Introduction to Animal Health Extension

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Preface

This manual is prepared for the course entitled ‘Animal Health Extension’ which is given to 4th year students of Veterinary Medicine. The manual was a cumulative effort of literature reviewed. The course has no textbook, which is concise to meet the demand of the course. Hence, the manual is an attempt to make concise document for the Faculty of Veterinary Medicine. The contents of this teaching package are explained lucidly with adequate examples and pictures.

This manual has eight chapters. The first three chapters deal with the concept and principles of animal health extension, and basic concept of technology. The next three chapters deal with extension program planning, communication and communication methods. Working with local leaders and organizing a training program have been presented in the last two chapters.

1. INTRODUCTION

Agricultural changes in developing countries, over the past decades, have tend to favor large scale mechanized commercial production which has required less manpower and has accelerated the movement of population to urban centers often ill-prepared to receive them or offer them suitable employment.

There is a growing recognition, however, of the need to give proper attention to the remaining rural population, who are predominantly peasant farmers, and to use appropriate skills in agriculture, to improve their general welfare and the quality of their lives. Too often in the past a narrow view has been taken of this process. Extension has been regarded as a means of passing down to farmers' techniques which, it was believed, would be beneficial to them without taking into account sufficiently the particular social or environmental conditions of the area. In particular, too often, the indigenous skills, social structure and detailed local knowledge of the people have been ignored in trying to transfer new skills or techniques to them.

Fortunately, extension is now being regarded as a much wider task of integrating indigenous and new skills or techniques, derived from study or research, into an overall framework of discussion and working with the people and the extension organization.

1.1. Definition of Agricultural Extension

The term Agricultural Extension came into common use in the USA early in this century (1907-1910) when the cooperative extension services were formed in each state in association with the Land Grant Colleges. Until 1914, lectures by university teachers to the general public were called extension lectures, but with the passage of the Smith-Lever Act in that year, the term agricultural extension came to be used mainly for non-formal education for the farming community. The purpose of the act was to aid the spread of useful and practical information to farmers and their families on subjects relating to agriculture and home economics.

Extension, the concept, the term and its usage is unhandy, imprecise. A great many activities are covered by it and it has been given many different meanings. As a result, it has been defined in a great variety of ways by different scholars.

Some consider it as a simple Transfer of Technology (TOT) while others regard it as an instrument, particularly policy instrument, geared towards achieving policy objectives. Adams (1985) for example defined it as an assistance to farmers to help them to identify and analyze their production problems and to become aware of the opportunities for improvement. Rolling (1988) on the other hand defined agricultural extension as a communication process geared towards bringing voluntary behavioral change. Van Den Ban and Hawkins (1988) have defined extension as the conscious communication on information to help people form sound opinions and make good decisions.

These all clearly show that it is not possible to have one and universally agreed definition of agricultural extension. However, one can have the following as a general framework of the definition of the term agricultural extension i.e. agricultural extension is a process which;

- helps farmers to analyze their present and expected future situation
- helps farmers to become aware of problems that arise in such an analysis
- increases knowledge and develops insight into problems, and helps to structure farmers‘ existing knowledge
- helps farmers acquire specific knowledge related to certain problem solutions and their consequences so they can act on possible alternatives
- helps farmers to make a responsible choice which in their opinion is optimal for their situation
- increases farmers motivation to implement their choices
- helps farmers to evaluate and improve their opinion-forming and decision making skills.

Animal health extension

Extension should be regarded as a process of integrating indigenous and derived knowledge, attitudes and skills to determine what is needed, how it can be done, what local co-operation and resources can be mobilized and what additional assistance is available and may be necessary to overcome particular obstacles.

The term *animal health extension* is used to cover any situation in which local people are directly and willingly involved in animal health activities from which they will derive some recognizable benefit within a reasonable period of time. Where necessary this may include activities by public organizations other than the veterinary authority, to promote veterinary by individuals or by groups of people within a limited area. It presupposes, however, that the participation arises from some perceived needs or opportunities which the people have recognized as being sufficiently important to devote part of their time, energy and resources to accomplish. The emphasis is not on the accomplishment of specific national or commercial goals but on the recognition by the people of the part animal health can play in conjunction with other rural activities in maintaining the health, improving living standards and meeting specific needs for animal products.

Extension should not be regarded simply as an efficient delivery system to “get things done” but as a catalyst to promote the establishment of an indigenous system for accomplishing widely accepted aims which, in time, will also be able to define and secure the delivery of any external assistance required.

