A demonstration is established. A meeting is held to discuss the demonstration. The meeting is advertised by circular letters. A news story is written on the results of the demonstration as seen at the meeting. These happenings and results are broadcast over the radio. Pictures are taken and a "slide story" is shown at a meeting. One method helps another, and many of them are used in combination and

sequence to repeat the story. Organized, followed-up teaching activity means more improvement in farm and home conditions.

Lecture No. 11: Information sources – Internet - meaning, purposes, benefits and limitations, Cyber cafes / Kiosks- meaning, Video and tele conferences – meaning, components, advantages, Cyber Extension – meaning, features, five successful models, advantages,

Every day technology is changing with high speed and today we are living in the era of information technology and Innovation of technology. The modern man uses different sources for information and he is thirsty for information. Today numbers of sources emerged as source of information and important among them are internet, cyber cafes / kiosk apart from the conventional sources.

INTERNET: The internet is an electronic infrastructure and it is the window to the **information superhighway**. The internet offers access to data, graphics, sound, software, text and people through a variety of services and tools for communication and data exchange.

The idea of internet originated in 1960 based on the concept of **pocket switched networks** by the US Department of defence to share secret information among them in wartime.

Internet in India was available for sometime through ERNET which was made available for commercial use by VSNL (VIDESHI SANCHAR NIGAM LIMITED) since 1995.

What is network?

The fundamental concept of internet is networking. When computers are connected together to share resources, it forms a network. A network is formed to share hardware resources like printer / scanner and software / information like files, data base with other computers which eventually 'reduces cost'.

Different types of machines or networks that are a part of internet have to speak the 'same language' (software) to communicate and exchange information.

Conventional means of communication were mailing letters, telephone and meetings / discussion. Thus, internet **is a network of networks** connected through different types of communication channel to communicate irrespective of distance and time.

TYPES OF NETWORKS

On the basis of Geographical area they are classified into

LAN - Local area network
WAN – Wide area network.

LAN: These are small networks of computers which span in small geographical area, generally within 1-5 km of range. Ex: Network in an office or within a building

WAN: These are very large networks of computers and span large geographical areas, generally covering a couple of miles, sometimes connecting computers thousands of miles apart and world wide.

INTERNET IS A WAN

e.g., A WAN can constitute a very large cooperate / govt. network spanning the country or even the world.

How to connect to internet: One should have computer, modem and internet access from any internet service provider (for e.g. BSNL)

The word MODEM stands for modulator / demodulator. Modems convert digital computer signals into a form that allows them to travel over the phone lines.

Benefits and or purposes of Internet:

1. **Education:** Can get additional Information by the students, teachers and scientists. It is a medium for interactive and collaborative learning. Useful for distance education
2. **Publishing:** All newspapers and newsletters are available on internet.
3. **Shopping:** E-commerce is possible
4. **Advertising:** Useful for advertising the products with text, graphics and pictures and video clippings.
5. **Financial services:** Stock broking and research reports on stocks are available and can be downloaded. The transactions like tele credit card checking, tele banking, tele insurance are taking place
6. **The business of governance:** Public information useful for every citizen can be kept on the net. Government services can be made available and can provide fast, transparent services through this. E.g., E –seva in AP
7. **Career:** Career opportunities can be known with the help of net
8. **Internet communication:** Provides access to all kinds of information available on the latest technology in any field.
9. **E-mail:** Is the primary communication tool on internet. One can send and receive mails without any geographical barriers. We can send e-mail through websites like rediffmail.com, hotmail.com etc.,
10. **Lister:** It allows group of people with common interest to send messages to each other at no cost.
11. **Usenet News group:** A newsgroup is world wide platform for exchanging ideas and information by common minded people.

The mail programme is loaded with windows is Outlook Express. It helps use to send, receive and store e mails.

World Wide Web (www) is a network of information resources. The digital pages on www are called web sites. The first page of website is called Home page

Limitations of internet

1. Requirement of continuous power supply
2. Failure in network
3. Lack of knowledge for the people on use of internet

4. Selecting the required information in the net is difficult from the volumes of information
5. some times it misleads the individual for wrong selection of information
6. Internet services are not available in rural areas hence farmers needs to travel to the urban areas to utilize the facility

Cybercafes / Information kiosks:

Computer multimedia system facilitates interactivity and better understanding between individual learners and the subject matter. These combine a variety of information sources into a variety of applications like electronic books, electronic magazines, information kiosks / cybercafés and interactive multimedia.

Kiosk is a small enclosed structure, often freestanding, open on one side or with a window, used as a booth to access to information in agriculture and allied areas.

Information kiosks are the public installations wherein computers are installed to make agricultural extension services accessible to people

These are information access system for public use.

Information kiosk is the hub of information as per the need of the area or the best source of information. For e. g., in Acharya N. G. Ranga Agricultural University, the information kiosks were installed at modern agricultural information center and at Agricultural Technology Information Center (ATIC) with touch screen operation. Any visitor to university can have access to any kind of information regarding package of practices, plant protection, nutritional deficiencies, symptoms of various pests and diseases of variety of crops and problems he encounters in the field. Just like ATMs they are developed and the information is made available to the farmers. Even video clippings along with voice can also be glanced and listened to the technological applications in local language. He can see the visuals and interact with kiosk to get the desired information. He can elicit the expert information by pressing keys till his doubt is answered. He can also follow the method of application of any technology through seeing of clippings in kiosk. In kiosk images were given, explanation of methods in voice, textual information is available in vernacular language. .

Teleconferencing:

It is interactive group communication (2 or more people in 2 or more locations) through an electronic medium. It brings people together under one roof even though they are separated by hundreds of miles. It was first introduced in 1960's with American Telephone.

Basic types: 3 basic types are

1. Video conferencing – television – like communication augmented with sound.
2. Computer conferencing – Printed communication through key board terminals.
3. Audio conferencing – Verbal communication via the telephone.

Video conferencing: Videoconference (also known as video teleconference) is a set of interactive telecommunication technologies which allow two more locations to interact in a two way video and audio transmissions simultaneously.

It is a remote meeting between two or more individuals present in geographically dispersed locations. Users can meet and share information virtually from wherever they are using videoconferencing equipment and communicate using any network available with them.

Components of Video teleconference:

1. Video input – Video camera or webcam
2. Video output – Television / Computer monitor
3. Audio input – Microphones
4. Audio output – Usually loud speakers associated with display device or telephone
5. Data transfer – Analog or digital telephone network LAN or internet.

Advantages of Video conferencing:

1. A live conversation between two partners from different locations is possible with the visibility
2. The experts (scientists) can have virtual contact with the farmers and solve the field problems
3. Useful in giving training sessions for guest lectures.
4. Useful in monitoring the progress of various activities
5. Reduces the cost of travel and time.
6. Researcher collaborates with colleagues at other institutions on a regular basis without loss of time due to travel
7. Problem solving information can be exchanged and procedural tasks can be discussed
8. Follow-up for earlier meetings can be done with relative ease and little expense

Limitations:

1. Technical failures
2. Impersonal
3. Acoustical problems with conference rooms
4. Greater participant preparation and preparation time needed
5. Lack of participant familiarity with the equipment

Cyber Extension: Information is an important resource in modern agriculture. The development of computers and improvements in telecommunication offers farmers and extension workers, many new opportunities to obtain technical and economic information quickly and use it effectively for their decision making.

Cyber: According to Oxford Dictionary the word Cyber means, "relating to Information Technology, the Internet, and virtual reality, the Cyber Space"

The Cyber Space: 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, audio, video and animation files. Software tools on networks provide facilities to interactively access the information from connected servers. The cyber space thus can be defined

as the imaginary space behind the interconnected telecommunications and computer networks, the virtual world...

Extension: Extension stands for "the action or process of enlarging or extending something". It could be extending knowledge to the farmers.

Cyber Extension: Cyber Extension thus can be defined as the "Extension over Cyber Space" or 'Extension over virtual space'. As the word Extension is subject-neutral, so is Cyber Extension.

But in the applied context of Agriculture, Cyber Extension means **"**using the power of online networks, computer communications and digital interactive multimedia to facilitate dissemination of agricultural technology**".**

FEATURES OF CYBER EXTENSION

- access to the astounding store-house of information is free
- information is available instantaneously 365 x 24
- communication can also the interactive through e-mail, discussion groups, news groups
- information is available from any point on the globe
- communication is dynamic and ever growing

SUCCESSFUL EXAMPLES

These are the cases of application of information and communication technologies in rural India.

1. Information Village Shops / Information Village Project.

M.S.Swaminathan Research foundation is aimed at binging the benefits of modern information and communication technologies to rural families in Pondicherry. A value addition center is the hub of information network has been established in Villianur village and four information shops have been established in different villages. Through these information shops every morning the information is delivered to the farmers on weather forecasts, market prices, scientific technology etc.,

2. Warna Wired Village Project.

It covers 70 Villages in Maharashtra. In 1960, Tahasaheb Kore propagated the idea of cooperative in Warna nagar as a method of achieving socio-economic development.

The wired village project was initiated by Mr. Vinay Kore, the son of Mr.Tahasaheb Kore.

This project was jointly implemented by Government of India (GOI) through National Informatics Centre (NIC), Government of Maharashtra and Warna Cooperative Society with the share of financial support being in the ratio of 50:40:10.

It allows internet access to existing cooperative societies. The aim is to provide information to villagers by establishing networked booths in the villages.

3. Honey bee knowledge network.

Information and communication technology (ICT) helps to empower the economically poor people. Under the honey bee knowledge network of Indian Institute of Management, Ahmedabad a large number of grass root inventions (Indigenous technical knowledge or ITKs) have been identified and documented as short multimedia presentations. Database is created for these innovations and these are made accessible via wide area network.

4. E-Sagu Project.

It is an agricultural information dissemination system. It is a tool for IT based personalized agro advisory system. It is personalized and cost-effective agricultural extension system. It aims to improve farm productivity by delivering high quality personalized agro expert advice in a timely manner to each farmer at his door step without farmer asking a question. The project started in 2004 as a research project by International Institute of Information Technology (IIIT), Hyderabad and is funded by the NGO MEDIA LAB ASIA.

The objective of e-sagu project is to increase the profitability of farmer by increasing the efficiency of agricultural input and reducing the cost of production.