1.2. Purpose of Animal Health Extension

The main purpose of animal health extension is to help people to examine problems that are affecting their lives and to consider if they may be solved or at least alleviated, by using veterinary techniques within the range of their skills and financial resources. The views of the people should, in turn, be relayed to the officials who frame the laws and design the infrastructure’ of the region so that they may promote policies’ which facilitate the achievement of the people’s objectives. The emphasis must be on local people

recognizing a need and deciding to do something about it. The contribution of animal health extension is initially to facilitate discussion and definition of such a need and to indicate ‘a variety of possible courses of action from which the local people can select the one most suited to their particular situation. The fundamental aim is not to provide an organization to do things for the people, however desirable these things may be, but to assist people to do things for themselves, to develop a genuinely critical view of their own situation and a realistic assessment of their ability to take the necessary steps to correct any defects. From an initial success in solving one limited problem, people may go on to tackle more complex problems and build up the experience and judgment necessary to improve a whole range of activities to enhance the quality of their lives.

1.3. Function of Animal Health Extension

The function of animal health extension, therefore, is not to move into an area and meet, to some extent, what appears to the extension staff to be a need, and then hope that the people will adopt and extend the activity until the problem is finally solved. In such cases a token amount of involvement by the local people may be required initially but the direction and driving force of the activity remains outside the control of the people and is often of little real interest to them.

Animal health extension, as applied in this context, is to facilitate people discussing, making decisions and taking action on them to meet local needs. There is nothing unusual in this. People in developing countries are mainly farmers or pastoralists. They are used to making decisions, in their daily lives on what to grow, where and when. Nomadic pastoralists have usually developed a precise program of movements of their animals to make the best use of the grazing, without any outside intervention. The role of an extension service in such cases is to help people to widen their knowledge and experience beyond the immediate range of their animals. The role of an extension service is to identify areas in which people need specific assistance in knowledge, or the provision of such items as drugs, vaccines, special tools, equipment or funds to achieve their objectives. They must then ensure that these supplies are available as required on terms fair both to the users and the suppliers.

2. PRINCIPLES OF EXTENSION

Principles are generalized guidelines which form the basis for decision and action in a consistent way. The universal truth in extension which have been observed and found to varying conditions and hold good under circumstances are presented.

1. **Principle of cultural difference.** Culture simply means social heritage. There is cultural difference between the extension agents and the farmers. Differences also exist between groups of farmers also. The difference may be in their habits, customs, values, attitudes and ways of life. Extension work to be successful must be carried out in harmony with the cultural pattern of the people.

Figure 1: Cultural difference

2. **Grass roots principle.** Extension program should start with local groups, local situations and local problems. It must fit to the laical problem. It must fit to the local conditions. Extension work should start with where people are and what they have. Change should start from the existing situations.

3. **Principle of indigenous knowledge.** Peoples everywhere have indigenous knowledge system, which they have developed through generations of work experience and problems solving in their specific situations. The indigenous knowledge system encompasses all aspects of life and people consider it essential for their survival.

Instead of ignoring the indigenous knowledge systems as outdated, the extension agent should try to understand them and their ramifications in the life of the people, before proceeding to recommend something new to theme.

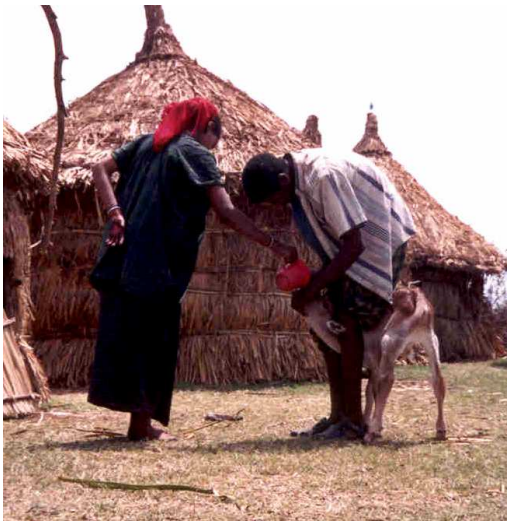


Figure 2: Drenching a goat with traditional medicine

4. **Principles of interest and needs.** People's interest and people's needs are the starting point of extension work. To identify the real needs and interest of peoples are challenging tasks. The extension agent should not pass on their own needs and interests as those of the peoples. Extension work shall be successful when it is based on the interest and needs of the people as they see them.

5. **Principles of learning by doing.** Learning remains far from perfect, unless people get involved in actually doing the work. Learning by doing is most effective in changing people's behavior. This develops confident as it involves maximum number of sensory organs. People should learn what to do, how to do, and with what result.

6. **Principle of participation.** Most people of the village community should willingly cooperate and participate in identifying the problem, planning of projects for solving the problems and implementing the projects in getting the desired results. It has been the experience of many countries that people become dynamic if they take decisions concerning their own affairs, exercise responsibility for, and are helped to carry out

projects in their own areas. The participation of the people is of fundamental importance for the success of an extension program. Peoples must share in developing and implementing their program and feel that it is their own program.

7. **Family principle.** Family is the primary unit of the society. The target for extension work should, therefore, be the family. That is, developing the family as a whole, economically and socially. Not only the farmers, the farm women and farm youth are also to be involved in extension program.

8. **Principle of leadership.** Identifying different types of leaders and working through them is essential in extension. Local leaders are the custodians of local thought and action. The involvement of local leaders and legitimizes by them are essential for the success of a program.

Leadership traits are to be developed in the people so that they shall seek change from less desirable to more desirable situation. The leaders may be trained and developed to act as carriers of change in the villages.

9. **Principles of adaptability.** Extension work and extension teaching methods must be flexible and adapted to suit the local conditions. This is necessary because the people, their situation, their resources and constraints vary from place to place and time to time.

10. **Principles of satisfaction.** The end product of extension work should produce satisfying results for the people. Satisfying results reinforce learning and motivate people to seek further improvement.

11. **Principles of evaluation.** Evaluation prevents stagnation. There should be continuous built-in methods of finding out the extent to which the results obtained are in agreement with the objectives fixed earlier. Evaluation should indicate the gaps and the stapes to be taken for further improvement.

3. AGRICULTURAL TECHNOLOGY: SOME BASIC CONCEPTS

Technology is the *application of knowledge for practical purposes.* Generally, technology is used to improve the human condition, the veterinary practices, or to carry out other socioeconomic activities. Technology can be classified into two major categories: (1) *material technology,* where knowledge is *embodied* into a technological product such as tools, equipment, vet-chemicals, improved forage varieties or hybrids, improved breeds of animals (e.g., semen from progeny-tested sires used for artificial insemination), and vaccines; and (2) *knowledge-based technology* such as the technical knowledge, management skills, and other processes that farmers need to successfully grow a forage or produce animal products.

The transfer of *material* technology to farmers generally involves the production, distribution, and sale of seeds, implements, vet-chemicals, and other production inputs. Therefore, the transfer process for material technology is generally simpler than training and disseminating technical knowledge and management skills to large numbers of poorly educated farmers who operate in different agro-ecological zones (i.e., the extension function). Also, the delivery systems needed for these different types of technologies are generally different. In most cases, the private sector is best suited to produce and distribute material technology. On the other hand, most *knowledge-based* technologies such as improved forage or livestock management practices are generally taught through vocational training programs for rural young people or disseminated through a publicly funded extension system for adult farmers.

At the same time, most material technology requires technical knowledge so that these products or tools can be used effectively. For example, to properly use a vet-chemical in parasitic control, farmers need to know the proper application rates, the time and conditions for application, safety procedures, and so forth. In addition, if farmers use a sprayer (another type of material technology) to apply vet-chemicals, then they need to know how to operate, adjust, calibrate, and clean the equipment to achieve the best results. Therefore, material and knowledge-based technologies are generally closely

intertwined. Private sector firms in developing countries have very limited technical capacity to train farmers in these product-related skills and knowledge; therefore, the transfer of most knowledge-based technologies is, by design or by default, left to the national or provincial extension system.

3.1. Categories of Technology

To understand the different roles that research, extension, drug suppliers, and other system actors should play in the technology development and transfer process, it is essential to differentiate between the different categories of technology. Although there are some common elements, each category of technology has its own unique functional relationships. Each category of technology follows a different channel as new technology is developed and transferred to farmers. In each case, it is possible to develop a functional map of the existing system to determine if serious linkage problems exist.

The types of technologies that should be examined include the following:

Livestock Technology
Genetic (breed improvement)
Livestock management practices
Animal health practices
Forage or range management

Veterinary Technology
Veterinary drugs and vaccines
Veterinary equipments
Diagnostic and treatment procedures
Prophylactic measures

It is important to note that different types of crop or livestock technologies have both *hardware* and *software* components. For example, a new forage variety, as a type of material technology, cannot be fully exploited without having a complementary set of

agronomic or forage management practices. Likewise, improved breeds of livestock generally require higher levels of management, including improved nutrition, housing, and preventive health practices.