The system is having five elements.

1. Farmers
2. Coordinators
3. Agricultural Experts
4. Agricultural Information System and
5. Communication System

Several farmers are assigned to each coordinator. Farmers register into the system by providing relevant information about their farms (soil data, water resources, capital availability etc.)

All parts are connected through internet.

1. **Farmers:** They are the end users of the system. They form the bottom layer. They can be illiterate and speak local language. They are not expected to use the system directly
2. **Coordinators:** A coordinator is associated with a group of farmers. The coordinator possesses agricultural expertise and basic data entry skills. He is provided with video camera or digital camera. He regularly visits the fields of the farmers associated with him and take photographs / video clips and enter the relevant data through text based forms and photographs into the system. Also when the system produces the advice, the coordinator contacts the concerned farmers and explains the personalized advice to them in a timely manner.
3. **Agricultural Experts:** These are agricultural scientists who give appropriate recommendation by interacting with the agricultural information system. Both the users and Agricultural Experts stay at their respective places of work, only information is transferred and moves between them through internet.

The research project was taken in the cotton growing villages of Warangal District. The project could reduce the cost of cultivation by reducing number of sprays with the timely advice and also the profit of the farmer increased when compared to control group.

The system can diagrammatically represented as follows:

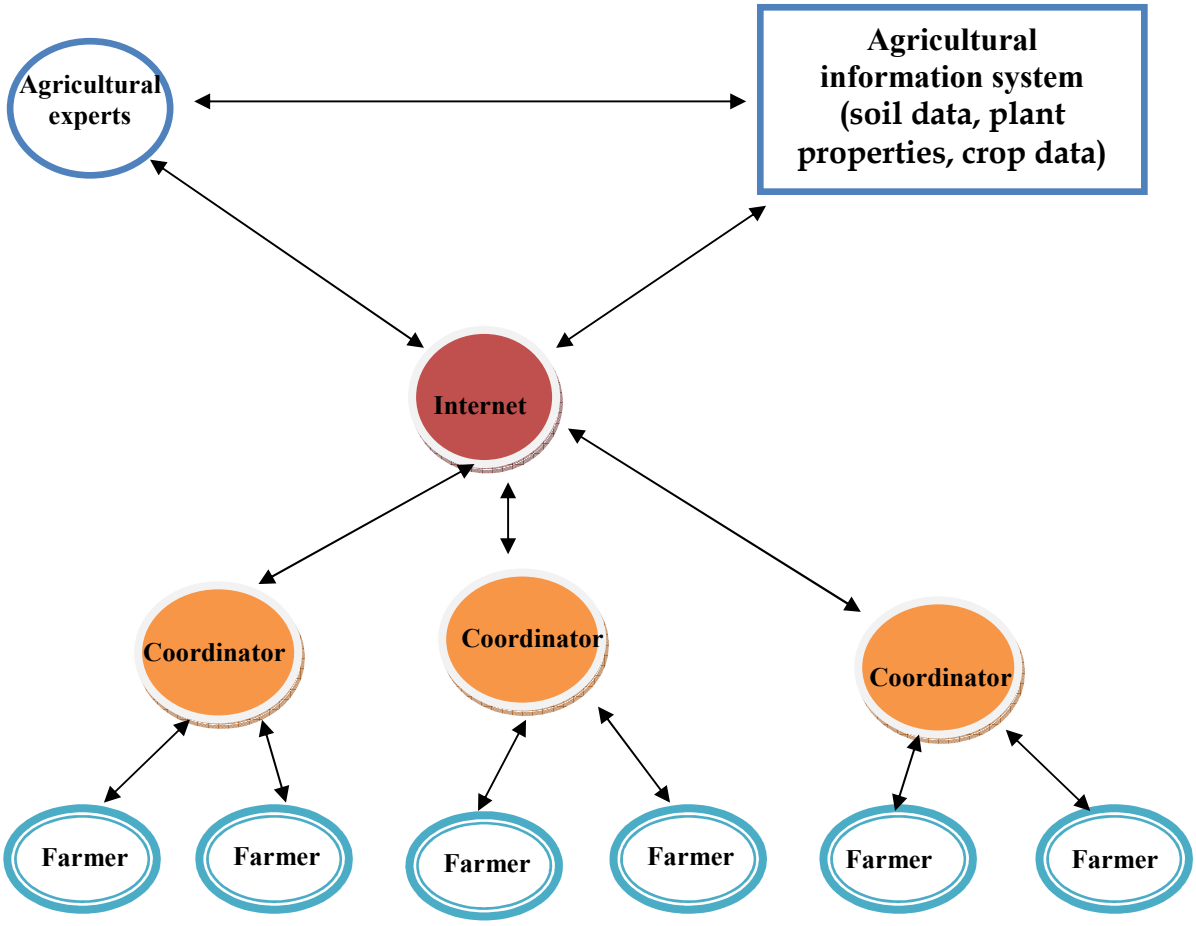


Fig: **An agricultural information dissemination system.**
In this double arrow indicates information flow

5 E-Chauppal:

"E-Chaupal" the unique web based initiative of **ITC** (Indian Tobacco Company)'s International Business Division, offers information and communication technologies related to latest local and global information on weather, scientific farming practices and market prices through the web portal all in Hindi. This project facilitates easy access of information by the farmers at their door step. Taking the literacy and infrastructure constraints at village level, **e-chaupal Sanchalak** a lead farmer is acted as the interface between computer terminal and the user farmers.

It is a powerful illustration of corporate strategy linking business purpose to larger societal purpose. It provides farmers

- Farming know-how and services
- Timely and relevant weather information.
- Transparent price discovery
- Access to wider markets.

Advantages of Cyber Extension:

- Saves money, time and effort
- Cut steps from extension process
- Information rich and interactive
- Offer instant international reach information
- Continuously available round the clock

Lecture No. 12: Call Centres – Parishkaram (Farmers Call Centre) in A.P. and Kisan call Centres – meaning, objectives, operational mechanisms, Agri clinics - meaning, objectives, eligibility, training, loan assistance and advantages, Agricultural journalism – meaning, scope, importance, characteristics of news, factors determining news value, types of news and sources of news

PARISHKARAM (Farmers Call Centre):

Government of Andhra Pradesh launched 'Farmers Call Centre' "Parishkaram" for answering farmers' queries on 1 July 2003 with agriculture service as its pilot project. It was a unique and first of its kind in the country at that time. It is accessible from most of the villages of all 23 districts in Andhra Pradesh on a four-digit toll free number 1100. Scientists at Farmers' Call Centre were answering queries through phone calls only. On the other end of the line from 7 am to 8 pm are 16 scientists and 10 officers.

The extension service has been outsourced by the government to an NGO co-operative called Andhra Pradesh Sahakara Vignana Samiti Ltd. Operators enter detailed data — the farmer's name, village, mandal, district, telephone number and nature of the query into the computer.

Questions are dealt with at several levels. The basic questions are answered with information available on the desk top. If they are a bit complex, the calls are transferred to level II, to scientists and department officials, all of whom have research backgrounds and field knowledge. The highest level is that of joint directors of agriculture who provide the answer to the call centre within 48 hours for relaying to the farmer concerned.

In addition to answering calls, the centre performs another function — it generates various reports to assist decision-makers. It collects data on the district-wise sowing of crops, the number of calls made and whether they were addressed to crop production scientists, crop protection scientists, horticulture scientist, plant breeding scientist, or the Agriculture department.

Recently, Government have introduced a system of simultaneous display of important questions received and answers given by scientists at call centre in TV DOORDARSAN-SAPTAGIRI channel. This is helping thousands of farmers with similar problems in AP. Further, segregating and broadcasting of answers to important questions from farmers regularly through Regional Radio Stations will cover very poor farmers also who couldn't have TV. Publishing similar important questions and answers in popular agricultural journals is further facilitating to reach information to farmers through conventional means. This hybrid system is simultaneously benefiting innumerable farmers of AP and beyond. Thus, single question and single answer given to a farmer from "Call Centre" is channelled to reach millions of farmers at the quickest possible time.

KISAN CALL CENTRE (1551):

The department of agriculture and cooperation (DAC) Ministry of agriculture, Government of India launched kisan call centres on January 21, 2004 across the country to deliver extension services to the farming community.

A network of call centres have been established to cover the entire country in all the principal languages to enable the farmers get expert advice through a toll **free number on BSNL** routes i.e., **1551 from any part of the country**.

The service would be available 24 hours a day. While during office hours there would be immediate response, beyond office hours the call would be recorded and query answered by post.

Call centre model utilizes the impressive telecommunication roll out in the country and acts as a basis for ensuring cost effective, strategically aligned, world class service to farmers.

Objectives of kisan call centers

- For harnessing the state of art knowledge in the field of agriculture and related areas and delivering them through state of art technologies available for the dissemination to solve grass roots and everyday problems in farmers own language and context.
- To provide an IT enabled dynamic encyclopaedia for use by farmers, agriculture extension works, agri – input dealers and other stakeholders in agriculture.
- To develop a data base which compiles and collates the actual needs of the farmers and to classify them in an intelligent format for use by policy makers, researchers, trade and industry.
- To provide an opportunity to the scholars and the agricultural scientists to play a dynamic role in the transformation of Indian agriculture
- To establish a network of relationship among the scientists, policy makers, extension workers, farmers and other stake holders.
- To harness the traditional knowledge systems available with the farming community and with women farmers to enrich the body of knowledge in agriculture related fields.

The kisan call centre consists of three levels – Level I, II and III.

1. Level I: (6.00 P. M – 9.30 A. M on gazette holidays)

The first level operator is an agricultural graduate with a rural background and knows the local language. They are expected to answer a majority of questions asked by the farmers. The details of the question and answers are fed into computer by operator.

In case the operator at level I is not able to satisfy the farmer, he forwards the call to the concerned subject matter specialist sitting anywhere in the state, in any institution, for giving advice.

2. Level II: (9.30 A. M. – 6.00 P. M. All working days during office hours)

It has subject matter specialists (SMS) who are at their respective place (Research stations, ATIC, KVK, agricultural colleges) of work.

The I level operator forwards the call on 'call sharing mode' to level II centre & over 70% of questions form the I level get answered at this level.