3.2. Criteria for Choosing an Appropriate Technology

There could be many criteria to be considered to say a technology is appropriate. In this section we will look at eleven criteria for choosing appropriate technology.
These are:

a) A technology should meet a felt need of a community.

Meeting a felt need is easiest when people's need is more specific. For example, if farmers' problem is coccidiosis (poultry disease) while the extensionist tries to promote improved forage seed, an improved forage seed is not an appropriate technology.

b) The technology has to be financially advantageous

Substantial and dependable food supply and income at local prices has to be secured.

c) The technology brings a recognizable success quickly

The potential of some technologies can be estimated before their results are actually measured eg. By looking at the growing condition of certain forages, farmers will appreciate success.

A recognizable success will come sooner with forages already familiar to people eg. Feeding elephant grass to cows increases milk yield significantly during dry season. Quick recognizable results largely support the credibility of a particular extension program especially if a technology is in the first phase of a program.

d) The technology has to fit local farming patterns

If a farmer's animal rearing system is an extensive one, the technology should support this system.

e) The technology has to deal with those factors that limit production.

Factors like soil, water, light, air and genetic potential limit forage production and productivity.

f) The technology benefits the poor

Characteristics of a technology that benefits the poorest farmers include:

- Utilize the resources the poor people have;
- Reduces risk;
- Should be culturally acceptable eg. Artificial Insemination; and,
- Labor intensive rather than capital intensive.

g) The technology has to be simple to understand

Simple technologies use the small farmers' knowledge and then fosters self confidence and dignity. Simple technologies are easy to modify and foster a dialogue between teacher & learner.

Characteristics of a simple technology

- Resembles the technology that farmers already use;
- involves forages or animals that farmers already know;
- technically unsophisticated; and,
- requires few inputs.

h) The technology aims at adequate market prices

Both adequate and reliable markets are necessary to create enthusiasm among farmers who are innovative and participate in the program. A lose of money due to market failure leads to lose of confidence and discourages exchange of knowledge and information about a technology.

i) The technology needs to be safe for the area's ecology

The technology application should maximize an environmentally friendly production system.

j) The technology needs to be efficiently communicated

It requires minimum of on-site supervision, simple to teach and creates enthusiasm among farmers.

k) The technology has to be widely applicable

More and more farmers could be involved and the program could have wider impact. Although there are variations in topography, micro-climates or cultural groups, a well chosen technology can surmount these barriers.

3.3. Technology Generation and Dissemination

The components of Technology Generation and Dissemination are:

Technology generation consists of planning, administration and implementation of research activities that develop, assess, adapt and test veterinary technology for farmers and other users.

Technology transfer further evaluates and adapts research outputs for users and then widely disseminates the knowledge and inputs to different target groups- farmers of different categories, private companies, NGOs and so on.

Technology utilization component encompasses the users of the veterinary technology, mainly farmers.

3.4. Participatory Technology Development

Participatory technology development, or PTD, is an approach which involves farmers in developing veterinary technologies that are appropriate to their particular situation. It is a practical process: farmers, as “insiders”, bring their knowledge and practical abilities to test technologies, and interact with researchers and extension workers___ the “outsiders”. In this way, farmers and the outside facilitators are able to identify, develop, test and apply new technologies and practices. PTD seeks to reinforce the existing creativity and experimental capacity of farmers, and to help them keep control over the process of

generating innovations. It can be an integral part of community-based extension approaches.

For instance, Ethno-veterinary knowledge (EVK), which revolves around traditional people's beliefs, knowledge and practices pertaining to animal health, plays an important role in complementing modern approaches in the control of animal diseases. This practice includes use of medicinal plants in addition to surgical techniques and management practices, which makes animal health care affordable and encourages the communities to conserve biodiversity.

However, there is lack of information on the validity and use of EVK, which makes development professionals hesitant to integrate these practices into conventional animal health care programs.

Advantages

- PTD builds trust between farmers and outsiders. This helps to build the farmers' confidence, tapping their potential for innovation and initiative.
- It strengthens the links between indigenous and scientific knowledge.
- It builds human capacity for self-reliance.

Disadvantages

- The PTD approach takes a long time, and demands patience and humility on the part of the outsiders.

Procedure of PTD

The PTD approach has five basic phases: building trust, identifying alternatives and setting priorities, designing the experiment, conducting the experiment, and sharing the experience.

Build trust

1. Develop and strengthen your relationship with the farmers, aiming to go beyond that of a professional with a client. Listen and try to understand the farmers' views, and try to help them become comfortable making suggestions and expressing their opinions.
2. Help the farmers identify the problems they want to solve. Consider the situation from the farmers' perspective. Look at issues in a holistic manner, taking various aspects into consideration. As far as possible, involve all of the members of the household: men, women, and children.

Identify alternatives and set priorities

3. Identify indigenous knowledge and skills that may be relevant to the problems selected.
4. Help the farmers identify several different ways they might solve the problems. Ideas for the alternatives may come from the farmers themselves, or from outsiders. Link these alternatives to the farmers' situation and experiences.
5. Together with the farmers, examine the advantages and disadvantages of each of the alternatives.
6. Assist the farmers to choose one or more of the alternatives for testing in the field.

Design the experiment

7. Help the farmers decide how to test the alternatives they have chosen. The experiment should involve both farmers and outsiders. The experiment design should show the difference between the various alternatives, as well as with the current practice. Help the farmers decide how to measure the results, so they can tell which alternative is best. Both farmers and outsiders should be involved in evaluating the results and assessing the impacts.
8. Train farmers how to conduct the experiment and manage the research process.

Conduct the experiment

9. Help the farmers do the experiment, following the agreed design.
10. Measure and record the results of the various alternatives, as well as the current practice.
11. Evaluate the results from the alternatives by comparing them with the current practice.
12. Modify the alternatives as needed; test them again in the next season.

Share the experience

13. Organize ways of sharing the experiences (technologies, successes, failures and constraints) of the experiment. These can include field visits, discussions, training sessions and study trips. Make it clear whose experiences are being shared. Put the farmers' experiences in the forefront. Let the individual farmer (or the group) say "I have done it. It is mine". Ensure that experiences and views on what contributed to success (or caused a failure) are shared.
14. Recognize unique situations (such as land, climate, soils, socio-economic and political situations) which may exist, as these determine how a technology might be improved or modified.

Figure 3: Delivering inappropriate technology

4. EXTENSION PROGRAM PLANNING

To understand the extension program planning process certain basic concepts of an extension, program, planning and extension planning need to be understood.

Extension program

The word ‘program’ has several distinct meanings in the dictionary. It means a proclamation, a prospectus, a list of events, a plan of procedures a course of action prepared or announced beforehand, a logical sequence of operations to be performed in solving a problem. When used by an organization, it means a prospectus or a statement issued to promote understanding and interest in an enterprise.

When preceded by the word extension’, the word takes on several added implications. An extension program, like that of any other public organizations, should present not only what is to be done, but why it is to be done. In this sense, it is not merely a list of activities or a calendar of work.

Some of the definitions of an extension program given in literature are presented below.

According to Kelsey and Hearne (1949) ‘an extension program is a statement of situation, objectives, problems and solutions’.

Leagans (1961) says that ‘an extension program is a set of clearly defined consciously conceived objectives or ends, derived from an adequate analysis of the situation, which are to be achieved through extension teaching activity’.

Lawrence (1962) says that ‘an extension program is the sum total of all the activities and undertakings of a county extension services. It includes: (i) program panning process; (ii) written program statement; (iii) plan of work; (iv) program execution; (v) results; and (vi) evaluation.

From the above definitions, it is clear that an extension program;

- Is a written statement;
- Is the end product of extension program planning.
- Includes a statement of situation, objectives, problems and solutions;
- Is relatively permanent but requires constant revision;
- May include long-term as well as short-term program objectives;
- Forms the basis of extension teaching plans;
- Has been draw up in advance; and
- Has been built on the basis of content

So, we can define an extension program as a written statement of situation, objectives, problem and solutions which has been prepared on the basis of an adequate and systematic planning effort and which forms the basis of extension teaching activities in a specific area, for a given period.

Planning

Planning means the preparation of purposeful actions in daily activities of every individual. Furthermore, some authors defined planning as follows:

Boone and Kurtz, 1984 as reviewed by Terry and Franklin, 1991: Planning is a process by which managers' set objectives, assess the future and develop courses of actions to achieve those objectives

Terry and Franklin, 1991: Planning is defined as selecting information and making assumptions regarding the future to formulate activities necessary to achieve organisational objectives in a profitable manner

Conyers and Hills, 1995 as reviewed by Terry and Franklin, 1991: Planning is a continuous process, which involves making decision about alternative ways of using available resources with the aim of achieving a particular objective in the future

Davies, 1997: Planning is thinking out and then working out in detail what has to be done and how it has to be done

In general, from the above definitions, we can understand that in the process of planning not only selecting of information, making assumptions and setting objectives should be performed but also a planner has to design how all the resources of the firm are effectively integrated to accomplish those objectives in a profitable manner within specified period of time. It is composed of numerous decisions oriented to the future. It represents the expenditure of thought and time now for an investment in the future.