The data relating to the caller including the question asked is also be transferred to the Level-II functionary on his computer along with the call. Hence, when the specialist takes the forwarded call, his computer also shows the data and question asked so that there is no repetition. It is envisaged that in normal cases, the entire spill over questions from the first level get answered at this level.

In case, it is not possible to answer, there is a system to revert back to the caller by post / fax / e-mail or by telephone in 72 hours.

Govt. of India Identified ATIC of ANGRAU as Level 2 Centre

3. Level III: (The management group)

It consists of a dedicated cell located at the nodal office. This receives the questions that have not been answered at the first and second levels as well as IVR calls (Interactive voice recording). Appropriate replies to these questions are framed in consultation with the concerned specialists available within or outside the state by the nodal cell. The replies are sent to farmers by post / e-mail / fax / phone within 72 hours of receipt of question.

Agri-clinics and Agribusiness Centers

Meaning: The Ministry of Agriculture, Government of India, in association with NABARD has launched a unique programme to take better methods of farming to each and every farmer across the country. Programme aims to tap the expertise available in the large pool of Agriculture Graduates. Irrespective of whether he or she is a fresh graduate or not, or whether currently employed or not, one can set up his / her own Agri Clinic or Agri Business Centre and offer professional extension services to innumerable farmers.

Committed to this programme, the Government is now also providing start-up training to graduates in Agriculture, or any subject allied to Agriculture like Horticulture, Sericulture, Veterinary Sciences, Forestry, Dairy, Poultry Farming, and Fisheries, etc. Those completing the training can apply for special start-up loans for venture

CONCEPT:

Agri-clinics are envisaged to provide expert services and advice to farmers on cropping practices, technology dissemination, crop protection from pests and diseases, market trends and prices of various crops in the markets and also clinical services for animal health so as to enhance productivity of crops / animals.

Agribusiness Centres: Agribusiness Centres are envisaged to provide input supply, farm equipments on hire and other services.

In order to enhance viability of the ventures, Agriculture Graduates may also take up in agriculture and allied areas along with the Agriclinics/ Agribusiness Centres

ELIGIBILITY: This scheme is open to agricultural graduates / graduates in subjects allied to agriculture like horticulture, animal husbandry, forestry, dairy, veterinary and other allied activities.

The project can be taken up by agricultural graduates either individually or on joint / group basis. The group may normally be of 5 members of whom one could be a management graduate with qualification of experience in business development and management.

The outer ceiling for the cost of project by individual would be Rs.20.00 lakhs and for group it is Rs. 100.00 lakhs

Training: The eligible graduates are given almost free of cost training for two months at selected training centres across the country by paying nominal registration fee. It was initiated by SFAC

(Small Farmers Agribusiness Consortium), coordinated by MANAGE, the training course comprises Entrepreneurship and Business Management, as well as skill improvement modules in the chosen area by the unemployed graduate.

A. Objectives of agri-clinics and agribusiness centers.

- To supplement the efforts of government extension system.
- To make available supplementary sources of input supply and services to needy farmers.
- To provide gainful employment to agriculture graduates in new emerging areas in agricultural sector.

The graduates can apply their indents to set up agriclinics / agribusiness centers to NABARD. The loans can be repaid within 5-10 years. The rate of interest, margin and security on loans will be decided by the respective bank, as per RBI norms.

Project activities:

- Soil and water quality cum input testing laboratories.
- Pest surveillance, diagnostic and control services.
- Seed processing units.
- Setting up vermin-culture units, production of bio-fertilizers, bio-pesticides and bio-control agents.
- Provision of extension consultancy services etc.
- Setting up of Apiaries (bee-keeping) and honey bee products' processing units
- Provision of Extension Consultancy Services
- Hatcheries and production of fish finger-lings for aquaculture
- Provision of livestock health cover, setting up veterinary dispensaries & services including frozen semen banks and liquid nitrogen supply
- Setting up of Information Technology Kiosks in rural areas for access to various agriculture related portals
- Feed Processing and testing units
- Value Addition Centres
- Setting up of Cool Chain from the farm level onwards (Group Activity)
- Retail marketing outlets for processed agri-products
- Rural marketing dealerships of farm inputs and output

Selection of Borrowers: The selection of borrowers and location of the projects may be done by the banks in consultation with Agricultural Universities / KVKs/Agriculture department of the state etc. in their area of operations, if necessary.

Repayment: The period of loan will vary between 5 years to 10 years depending on the activity. The repayment period may include a grace period (to be decided by the financing bank as per the individual scheme) of a maximum of 2 years.

Advantages:

- Multi-sourced extension services.
- Input supply and support services are provided on competitive basis.
- Location specific specialized crop advices are provided.
- Field level staff are adequately qualified and trained for extension work.

- Provision of specialized agri-services like agricultural insurance, technology information, maintenance and repairs etc.
- Serves as a source of incentive to graduates by affording them to various viable business opportunities.

AGRICULTURAL JOURNALISM

According to Webster's Third International Dictionary, Journalism means "the collection and editing of material of current interest for presentation, publication or broadcast". According to Chamber's Twentieth Century Dictionary, Journalism means "the profession of conducting or writing for public journals" The word journalism is derived from "journal"; its best contents are 'dujour' of the day itself. Journal means a daily register or a diary – a book containing each day's business or transactions. The word journal also connotes a newspaper published every day or even less often or a magazine. Thus, journalism means "the collection and editing of material of current interest for presentation, publication or broadcast".

A journal is defined as a register of a diary of public events which has a definite periodicity of publications say a daily, weekly, a bi-weekly, fortnightly and monthly so on.

Journalism is defined as a profession of conducting or writing for a journal which may be a newspaper, a magazine, radio, a television.

Agricultural journalism is journalism as applied to agriculture i.e. Agricultural journalism is a profession of conducting or writing in agriculture and allied subjects for a journal, which may be a newspaper, a magazine, radio, a television.

Importance:

Farmers like many others are also curious. They want to know what is happening or has happened about agriculture. They have a desire for information, because they want to have a better knowledge of the world around them and improved their living standards by increasing the productivity and production. News satisfies this curiosity and this desire for information. People who can read, listen and have information enjoy certain status in our villages. Others look to them as 'knowing' or informed people and look to them for information.

The agricultural extension personnel who are on the job to disseminate the news or transfer of technology to the farming community should invariably understand the agricultural journalism and utilize the mass media channels effectively.

Scope:

` The farmers are information hungry and present public extension system is not able to meet the demand of the farmers for information. The farmer and extension worker ratio is widening. On the other side, communication tools development is enormous. Private extension is also coming into picture. Today, journalism in India has got lot of scope with media barons opening new channels or newspapers or publishing houses on a regular basis. The competition is so rife that each channel or newspaper tires to produce something exclusive, which in turn has given the audience a great deal of variety.

Characteristics of News:

- News has geographical boundaries

- News is always revealing
- News is what interests people
- No news interests all people
- Most people read only part of the paper they buy
- Their reading habit is selective
- They read what they consider is news

Factors determining the news values:

1. **Timeliness**: The reader wants his news to be new. News coming from the press must be really not, in the sense of being not only exciting but new, not till they are known. The news must be need based and timely.

2. Proximity: Nearness play a dominant role. The reader finds more interest in a minor event closer to his place than a major and important event happened miles away. But proximity is both geographical and emotional. A farmer of nearby village harvesting a record yield is more interesting to the farmers than in other parts of the country or a far off place.

News from research i.e. high yielding variety released by ANGRAU is more important and interests Andhra Pradesh farmers than in Karnataka.

3. Magnitude (Size): The very small and very large size also draws the attention of the readers. For example 3000 farmers attending Kisan Mela attracts rather than 100 farmers attending kisan mela. Similarly one or two people died in accident may not be that much important than 40 people died in any accident**.**

4. Importance: This is subjective. It has direct bearing on the kind of audience that the newspaper in mind. What sounds important to a local regional newspaper may not be important to The Hindu and vice-versa.

5. Truthfulness: Accuracy of the source of the news is important.

6. Objectivity: News reporting should be free from bias. People are interested in the papers that maintain objectivity

7. Names make news (Prominence): The important persons like President, Prime Minister, Chief Minister and Governor and they make news rather than ordinary person

8. Suspense: Readers are more interested in this type of news which gives some suspense in the beginning and giving the information at the end.

9. Conflict: Routine and happiest events may not make news but if any quarrel is there that attracts the readers

10. Human interest: Readers are attracted by human interest (names of persons and villages)..

Sources of News:

1. Result demonstrations
2. Research Stations

3. Research publications – Annual reports, highlights
4. Kisan melas
5. Farmers fields
6. Agricultural Universities / State Departments
7. Other extension activities like field days/training programmes, rythu sadassus etc
8. Plan estimates related to agriculture and allied activities
9. Agriculture finance institutions
10. Agriculture input agencies
11. Agriculture Market committees
12. Electricity and irrigation sectors
13. Farmers committees and associations
14. NGOs etc.

Categories or Types of News

- Before and after event stories
- Experience and success stories
- New development – such as pest outbreaks, scientific discoveries, weather and crop conditions, progress made on plans
- Predictions – such as long range crop and livestock report economic outlook information, long range weather forecasts
- Subject matter - when tied to an event, situation, development or problem

Lecture No. 13: Diffusion and adoption of innovations – adoption – definition –adoption process and innovation – meaning – models of adoption process – five and seven stage models – attributes of innovation – relative advantage, compatibility, complexity, trialability, observability and predictability.

DIFFUSION AND ADOPTION OF INNOVATIONS:

One of the most important functions of Extension is to bridge gulf between research centers and the farmers in the matter of introduction of improved methods of agriculture. In other words successful communication is the main job of an extension worker. We have already considered the term communication and its elements in the earlier lectures. An extension worker's job does not end with merely informing the farmers about improved practices, he should ensure practical application (by the farmers) of the result of research and field trials. Extension officer's efficiency can be measured (a) by the speed or quickness with which the gulf between what is known and what is done by the farmers is bridged. (b) by the number of new practices adopted; and (c) also by the number of farmers and communities that adopt the new practices.

While discharging the technology dissemination function by the extension worker, they are often faced with some of the following questions:

1. There is lag between what is known and what is done by most farmers. Why?
2. Where do most farmers get their new ideas?
3. In some villages, people seem to accept new ideas quickly and in others, nearly all the people are slow to take to new things. Why?
4. Some farmers accept new ideas and put them into practice faster than others. Why?

5. Some new ideas and practices are accepted quickly and with little apparent efforts, while others are accepted only after years of effort put forth by extension agencies. Why?

These questions have been focus of considerable research by the behavioural scientists in several countries including India. Answers to the questions may be found if the extension workers understand the meaning of diffusion, adoption, their processes, innovation etc. by which farmers accept new ideas as described below

Adoption-It is a decision to make full use of an innovation as a best course of action available.

Adoption Process: According to Rogers, "adoption process is the mental process through which an individual passes from hearing about an innovation to final adoption". Adoption process occurs at individual level

Diffusion-It is a process by which an innovation is communicated through certain channels over time among the members of the social system. It is special type of communication in that the messages are concerned with new ideas.

Diffusion Process: Diffusion process is the spread of a new idea from its source of invention or creation to its ultimate users or adopters". These definitions indicate that "diffusion is a process related to adoption of an innovation in an entire social system such as a village or block etc., while adoption is a sequence of thoughts and actions which an individual goes through, before he finally adopts a new idea".

Innovation: An innovation is an idea, practice or object that is perceived as new by an individual or other unit of adoption.

Perception: Perception is an activity through which an individual becomes aware of objects around oneself and of events taking place.

MODELS OF ADOPTION PROCESS:

An innovation diffuses within a social system through its adoption by individuals and groups. The decision to adopt an innovation, however, "is not normally a single, instantaneous act", it involves a process. The "adoption process" is a decision-making process goes through a number of mental stages before making a final decision to adopt an innovation.

In their pioneering work of diffusion of hybrid corn seed in two Iowa's communities in the United States, Ryan and Gross (1943) first drew attention to the existence of a sequence of stages in the process of adoption by farmers (1) "awareness" of the existence of an innovation (2) "conviction" of its usefulness, (3) "acceptance" in the sense of willingness to try the innovations which is followed by its (4) "complete adoption". The existence of an adoption process involving four interrelated stages was also outlined by Wilkening (1953). He described that the adoption of 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 namely, awareness, obtaining information, conviction, trial and adoption.

As already discussed, adoption is essentially as decision – making process. According to Johnson and Haver (1955), decision-making involves the following steps.

(i) Observing the problems
(ii) Making analysis of it
(iii) Deciding the available courses of action
(iv) Taking one course and
(v) Accepting the consequence of the decision

Decision - making is a process comprising a sequence of stages with a distinct type of activity occurring during each stage. Similarly, the way in which an individual adopts an innovation is viewed as a process, a series of related events in a time sequence.

The North Central Rural Sociology Subcommittee for the study of Diffusion of Farm Practices (1955) identified 5 stages of the adoption process, which received world wide attention. They are 1) Awareness 2) Interest 3) Evaluation 4) Trial and 5)Adoption.

FIVE (5) STAGE MODEL OF ADOPTION PROCESS.(North Central Rural Sociology Sub Committee)

1. Awareness:: At this stage an individual becomes aware of some new idea such as maize hybrid or new pesticide. He knows about the existence of the new idea but he lacks details about it... For instance, he may know only the name and may not know what the idea or product is, what it will do or how it will work.

2. Interest: At the interest stage, a person wants more information about the idea or product. He wants to know what it is, how it works and what its potentialities are. He may say to himself that this might help him increase his income, or help him control insects or diseases or improve farming or home life in some other way.

3. Evaluation: At this stage, the individual makes mental application of the new idea to the present and anticipated future situations and decides whether or not to try it. He applies the information obtained in the previous stages to his own situation. At this stage, the individual judges the worth of the innovation. The person makes an assessment whether the idea is applicable to own situation, and if applied what would be the result. He asks himself "can I do it? And if I do it, will it be better than I am doing now; will it increase my income or otherwise bring me satisfaction?"

4. Trial: The individual actually applies the new idea on a small scale in order to determine its utility in own situation. If he decides that the idea has possibilities for him he will try it. The trial stage is characterized by small-scale experimental use, and by the need for specific information which deals with: "How do I do it; how much I do I use; when do I do it; how can I make it work best for me?" Apparently individuals need to test a new idea even though they have thought about it for a long time and gathered information concerning it. Trial may be considered as the practical evaluation of the innovation. It provides evidence of the advantages of the innovation.

5.Adoption This final stage in the process is characterized by large scale, continued use of the idea, and most of all, by satisfaction with the idea**.** Trial may be considered as the practical evaluation of an innovation. It provides evidence of advantages of the innovation. Being satisfied with the trial and considering the pros and cons of the situation, the individual takes final decision and applies the innovation in a scale appropriate to own situation on a continued basis.

Note (i) these five stages are **not** necessarily a rigid pattern which people follow. These stages are influenced by cultural differences and social factors as well as by the kind of practice, place and person. At any stage the recommendation can be thrown off. There can be jumping from one stage to another. If the farmers have confidence in the extension worker, and his recommendations, they may jump form "evaluation" to "adoption" stage.

(ii) Further, it should be remembered that there is no complete agreement as to the number of stages in the adoption process, although there is general consensus on the existence of stages and that adoption is seldom an impulse decision. For instance Singh and Pareek (1960) have developed a seven stage model of the adoption process.

SEVEN (7) STAAGE MODEL OF ADOPTION PROCESS (SINGH & PAREEK)

1. **Need**: This is a stage when an individual wishes to change his existing practices, Express dissatisfaction and develops a compromise.

2. **Awareness:** The individual just comes to know about an innovation without knowing the details of it.

3. **Interest:** He makes an attempt to know more about the innovation. Asks extension agents / friends and seeks information and sees the innovation.

4. Deliberation: This is a stage of deliberation and mental evaluation. The individual mentally examines the possibility of application of the innovation under own condition. He seeks advice of opinion leaders, observes the performance at different places and discusses with family members. The individual then takes a decision to try out or reject the idea.

5. **Trial**: An individual uses an innovation in part or sometimes in full. The individual applies the practice on a limited scale to observe the performance under own conditions.

6. **Evaluation**: The individual evaluates the performance of the innovation. The individual observes the performance of an innovation on various dimensions. Collects data on the performance of an innovation on others' situations. Compares the performance of the new with the old one and figures out changes which will be necessary if innovation is to be adopted. Calculates input- output, risks, uncertainties etc.

7. **Adoption**: It is a decision to use the practices on continued basis.

Perceived attributes of innovation

Attributes are qualities, characteristics or traits possessed by an object. An innovation has some qualities or characteristics. It is not the intrinsic quality, but the quality or character of the innovation as people see to them, is important for extension. The perceived attributes of innovations which are basic to extension are as follows.

1. Relative advantage: is the degree to which an innovation is perceived as being better than the idea it **supersedes.** The relative advantage may have a number of dimensions. For example, if a new technology or practice gives more yield or income' or saves time, labour and cost; or has less risk than the existing one; it has more relative advantage. Multiple use of an innovation may be a form of relative advantage. For example, an equipment or material which may be used for a number of activities has more advantage than an equipment or material which can be used for a single purpose. The advantage of location for specific enterprises in specific areas may provide some relative advantage. The innovations which have more relative advantage are likely to be adopted quickly.

2. Compatibility: is the degree to which an innovation is perceived as consistent with the existing values, past experiences and needs of potential adopters. Compatibility has at least two dimensions – situational compatibility and cultural compatibility. When a new crop variety suits the agro-climatic condition of the farmer, it indicates situational compatibility. When a breed of livestock advocated to the farmer is in agreement with their beliefs and values, it is cultural compatibility. The name given to an innovation may affect its compatibility. Compatibility of an innovation is essential for its adoption.

3. Complexity: is the degree to which an innovation is perceived as relatively difficult to understand and use. An innovation should, as far as possible, be less complex for the farmers to understand and use. However, complexity of an innovation may not deter its adoption, provided it has more relative advantage. For example, many of the high yielding technologies like HYV crops, crossbred cattle, composite fish culture etc., are quite complex. Still, their diffusion have been quite high, which may be due to their high relative advantage in terms of more yield and income and shorter gestation period.

Complex technologies often require complementary adoption. For example, adoption of high yielding technologies require adoption of balanced nutrition practices, appropriate protection technology and better management methods, to get the best results. Complex technologies, because of their complicated and intricate nature, require consistent training and communication support for the clientele, for their adoption and continued use.

4. Trialability: is the degree to which an innovation may be experimented with on a **limited basis**. Adoption of new seeds and fertilizers are more, compared to new farm machinery, simply because seeds and fertilizers may be purchased in small units and tried, whereas, purchase of farm machinery, requires large investment and can not be tried in parts. The minikit demonstrations have helped in spreading the cultivation of high yielding variety crops as this method involves small scale trial by the farmers. Earlier adopters appear to be more concerned about the trialability of an innovation than later adopters.

5. Observability: is the degree to which the results of an innovation are visible to others. The visible impact of an innovation facilitates its diffusion in the social system. For example, application of balanced fertilizer in crop plants has almost always been recommended to the farmers. In practice, farmers generally use more of nitrogenous fertilizers. It is because, the effect of nitrogenous fertilizer is very obvious in the eyes of the farmers – the plants "jump" the leaves turn green, whereas, the effects of phosphatic and potassic fertilizers are not so evident. Understanding the beneficial effects of balanced fertilization by the farmers, which is more profitable in the long run, requires high level comprehension, which may be brought about by intensive training and communication.

Disease control has two aspects-preventive and curative. Preventive innovations in disease control are generally less costly than the curative innovations, but the results of preventive innovations are not so obvious, compared to those of the curative innovations. That is why technologies like treatment of seeds; preventive vaccinations etc. have been less adopted. Treatment of seed potato has, however, very high rate of diffusion, because preventing disease in this high investment crop brings higher return, i.e., has high relative advantage.

Predictability has also been perceived as an attribute of innovations (Napier, 1991). **Predictability** refers to the degree of certainty of receiving expected benefits from the adoption of an innovation. Subsistence farmers are often very cautious while making adoption decisions, because crop failure or substantial reduction in output due to failure of agricultural innovations to achieve expected production goals, can result in loss of meager landholdings and starvation of the family. Under such conditions farmers are reluctant to adopt any technology or technique which introduces a higher level of uncertainty into the operation of the farm enterprise.