Extension Program Planning

Having described the concepts of planning and extension program, now the stage is set to examine the concept of extension program planning.

Extension program planning can be defined as a procedure of working with people in an effort to recognise unsatisfactory situations or problems and to determine possible solutions or objectives and goals. It is a carefully designed and conscious effort of an extension agent to meet the needs, interests and wants of the people for whom the programme is intended.

4.1. Principles of Extension Program Planning

After a critical analysis of the program planning principles available in extension literature, Sandhu (1965) identified a set of principles that may be applicable in developing countries. These are:

1. **Extension program planning is based on analysis of the facts in a situations**

It is important to take into account the conditions that exist at a particular time. This implies that factors such as grazing land, economic trends, social structure economic status of the people, their habits, traditions and culture, in fact everything about the area in which the job is to be done, may be considered while planning an extension program for an area. Theses factors may be viewed in terms of established long-term objectives and rural policy. The outcome of pervious plans should also be reviewed and results utilized.

Brunner and Yang (1949) argue that there is no greater mistake than to assume that technical know-how alone will solve the problems of the livestock farmers. They say that no program or even technique can achieve the desired results when not in harmony with the culture of the people. 'Extension knows, if need be, the survey way is to effect cultural change by the slow but certain process of education.

2. **Extension program planning selects problems based on people's interests and needs**

Sound program building selects problems based on people. It is necessary to these problems which are most urgent and of widest concern. Choice of problems must be from among those highlighted by an analysis of the facts regarding what are the felt and unfelt needs. To be effective, extension work must being with the interests of the families. It must meet interest and use them as a spring-board for developing further interest. It is common knowledge that people join together because of mutual interests and needs.

Brunner (1945) said that an extension program must meet the felt needs of the people. Leagans (1961) has recommended that the extension workers adopt the subject matter and teaching procedure to the educational level the of the people, their needs and interests, and to their resources.

3. **Extension program planning determines definite objectives and solutions which offer satisfaction**

In order to hold interests, we must set working objectives and offer solutions which are within reach and which will give satisfaction on achievement. This is related to motivation for action. People must see-how they or their communities are going to benefit from the proposed solutions. Very often the simplicity or dramatic effect of the practice recommended is the most potent factor in its wide adoption. Further, if there is to be progress, the objectives must be periodically revised in view of the progress made. In other words, as change occur, objectives need to be redetermined to allow for even further progress to be realized.

4. Extension program planning has permanence with flexibility

Any good program must be forward looking and permanent. Permanence means anticipating years of related and well-organized effort. Along with this lower process, which both follows and makes a long-term trend, experience has shown that particular items will need to be change to meet unforeseen contingencies or emergencies. Without flexibility, the program may not, in fact meet the needs of the people. A program should be prepared well in advance of its execution but not too far ahead of time. Ordinary events may subject it to change in part though not in total. It is therefore obvious that an extension program must be kept flexible to meet the change needs and interests of the people.

5. Extension Program Planning has balance with emphasis

A good program should cover the majority of people's important interests. It must be comprehensive enough to embrace all age groups creeds and races at all levels and community problems. It is futile to deal with only one phase of life in a community as an end in itself. At the same time, a few of the most important or timely problems should be chosen for emphasis. To avoid scattered effort, some things must stand out. Decision must be made as to which of the needs are most urgent. The next consideration in choosing items for emphasis is to promote efficiency by permitting a good distribution of time and effort throughout the year. Too many things carried out simultaneously will divide either the worker's or the people's attention.

6. Extension Program Planning has a definite plan of work

A plan of work is an outline of procedure so arranged as to enable efficient execution of the entire program. It is the answer to what, where, when and how the job will be done, in carrying out program plans, different leaders and group may work on various phases, i.e. the women in the community may work on one segment, the men on a second segment and youth-club members on a third. Organization should be used as a tool to accomplish these purposes, never as an end in itself.

7. Extension Program Planning is an educational process

Extension program have helped people to solve many problems, but an equally important outcome has been the development of the people themselves to the end that they can more effectively identify and solve the many other problems which confront them.