It may be generalized that the attributes - relative advantage, compatibility, trialability, observability and predictability of an innovation, as perceived by the members of a social system are positively related to its rate of adoption. The complexity of an innovation, as perceived by the members of a social system, is negatively related to its rate of adoption.

Lecture No. 14: Innovation –Decision Process – meaning – and stages (knowledge, persuasion, decision, implementation and confirmation); concepts – dissonance and rejection – active rejection and passive rejection – discontinuance – replacement discontinuance and disenchantment discontinuance, over adoption, rate of adoption and innovativeness – adopter categories and their characteristics

INNOVATION DECISION PROCESS

Rogers & Shoemaker have used the term Innovation – Decision Process in preference to Adoption process.

Definition: According to Rogers (1983, 1995) the innovation – decision process is the process through which an individual passes from first knowledge of an innovation, to forming an attitude towards the innovation, to a decision to adopt or reject, to implementation and use of the new idea, and to confirmation of this decision.

This process consists of a series of actions and choices over time through which an individual or an organization evaluates a new idea and decides whether or not to incorporate the new idea into the ongoing system. This behaviour consists essentially of dealing with the uncertainty that is inherently involved in deciding about a new alternative to those previously in existence. The perceived newness of an innovation, and the uncertainty associated with this newness, is a distinctive aspect of innovation-decision making, compared to other types of decision making. Innovation – decision is a process that occurs over time and is conceptualized to have five stages.

1. Knowledge
2. Persuasion
3. Decision
4. Implementation

5. Confirmation

1. Knowledge stage: It occurs when an individual or other decision making unit is exposed to an innovation's existence and gains some understanding of how it functions. Knowledge function is mainly cognitive or knowing. Knowledge seeking is initiated by an individual and is greatly influenced by one's predispositions. Exposure is selective and generally, individuals tend to expose themselves to those ideas which are consistent with one's existing attitudes and beliefs, and avoid those which are in conflict with them. A need can motivate an individual to seek information about an innovation and the knowledge of a innovation may develop the need.

Questions such as 'what is the innovation?' 'How does it work?' and 'Why does it work?' are the main concerns of an individual about an innovation. The first of these three types of knowledge, awareness-knowledge, is information that an innovation exists. Awareness-knowledge then motivates an individual to seek 'how-to-knowledge and 'principles' knowledge. This type of information-seeking is concentrated at the knowledge stage, but it may also occur at the persuasion and decision stages.

How-to knowledge consists of information necessary to use an innovation properly. The adopter must understand what quantity of an innovation to secure, how to use it correctly, and so on. In the case of innovations that are relatively more complex, the amount of how-to knowledge needed for proper adoption is much greater than in the case of less complex ideas. And when an adequate level of how-to knowledge is not obtained prior to the trial and adoption of an innovation, rejection and discontinuance are likely to result.

Principles-knowledge consists of information dealing with the functioning principles underlying how the innovation works. Examples of principles-knowledge are: The notion of germ theory, which underlies the functioning of vaccinations and the biology of plant growth, which underlies fertilizer innovations. It is usually possible to adopt an innovation without principle-knowledge, but the danger of misusing the new idea is greater, and discontinuance may result. The competence of individuals to decide whether or not to adopt an innovation is facilitated by principles know-how. If a problem occurs in an individual's use of an innovation, principles-knowledge may be essential in solving it.

Types of knowledge	Questions answered
1. "Awareness – knowledge	What is innovation
2. "How to – knowledge	How does innovation work
3. "Principles – knowledge	Principles underlying how the innovation work (FUNCTIONING PRINCIPLES)

2. Persuasion stage: Persuasion occurs when an individual or some other decision making unit forms a favorable or unfavorable attitude towards the innovation. Persuasion function is mainly affective or related to feeling. At this stage, the individual becomes more psychologically involved with the innovation and actively seeks information about it. The individual perceives the attributes of innovation, which is conditioned by one's personality and social system norms, and develops a general idea about the innovation.

In developing a favourable attitude towards the innovation, an individual may mentally apply the new idea to the present or anticipated future situation before deciding whether or not to

try it. There may be two levels of attitudes, a specific attitude towards the innovation, and a general attitude towards change. A previous positive experience helps the process and a previous negative experience i.e. a failure develops resistance to future new ideas.

3. **Decision stage:** Decision occurs when an individual engages in activities that lead to a choice to adopt or reject the innovation. The individual puts the innovation to a small-scale trial in own situation. Considering its relative advantage, risk involved and many other related factors like availability of market, need for the family etc., the individual decides whether to adopt or reject the innovation.

For some individuals and for some innovations, the trial of a new idea by a peer like themselves can substitute at least in part., for their own trial of an innovation. This 'trial by others' provides a kind of vicarious (realized through other's experience) trial for an individual. Extension agents often seek to speed up the innovation-process fpr individuals by organizing demonstrations and field days of a new idea in a social system. These are quite effective in influencing adoption by individuals.

4.I**mplementation stage**. Implementation occurs when an individual or other decision making unit puts an innovation into use. At this stage the individual is generally concerned with where to get the innovation, how to use it and what operational problems will be faced and how these could be solved. Implementation may involve changes in management of the enterprise and/or modification in the innovation, to suit more closely to the specific needs of the particular person who adopts it.

Re-invention often occurs at the implementation stage. **Re-invention is defined as the degree to which an innovation is changed or modified by a user in the process of its adoption and implementation.** Re-invention often is beneficial to the adopters of an innovation. Flexibility in the process of adopting an innovation may reduce mistakes and encourage customization of the innovation to fit it more appropriately to local situations or changing conditions. As a result of re-invention, an innovation may be more appropriate in matching an adopter's preexisting problems and more responsive to new problems that arise during the innovation-decision process.

Recognition of the existence of Re-invention brings into focus a different view of adoption behaviour – instead of simply accepting or rejecting an innovation as a fixed idea, potential adopters on many occasions are active participants in the adoption and diffusion process, to give their own unique meaning to the innovation as it is applied in their local context. Adoption of an innovation is thus a process of social construction.

5. Confirmation stage: Confirmation occurs when an individual seeks reinforcement of an innovation decision already been made, or reverses a previous decision to adopt or reject the innovation if exposed to conflicting messages about the innovation. The decision to adopt or reject an innovation is not a terminal act. Human mind is in a dynamic state and an individual constantly evaluates situation. If the individual perceives that the innovation is giving satisfactory results he will continue otherwise may reject it. Reversal of the decision after adoption or rejection of an innovation may, take place at a later state.

At the confirmation stage, extension agents have the additional responsibility of providing supporting messages to individuals who have previously adopted. Extension agents often assume that once adoption is secured, it will continue. But there is no assurance against discontinuance, because negative messages about an innovation circulate via interpersonal networks in most client systems.

Throughout the confirmation stage, the individual seeks to avoid a state of internal disequilibrium or **DISSONANCE**, an uncomfortable state of mind, by reducing or eliminating it. An individual seeks to accomplish it by changing one's knowledge, attitudes or actions.

CONCEPTS RELATING TO ADOPTION AND DIFFUSION

1. DISSONANCE: An internal disequilibrium or an uncomfortable state of mind of an individual to adopt or reject an innovation.

2. REJECTION: It is a decision not to adopt an innovation. Rejection may take two forms.

a) Active rejection: It consists of considering adoption of innovation (including even its trial) but then deciding not to adopt it.

b) Passive rejection (also called Non-adoption): It consists of never really considering the use of the innovation.

3. DISCONTINUANCE: It is a decision to reject an innovation after having previously adopted it.

Discontinuance is of 2 types
a) Replacement discontinuance: It is a decision to reject an idea in order to adopt a better idea that supersedes it.

b) Disenchantment discontinuance : It is a decision to reject an idea as a result of dissatisfaction with its performance.

E.g.: Crop varieties generally deteriorate after a number of years, they are replaced by superior varieties, if available or may not be cultivated at all.

4. RATE OF ADOPTION: It is the relative speed with which an innovation is adopted by members of a social system.

5. **OVER ADOPTION:**: People continue to adopt an innovation rather vigorously, when experts feel that it should not be so done. e.g., Excessive use of pesticides.

Over adoption produces -ve effect and causes distortion of the systems.

6. INNOVATION: It is an idea, practice or object that is perceived as new by an individual or other unit of adoption.

7. INNOVATIVENESS: It is the degree to which an individual is relatively earlier in adopting new ideas than other members of a system.

8. ADOPTION PERIOD: The period that takes from awareness stage to the adoption stage by the individual.

9. **INNOVATION-DECISION PERIOD**: The innovation – decision period is the length of time required to pass through the innovation – decision process. The time elapsing form awareness-

knowledge of an innovation to decision for an individual is measured in days, months, or years. This period is thus a gestation period in which a new idea is fermenting in the individual's mind.

10.**PERSONAL LOCALITE:** The person who is directly influencing the farmers decisions within the system i.e. neighbourers, friends, local leaders, peers etc.

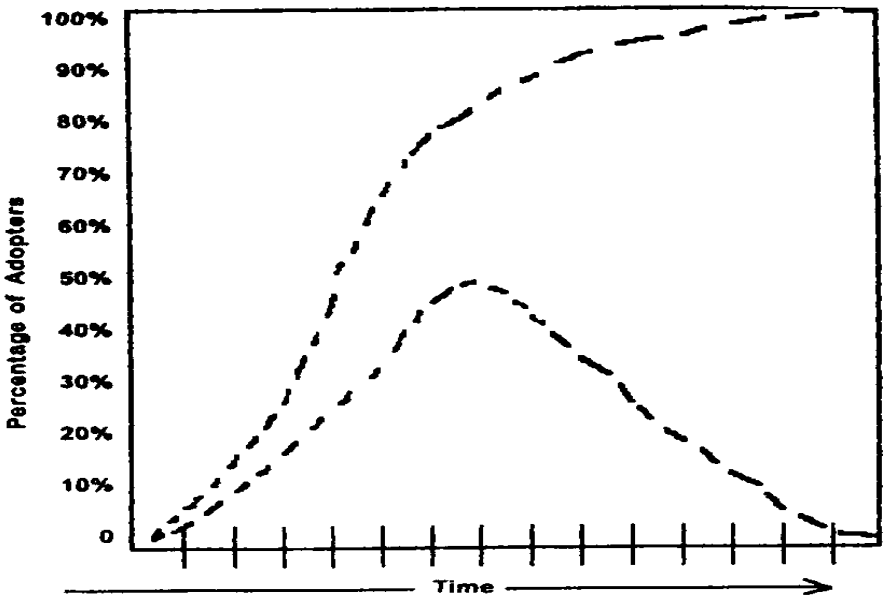
11. **PERSONAL COSMOPOLITE**: The persons who are directly influencing the farmers decisions and belong to outside the system e.g. Extension agents

12. IMPERSONAL COSMOPOLITE: Indirectly Influencing the farmers decisions e.g Mass media

ADOPTER CATEGORIES AND THEIR CHARACTERISTICS:

All individuals in a social system do not adopt an innovation at the same time. Rather, they adopt in an ordered time sequence, and they may be classified into adopter categories on the basis of their innovativeness. ***INNOVATIVESS 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 workers to identify the individuals who are likely to adopt innovations early and who may lag behind.

The adoption of an innovation over time follows a **normal, bell-shaped** curve when plotted over time on frequency basis. If the cumulative number of adopters is plotted, it results in an 'S'-shaped curve. The S-shaped curve rises slowly at first when there are few adopters in a time period, accelerate to a maximum when about half of the individuals in the system have adopted and then increases at a gradually slower rate as the few remaining individuals finally adopt (Fig). The S-shaped curve is like that of a 'learning curve' as propounded by the psychologists. Each adoption in the social system is in a sense equivalent to a learning trial by an individual.



Both of these curves are for the same data, the adoption of an innovation over time by the members of a social system. But the bell-shaped curve shows these data in terms of the number of individuals adopting each year, whereas the S-shaped curve shows these data on cumulative basis.

The distribution of adopters over time closely approaches normality, and may be explained by the statistical concept of normal curve. The distribution of the adopters may be partitioned into five adopter categories by using the mean (x) and standard deviation. The area lying to the left of the mean time of adoption minus two standard deviations includes 2.5 per cent of the individuals who are the first to adopt an innovation and are known as innovators. The next 13.5 per cent between the mean minus one standard deviation and the mean minus two standard deviations to adopt the new idea are called as early adopters. The next 34 per cent of the adopters between the mean date of adoption and minus one standard deviation are known as early majority. Between the mean and one standard deviation to the right of the mean are located the next 34 per cent to adopt the new idea, the late majority. The last 16 per cent to the right of mean plus one standard deviation are the last to adopt the innovation the laggards. The five-adopter categories are conceptualized as ideal types and are presented in Figure given below.

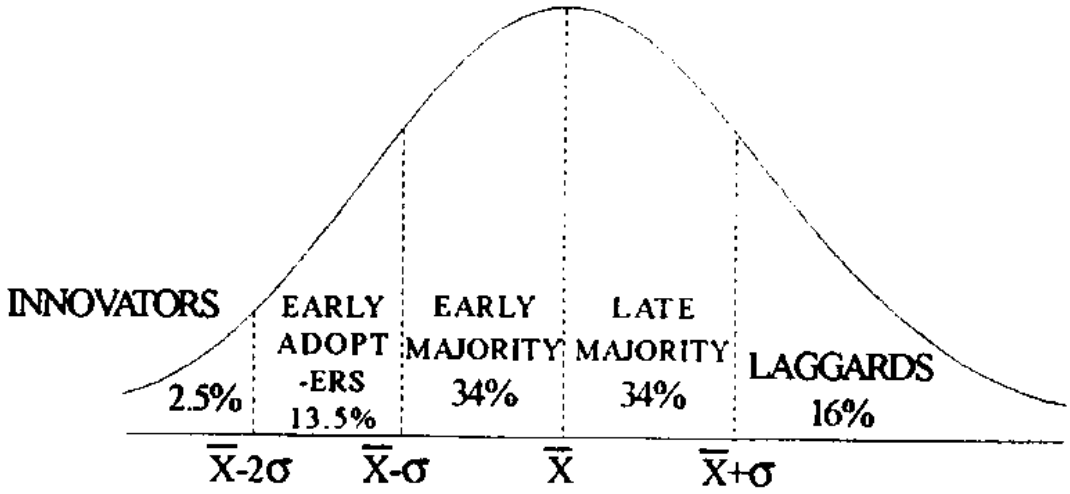


Fig: Adopter categories on the basis on Innovativeness

1. InnovatorS (Venturesome). They are **venturesome** and first people to adopt a new idea, much ahead of other members in the community. They are generally very few in number and not more than one or two in a community. They may deviate from the social norm and may be viewed as deviants by others.

Characteristics:

1. Have larger farms 2. High net worth and risk capital. 3 Willing to take risks. 4. Usually not past middle age. 5. Generally well educated. 6. Have respect and prestige in progressive communities but not in conservative type of communities 7. Mentally alert and actively seeking new ideas. 8. Their shpere of influence and activity often goes beyond the community boundaries. 9. They have many formal and informal contacts outside the immediate locality. 10. They often by-pass the local extension worker in getting information from the originating sources and may learn about new things even before he does. They sometimes manage to get samples of seeds or chemicals even before they are released for public use. 11. They subscribe to many farm magazines and specialised publications 12. Other farmers may watch the innovators and know what they are doing but the innovators are not generally named by other farmers as "neighbours and friends" to whom they go for information.

2. Early adopters (respectuful): They are **localite and** are a more integrated part of the **community.** Because early adopters are not too far ahead, the average members of the community can comprehend their activities relating to adoption of the innovation. They have more opinion leadership and potential adopters look to them for advice and information about the innovation. They try to maintain adoption leadership to keep up their prestige in the community.

(1) Younger than who have a slower adoption rate, but not necessarily younger than the innovators (2) They are not the persons who test the untried ideas but they are quickest to use tried ideas in their own situations (3) Have large farms. (4) Higher education than those who adopt more slowly.(5) High income (6) They participate more in the formal activities of the community. (7) They also participate more in government programmes. (8) This group usually furnishes a disproportionate amount of the formal leadership (elected positions) in the community. (7) They

read papers and farm journals and receive more bulletins than people who adopt later. (10) They may be regarded as "community adoption leaders."

3. Early majority (Deliberate and local adoption leaders): They adopt new ideas just before the average members of the community. They are neither very early not relatively late to adopt an innovation. They are **deliberate** and take longer time to make the decision to adopt, in comparison to the innovators and early adopters.

1. Slightly above average in age, education and farming experience. 2. They take a few more farm Journals and bulletins than the average. 3. They have medium high social and economic status. 4. Less active in formal groups than early adopters, but more active than those adopting later. 5. In many cases, they are not formal leaders in the associations in the community, but they are active in those associations. 6. They actively participate in extension programmes like training, demonstration, kisan mela, study tour etc. 7. They are most likely to be informal leaders, but not holders of elected positions. 8. Have more limited resources than early adopters and innovators, and so cannot afford to make hasty or poor decisions. 9. They associate mainly with people of their own community. 10. They value highly the opinions their neighbours and friends hold about them for, this is their main source of status and prestige. 11. They are mostly mentioned as "neighbours and friends" from whom the majority of farmers seek information.

4. Late majority(skeptical and later adopters): They are **cautious and skeptical**, and adopt new ideas just after the average members of the community. They adopt mainly because people have already adopted the innovation and are getting the benefit out of it.

1. Those in this group have less education and are older than the early majority.
2. They form the major part of formal organisational membership, although they participate less in such formal groups.
3. They take fewer leadership roles than the earlier adopters.
4. They take and read fewer papers, magazines and bulletins, than the early majority.
5. They do not participate in as many activities outside the community as do people who adopt earlier.

5. Laggards (traditional): "Laggards "are the last people to adopt new practices and are traditional. By the time the laggards finally adopt an innovation, it may already have been superseded by a more recent idea which the innovators are already using.

1. Least education. 2. Oldest. 3. Participate least in formal organisations, cooperatives and government programmes. 4. They hardly read farm magazines and bulletins.

These people are likely to belong to the backward classes, may be working as share-croppers and agricultural labourers, with very little land of their own. They are generally resource-poor people with little surplus to invest in their production enterprise. They generally live in areas having least urban influence and, socially and economically the most disadvantaged.

Lecture No.15: Factors influencing adoption process – social, personal and situational: Capacity building of extension personnel and farmers – training = meaning – types of training – pre-service training, in-service training, orientation, induction training, refresher training and training for professional qualification – training to farmers – time, duration and venue.

FACTORS INFLUENCING ADOPTION PROCESS:

I. Social factors: Community standards and social relationships provide the general framework wherein the process of change occurs, and they account for the differences between one community (or group) and another.

(1) Social values: In some groups and communities, people place a higher value upon material gains and money than they do in others. In some other groups; changes in farming are encouraged and expected; prestige is attached to the adoption of new ideas and techniques. In others, more value is placed upon tradition and little freedom is allowed for the individual to deviate from the group's pattern in adopting innovations.

If the adoption of new practices goes contrary to the established customs and traditions of the people, the innovator may be ridiculed or lose prestige.

The extent to which changes are adopted depends on the values and expectations of the group and upon the extent to which the individual is expected to conform. Where there is great emphasis on maintaining traditions and values rooted in the past, change occurs more slowly. On the other hand, where emphasis is upon individualism and personal success, change occurs more rapidly.

(ii) Local Leadership: The acceptance of change is also influenced by the nature of leadership and control in the group or community. In some communities, none would accept a new idea, unless and until one man (the leader) in the community is sold on the idea. Once sold, he would influence all farmers in the community to accept it. In such situations, it is important to identify and use such influential leaders. The influence of informal leaders is likely to be greater where neighbour, kinship and community ties are the strongest.

(iii) Social contacts: The nature and extent of social contact within, and outside the community is important in the diffusion of new ideas and techniques, as indicated below:

a) Nature of Social contacts: The presence of organizations whose objectives include the promotion of changes will aid directly and indirectly in the diffusion process. On the other hand, where social contacts are primarily through kinship, visiting and informal activities, there may be greater resistance to change.

b) Extent of Social contacts: The extent to which social contacts are confined to the immediate locality is a factor. The broader the social orientation of the people, the more likely they are, to accept new ideas. Only a few individuals may have such outside contacts, but they may be in a position to influence their neighbours. Local orientation on the part of the majority is not necessarily a limiting factor on the diffusion of new ideas, so long as a few leaders have outside contacts.

c) Social distances: The social distances associated with wide status differences are also a factor in the diffusion of farm information through inter-personal channels. For example, tenant farmers in some areas may not get ideas from the large farm owners because of their lack of contact. Also small-scale farmers may fail to communicate with large-scale farmers. Rigid class structure impairs inter-class communication of ideas.