The process of program planning is in itself an excellent teaching device. This concept should encourage the extension workers to devote sufficient time and effort to developing block extension programs. People will become interested in the program when they are involved in the planning process. So; efforts are necessary to involve a large number of people in identifying their needs and significant interests. Effective program planning is a scientific, problem –solving process, in which skilled thinking in necessary to help people meet and overcome the complex problems of today's society.

The people who do the planning may participate in local surveys and neighborhood observation. This provides an opportunity for them to learn more about their own community and area and increase their interest. The extension worker has the responsibility of providing local leaders with the knowledge, skills and attitudes they must have if they are to help in educationally serving the people. Essentially, learning takes place through the experiences the learner has and the responses he makes to the stimuli of his environment. The experience gained in finding facts, analyzing situations, recognizing problems, stating objective and thinking of possible solutions and alternatives should make for a better and more effective learning environment. The extension personnel should remember this fact and provide opportunities for the effective participation of local people in program planning.

8. Extension program planning is a continuous process

Since program planning is viewed as an educational process and since education is seen a continuous process; therefore it logically holds that extension program planning is a continuous process. There is no question of exhausting new knowledge, either in the subject matter with which we deal or in the methods of teaching. With the constant flux of agricultural technology, extension education is faced with an increasingly more

difficult job as it tries to serve the needs and interests of the people, Sutton (1961) said that extension in a changing society adjust and plan for the future to serve the needs of people. He set forth five steps which might be useful in making necessary adjustments:

i) Keep close to the people.
ii) Be flexible and ready to grasp with firmness new problems as they arise
iii) Work with people in seeking practical solutions to their problems.
iv) Keep abreast of technological and social change
v) Close the gap between research discovery and practical application.

It is obvious that tomorrow's problems will not be the same as toady's. So extension must make periodic adjustments in its plans to meet the changing problems. Extension must also be alert to the change that is going on in science and technology. With new technology, solutions to problems change. It is, therefore, necessary to view extension program planning as a continuous process through its recurrence is cyclic.

9. Extension Program planning is a coordinating process

Extension program planning finds the most important problems and seeks agreement on definite objectives. It coordinates the efforts of all interested leaders, groups and agencies and considers the use of resources. It obtains the interest and co-operation of many people by showing them why things need to be done. This is important in working with people and their institutions. Within the extension organization, the department staff may work together on integrated program, each member devoting of his energy to appropriate phases.

10. Extension program planning involves local people and their institution

Involvement of local people and their institutions is very essential for the success of any program for their development. People become interested and give better support to the program when they are involved in the planning process. So, extension programs should be planned with the people.

11. Extension program planning provides for evaluation of results

Since extension program planning involves decision-making procedures, so evaluation is important in order to make intelligent decisions aimed at achieving the stated objectives. Matthews (1962) pointed out that extension program planning and evaluation go together.

Effective evaluation will, of course, depend on clear objectives, knowing which people we are trying to teach and having records of the results in terms that reflect changes in their action. Starting a program with the intention of engaging in a careful evaluation at the close of a specific period has a salutary effect on all the intermediate processes. However, provision has to be made both for concurrent and ex-post facto types of evaluation.

4.2. A Program Planning Process

Planning extension and rural development programs has nine stapes. The various steps are:

1. Analyze situation

Situation analysis is defined as an effort to identify the problem or need gap or condition that exists between "what is happening" and "what should have happened" or between what is more desirable and the opportunities available to achieve the desired situation. During situation analysis information should be gathered on problems, needs and opportunities, which is needed to have an insight and make decisions for actions afterwards. Situation analysis involves collection, analysis and interpretation of the existing facts (hygienic management, treatment practices and control measures of diseases etc.). During data collection, farmers will be interviewed on many issues concerning the area. At this time, problems in the animal health are all listed. Also detailed one-by-one interviews with key informants will be conducted to get more information.

Good planning depends on the availability of adequate and reliable data and scientific elaboration and interpretation of the same. Extension workers must have adequate knowledge of what farmers produce and how the production can be stepped up the maximum.

An intimate knowledge of the hygienic management, treatment practices and control measures of diseases is essential for purposeful program planning in animal health. Hence it is of great importance that all extension workers possess the factual and basic farm and family information for preparing sound family and village plans. There is no research evidence, however, to suggest what kind and used for this purpose.