II. PERSONAL FACTORS: Why some people adopt new ideas and practices more quickly than others relates in part to the individual himself.

(1) Age: Elderly farmers seem to be some what less inclined to adopt new practices than younger ones. (However, the findings of several Indian studies do not support the existence of a negative relationship between age and adoption).

(2) Education: More then eight years schooling is almost always associated with higher adoption rates than lesser amounts.

(3) Psychological characteristics:

a) Exposure to reliable sources of farm information may create a state of rationality which in turn predisposes.
b) A *mentally flexible* person has higher adoption rates than one with mental rigidity.
c) Some people are found to be more prone to change than others.

(4) Values and attitudes (cultural characteristics):

(a) Values found to be positively related to farm practice adoption rates are: a desire by farmers and their wives for a high school or college education for their children, a high emphasis on science and material comfort, and also wide contacts within and beyond the community.

(b) A high emphasis on traditionalism, isolationism and security e g., owning farm free of debt) has been found to be negatively associated with adoption of improved practices.

III. SITUATIONAL FACTORS: Reasons why farmers adopt farm practices more quickly at one time than another relate to the situation in which they find themselves when alternative courses of action become known.

1) THE NATURE OF THE PRACTICE: The speed with which adoption will take place is partly dependent on the nature of practice itself.

A) Complexity: Generally speaking, the more complex a practice and the more change it requires in the existing operations, the more slowly it will be adopted.

The following classification of practices in terms of their complexity roughly represents the decreasing order of speed with which acceptance may be expected to occur:

a) **A simple change**: A change in materials and equipment only, without a change in technique or operation (e. g., new variety of seed).
b) **Improved practice:** Change in existing operation with or with-out a change in materials or equipment (e. g., change in rotation of crops).

c) **Innovation**: Change involving new technique or operation (e. g., contour cropping).

d) **Change in total enterprise:** e. g., from crop to livestock farming.

B) **Cost**: Those practices which cost little seem to be adopted more rapidly than those which are more expensive.

C) **Net returns**: Those practices which yield, the greatest marginal returns per rupee invested, and in the shortest time seem to be adopted most readily.

The above two characteristics viz., cost and net returns are also referred to as "relative advantage" or "Profitability".

D) **Compatibility:** Is the degree to which an innovation is consistent with existing values and past experiences of the adopters. An idea that is not compatible with the cultural norms of a social system will not be adopted so rapidly as an idea that is compatible e. g., the lack of compatibility of beef production with cultural values in India.

E) **Divisibility (Trialability):** Is the degree to which an innovation may be tried on a limited basis**.** New ideas that can be tried on a small scale or on the installment plan will generally be adopted more rapidly than innovations that are not divisible. e. g., new seeds or fertilizers can be tried on a small scale, but new machinery or a thing like cow dung gas plant cannot be so tried.

F. **Communicability (Observability):** Is the degree to which the results of an innovation may be diffused to others. The results of some practices are easily observed (e. g., application of nitrogenous fertilizer to plants), while the results of some innovations are not easily observed (e. g., pre-treatment of seeds, or soil conservation measures).

2) **FARM INCOME**: High farm income nearly always is associated with high adoption levels.

3) **SIZE OF FARM**: Size of farm is nearly always positively related to the adoption of new farm practices.

4) **TENURE STATUS**: Adoption scores are usually higher for owner cultivators than for tenant cultivators.

5) **SOURCES OF FARM INFORMATION USED:**

a) The number of sources used or the number of contacts with information sources is positively related to adoption rates.

b) A high positive correlation is particularly evident with the use of such sources as Government agencies.

c) High dependence on relatives and friends as sources of information is usually negatively associated with the adoption of new farm practices.

6) **LEVEL OF LIVING:** Since successful farm practice adoption is instrumental in providing the means for supporting a higher level of living, a positive correlation between the two would be expected and is generally found.

CAPACITY BUILDING OF EXTENSION PERSONNEL AND FARMERS.

Capacity Building can be defined as "activities which strengthen the knowledge, abilities, skills and behaviour of individuals and improve institutional structures and processes such that the organization can efficiently meet its mission and goals in a sustainable way.

Training is one of the components of capacity building.

I. Meaning of training:

Training means to educate a person so as to be fitted, qualified, and proficient in doing some job. For an extension worker, training includes education which aims at bringing a desirable change in the behaviour of the trainee / learner.

This change requires a change in his knowledge, skills, attitudes, values, beliefs and understandings so that he fits in his job and become qualified and proficient in communicating the desirable knowledge to his client system i.e., the farmers.

II. Definition of training

Training is a process of acquisition of new skills, attitudes and knowledge in the context of preparing for entry into a vocation or improving ones productivity in an organization or enterprise.

Training is defined as the development of knowledge and skills required for employee in particular occupation. It is filling up the gap between competence of employee and what the organization requires.

Competence of the employee ⟷ Organizational Requirement

GAP

EDUCATION VERSUS TRAINING:

Sl.No.	EDUCATION	TRAINING
1.	Education is concerned with increase in general knowledge and understanding of total environment	Concerns with increase in knowledge and skills in doing a specific job
2.	It concerns with opening out the world to the student so that he chooses his interests, mode of living and career	Preparing the individual to perform specific job assigned to him
3.	It is general preparation and a person receives education before entering in to employment	Specific preparation received just before employment or during employment for performing tasks assigned by organization
4.	Main purpose is enrichment of personal self. Here **learner** is benefited. It is a process of intellectual development	Purpose of training is to impart special skills to the trainees. Here the **organization** is benefited
5.	Methods of evaluation are formal	Methods of evaluation are informal
6.	Education is preparation for life not for	Training is always understood to

	earning a livelihood	have a vocational purpose
7.	Education refers to a more general process of intellectual development	Training refers to the process of developing knowledge, skills and attitudes in the person to be applied to the performance of individual's specific work situation
8.	It is a long term process	It is a short term process

Training is the process of acquiring 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 organizational goals.

Types of training given to extension personnel – This is of broadly two types

1. Pre-service Training: It is a process through which the individuals are made ready to enter a certain kind professional job, as in agriculture, medicine or engineering. It is a professional training prior to any appointment, oriented to make an individual prepared to enter into a new profession. Swanson (1984) defines it as a programme of training activities that prepares an individual for a career in extension, and usually leads to some type of diploma, certificate, degree, or other qualification in one or more of the following agriculture, fisheries, forestry, animal and/or veterinary science or home science.

The state departments of Agriculture now prefer University graduates for entry into their extension services and similarly the Veterinary department prefers to to take only Veterinary graduates released from the Universities.

2. In-Service Training:

It is meant for in service candidates who are on the job. In-service training is a process of staff development for the purpose of improving the performance of an incumbent holding a position with assigned job responsibilities. It promotes the professional growth of individuals. Inservice training is a problem centred, 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.

According to Arnon (1987), even for the University graduate, learning cannot cease on completion of formal studies. He said that the in-service training is given with the following objectives:

1. To keep up with research by regular meetings between researchers and extension workers, joint colloquia etc.
2. To impart basic knowledge not only in the fields directly related to agriculture, but also in sociology, economics, psychology etc.
3. To improve extension methods, by constant evaluation of methods, the joint study of research findings and extension methods, exchange of experiences.

In-Service training are of different types, some of them are as follows:

i. Orientation Training

This training is given usually to newly appointed extension personnel. It provides an introduction to public employment and provides answers to questions which a newly recruited person is likely to ask. This term is also used for training inservice extension personnel in a new responsibility like a new operational programme so that personnel are appropriately oriented towards meeting the requirements of new situation.

ii. Induction / portal / vestibule Training

Induction training is given to new extension personnel immediately after they have been employed and before they are assigned to work in particular area usually as an Assistant Agriculture Officer or Agriculture Officer, or Extension Officer.

iii. Maintenance or refresher training:

This training is originally started for trainers of the training institutes and Universities for refreshing their knowledge and skills for imparting them to trainees. The term indicates any new training for updating professional competence of extension personnel notably in the subject matter area of specialization. This training is usually imparted in the later career of extension personnel. This training is having considerable importance to extension personnel as it relates to updating to technical knowledge and competence of extension personnel. This deals with new information and new methods and review of older materials. This type of training is given to the employees to keep them at their peak performance level and also prevent them from getting into a rut.

iv. Retraining:

It refers to the efforts designed to prepare an individual for a new assignment or a broadened aspect of the old specialty.

v. Career or development training / Training for professional qualification:

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 (undergraduate or postgraduate) or diploma by the employees, to motivate them to move up higher levels of administrative hierarchy (promotions)

The Directorate of Extension is operating such a scheme on an yearly basis under which, in addition to salary and allowances which personnel get from their own employing organizations, it pays fixed monthly stipends to extension personnel to cover their cost of boarding, lodging and tuition fees. Only meritorious extension personnel and that too below the age of 45 years are eligible for such courses.

TRAINING TO FARMERS:

There is a regular farmer training programme in all agricultural universities. There are training centers for young farmers. In some states, they also arrange short courses for the farmers. The training includes crop raising, animal feeding and management, plant protection. For such training the following points should be considered.

1. Time of holding the training: It should be at the convenience of the farmers i.e., when they are comparatively free from such of the agricultural operations. This will differ according to the seasons and climate. In case A.P., March to May for Kharif crop and August to September for rabi crop is ideal time for conducting training courses in Agriculture.

2. Duration of course: For farmers who are engaged in farming, a one week course is sufficient for special topics such as use of irrigation facilities and water management, operation of implements and plant protection etc, it may be of two or three days duration.

3. Venue of course: Besides physical facilities, the appropriate environment under which the course is to be conducted i.e, where the farmers car see the actual crop, method demonstrations, operations with some machines and implements or some treatments such as fertilizer application, venue has to be given due considerations.

4. Production cum demonstration camps and discussion groups of the farmers: These should be arranged in the villages because the farmers cannot afford to remain away from their farms and homes. These should be organized before each main crop. The duration should be 1-2 days only, and the trainees or participants should be from the same village or groups of nearby villages, so that the farmers can walk back to their home the same evening. This will provide technical knowledge to the farmers right in their villages, and the topics can be related to their local problems.

Lecture No. 16: Farmers Training Centre (FTC) – Objectives and trainings organised; Krishi Vigyan Kendra (KVK) – mandate; District agricultural Advisory and Transfer of Technology Centre – (DAATTC) – objectives.

FARMERS TRAINING CENTRE(FTC)

Farmers Training Centres are the training centres of Department of Agriculture working in all the districts of Andhra Pradesh concentrating on capacity building of the farmers. FTCs have been established to improve the efficiency of farmers who have crucial role to play in accelerating by providing necessary knowledge and skills. Training programmes cover practicing farmers, farm women and young farmers. In A.P. Farmers training programme was started in 1968. First FTC was established in **1969** at **Gopannapalem** in West Godavari district.

The main objective is to popularize latest technology among the cultivators by organizing short term training courses at village level, specially to small and marginal farmers, farm women and convenors of Charchamandals (Discussion Group).

OBJECTIVES:

1. To conduct training programmes for farmers for speedy diffusion of knowledge regarding modern agricultural techniques.
2. To develop efficient farm leadership
3. To inculcate among farmers the habit of seeking timely guidance from agricultural extension personnel and other experts.

STAFFING PATTERN:

FTC is provided with District Training Officer (DTO in the cadre of Deputy Director of Agriculture), Radio Contact Officer, two training officers (one for male and other for female), and two demonstrators.

Each District is having one FTC. FTC is provided with one demonstration cum exhibition van. Training programmes were organized by PERIPATETIC (mobile) team in villages on HYVs with the use of A.V. aids. Functional literacy programme was integrated with the discussion groups. FTC staff participates in arranging exhibitions on the occasions of Kisan Melas, Jatharas.

The major functions of FTC include Training, publications and arranging exhibitions.

Types of Trainings conducted by FTC:

The FTC conducts two types of trainings. They are 1) Non-Institutional and 2) Institutional. The details are given below:.

I. NON-INSTITUTIONAL TRAININGS:

(1) **Production cum Demonstration training Camps**: The training camps are organized in each village extension worker circle to give training on H.Y.V's to farmers before the crop season with the objective to give a brief but complete demonstration of various techniques of growing the particular crop. Ttraining is carried out by experienced field staff.

(2) **Farmers Discussion groups**: Discussion groups consist of farmers and farmwomen. The discussion group serves as a forum for exchange of views and field problems faced by them.

iI. Institutional Training:

i. **Short Term Courses for Farmers**: These courses are developed to acquaint farmers with modern scientific technique of farming. These courses are conducted at the mandal headquarter or in the villages. Stipend is also paid to meet the incidental charges to each farmer for attending the training programmes. These are usually for 1 or 2 days only.

2. **Short Term Courses for farmwomen**: Training content includes the storage of agricultural produce, HYV grains, and methods of cooking, nutritional principles. Stipend is also paid.

3. National Demonstrations: National demonstrations are conducted in each district with emphasis on multiple cropping including HYVs of improved food crops in their region. The objective is to provide an opportunity to the farmer in the neighbourhood to see for themselves the methods and results of new agricultural practices recommended. The Subject Matter Specialist looks after the proper conduct of these demonstrations.

4. Study /Conducted Tours: To make the farmers training more effective through visual education and exchange of experiences, the conducted tours are organized. The place of visit may be research stations, agricultural university, experimental farms, private farms of progressive farmers.

5. Training courses for Conveners of Charcha Mandals:

a. Specialized training for 3 days
b. Correspondence courses or radio broadcasts on agriculture technology
c. Annual prizes for best run charcha mandals

FTC also conducts training programme for Water Users Associations (WUAs)

FTC was actively involved in conducting Agricultural Market Committee Level training programmes to farmers

Publications: : FTC regularly publishes "Vyavasaaya Samachara Lekha" every month. Leaflets, folders are also published on topical interest.

KRISHI VIGYAN KENDRA (KVK) (AGRICULTURAL SCIENCE CENTRE)

The first KVK was established in 1974 at Pondicherry under Tamil Nadu Agricultural University. The **Krishi Vigyan Kendra** (KVK), according to Prasad, Choudhary and Nayar (1987), is designed to impart need-based and skill-oriented vocational training to the practicing farmers, in-service field level extension workers, and to those who wish to go in for self-employment.

The first KVK was established in 1974 at Pondicherry under Tamil Nadu Agricultural University. The priority for establishing KVKs is given to hilly areas, drought prone areas, forest areas, coastal areas, flood prone areas, forest areas, coastal areas, flood prone areas, and areas dominated with tribal farmers, weaker sections, small farmers and landless labourers. The objective is to gradually cover the entire country with one KVK in each district, priority being given to the backward areas.

The basic concepts of a KVK are-

1) The center will impart learning through work-experience and, hence, will be concerned with technical literacy, the acquisition of which does not necessarily require as a precondition the ability to read and write.

2) The center will impart training only to those extension agents who are already employed or to practicing farmers and fishermen. In other words, these centers will cater to the needs of those who are already employed, or those who wish to be self-employed.

3) There will be no uniform syllabus for a KVK. The syllabus and programme of each center will be tailored according to the felt needs, natural resources and the potentials for agricultural growth in that particular area

The three fundamental principles of KVK are

- Agricultural production as the prime goal
- Work-experience as the main method of imparting training and

- Priority to weaker sections of the society.

The main idea is to influence the productivity to achieve social justice for the most needy and deserving weaker sections of the society like the tribal farmers, small and marginal farmers, agricultural labourers, drought and flood affected farmers, and so on.

Need-based training courses are designed for different types of clientele. Courses are based on the information received through family and village survey. No certificate or diploma is awarded irrespective of the duration of the courses. After the training, follow-up extension programmes are organized for converting the acquired skills of the trainees into practice. While designing the courses, the concept of farming system is taken into account to make the enterprises commercially viable.

MANDATE:

The mandate of a KVK is unique for it and is determined on the basis of the most important needs of the clientele, their resources and constraints, and nature of the ecosystem. The success of a KVK is judged by the extent to which it fulfills obligations specified in the mandate.

1. On-farm testing on farmers fields of proven technologies in agriculture and allied fields.
2. Organising Vocational Trainings in agriculture and allied areas
3. Conducting frontline demonstrations on major cereal, oilseeds, pulses and other important crops
4. Organinsing inservice training programmes to field / local extension functionaries in emerging advances in agriculture and allied areas.

The KVKs are fully funded by the Indian Council of Agricultural Research (ICAR). Initially, one KVK for each district was thought of and now two KVKs are also established in certain districts being the largesr ones. Though KVKS are sponsored by ICAR they are working under different administrative controls viz., SAUs, NGOs and ICAR. In Andhra Pradesh at present there are 16 KVKs (Adilabad, Rudrur, Malyal, Wyra, Kampasagar, Palem, Kadapa, Anantapur, Kalyanadurg, Yemmiganur, Nellore, Darsi, Garikapadu, Undi, Amadalavalasa, Rastakuntabai) are working under the control of ANGRAU. Three KVKs are under the control of AP Horticultural University and some are to come under the control of SV Veterinary University. Kalvacharla of East Godavari district and Hayatnagar of Ranga Reddy district are with ICAR. NGO KVKs include Yagantipalli, Kothapet, Zaheerabad, Gaddipalli, Jammikunta, Kavuru, Elamanchili and another one at near Tirupati..

DISTRICT AGRICULTURAL ADVISORY AND TRANSFER OF TECHNOLOGY CENTERS (DAATTCS) / ERUVAKA KENDRAS) – ANGRAU ESTABLISHED EXTENSION CENTRES

Believing in the concept that every research scientist should also be an extension worker in serving farmers, the University works in active association and close co-operation with farmers through frequent farmer-scientist interactions joint and diagnostic field visits enabled University scientists to earn good will confidence and credibility of farmers. In order to reinforce and strengthen this mode of approach to solve many problems and complicated issues of farmers with ease, the University reorganized its extension activities by establishing the "District Agricultural Advisory and Transfer of Technology Centers" at all the 22 district head quarters in the state, barring Hyderabad urban district during 1998. Presently each DAATT Centre has 3 scientists

having specialized in crop production, Crop protection, transfer of technology and Veterinary. It is ultimately proposed to station eight scientists and each center.

Objectives:

1. To assess and refine the technologies generated by the research scientists and their suitability to different farming situations.
2. To assess the potentials of the district by developing database in order to exploit district resources and develop action plans in cooperation with line departments.
3. To conduct field diagnostic visit, identify the field problems and provide scientific solutions.
4. To organize Kisan Melas in coordination with line departments.
5. To extend scientific expertise to the line departments in the conduct of training programmes to officials, farmers and input agencies.
6. To establish linkages with research institutes and other district units.
7. To assist and implement the RAWE programme, internship programme and RHWE programme for Agriculture, Veterinary and Home Science students, respectively.
8. To maintain an useful Information Center.
9. To supply need based scientific/popular information to the line departments on enterprises for their printing/multiplication and distribution to the farmers.
10. To coordinate with All India Radio, Television and Print Media for transmission of needed agricultural information in the district.
11. To implement any other extension programme that may be taken by the University, from time to time, in coordination with the line departments.

DAATT Centre is an independent unit with senior member as Coordinator. The center is under the overall technical and administrative control of Associate Director of Research of the zone concerned who is in turn responsible to Director of Extension on extension activities of each district center in his jurisdiction.

The District Agricultural Advisory and Transfer of Technology Centre (DAATTC) works mainly on **Farmer-Extension-Research** interaction model

The DAATTC though independent works in coordination and cooperation with the line departments to avoid any duplication of functions.

Areas of functioning of the center are decided by the District Coordination Committee which decides joint seasonal action plans of the center well in advance of the *kharif* and *rabi* seasons

Location: The centres are located at Agricultural Market Centres in all the district head quarters barring Hyderabad. Recently the DAATTC, Guntur, Kadapa, Nellore, Srikakulam, Vizianagaram are relocated to the Research Station premises maintaining independent entity.

*****