Figure 4: Collecting information from key informants

The data collected should be analyzed and evaluated with the help of the entire team of extension workers and with the active participation of people's representatives. The following criteria should be met in order to ensure that this has been adequately followed:

i) Facts needed to evaluation the accomplishment of the previous year's program are collected
ii) Local facts needed to define correct and projected needs and interests and problems of the area are assembled.
iii) Need facts are collected by:

a) concerned extension staff;
b) appropriate state extension specialists; and
c) other local people.

iv) The basic facts assembled and collected about background information are analyzed and interpreted.

v) The situation revealed by the interpretation is projected.

vi) The following groups are involved in the interpretation and projection of the basic facts:
a) Area extension staff
b) Planning Committee members
c) Appropriate State Extension Specialists
d) Other local people

vii) The major needs and problems of the area which are within the scope of extension's educational responsibility are identified.

viii) The following groups are involved in identifying the major needs and problems of the block:
a) Area extension staff
b) Planning committee
c) Appropriate State Extension Specialists
d) Other resource persons
e) Other local people

The result of situation analysis may help the involved people in the process:

- To have good understanding on the existing social, cultural, economical and other conditions of the target people/area;
- To identify the problems to be solved or the gap that exists between what is happening and what should have happened as well as ways to solve them; and
- To develop effective and successful extension program plan that will provide an extension workers with a clear procedure to follow in the process of implementation of the program.

2. Select problems with due regard to priorities

Selection of problems to be tackled will involve identification, classification and selection with due regard to priorities. Identifications of problems; will be done on the basis of situation analysis. From the data collected during situation analysis, the main animal health problems in the area will be identified (e.g. hygienic management, treatment practices, nursing sick animals and control measures of diseases etc.). From the listed problems with the involvement of the communities, the most occurring problems will be selected. They will be also asked to select the most highly ranked problems from the list selected.

Once the problems have been identified, it is desirable that they be properly classified into the following categories.

a) Problems which can be solved by the people themselves with no outside financials aid
b) Problems which can only solved with the help of government funds.

In view of the limited resources and unlimited problems, it is essential that some problems which need immediate solution should be selected for formulating programs to solve them. Trying to meet all needs at any one time may be beyond the planners. It may confuse the villagers and is certainly unnecessary. Efforts should be made to select problems, therefore, with due regard to priorities both form the point of view of the national needs and people's interests. In other word, it is necessary for the extension planners and the people's representatives to select problems and fix priorities based on their needs and the resources and technology available.

The following conditions will exist when the requirements of this step have been adequately met:

i) All the problems that can be solved by the villagers with their own resources have been determined.

ii) Those problems that can only be solved by Government funds are also determined.

iii) All the problems in the areas are collected and identified democratically through participations of village people, the entire extension staff and other who contribute to the program.

iv) Of the identified problems, the most felt and widest concern are selected by the extension agents and people's representatives.

v) Selected problems are related to the family, community block and district situation.

vi) For tacking the selected problems, the time is scheduled on greatest priority basis.

vii) Priorities are determined relative to the major problems, needs and interests as determined by the planning committee

viii) The extension workers and the program planning committee members are involved in determining priorities.

Figure 5: Prioritizing problems with farmers

3. Find solutions to problems

The animal health worker and extension officer at the peasant association (PA) level are the most important functionaries who advise the village families and the village institutions regarding solutions to their problems. The animal health worker and extension officer can join the PA team to help the people and the department officers in finding solutions to agricultural problems of the area. Experiences of the farmers and suggestions of the specialists will help in arriving at a joint decision.

Solutions are sought for the most problems which were prioritized by the farmers. For example, when finding solution for problems on treating sick animals different community members should be advised. During situation analysis, the area may found as the area which does get access to conventional animal health services despite attempts by development organizations to facilitate availability of veterinary drugs and skills. As a results, farmers relied heavily on traditional alternatives, such as use of traditional remedies to heal their animals. In this case to find the solution, farmers will be asked to list the most occurring livestock diseases. They also identify and analyze the most confidently used traditional treatment. They also asked to select men and women with excellent knowledge of traditional animal health care in their locality. The selected traditional healers should rank ten diseases that are most commonly treated using traditional remedies. Key informants also interviewed on detailed information on traditional remedies used on selected diseases, including ingredients used, methods of preparation and administration; and traditional practices aimed at finding out who holds the knowledge and how it will be shared and used.

The following conditions will exist when this step has been properly carried out:

i) All the available research findings in the State are collected and projected.

ii) Suitable solutions to the problems according to the research findings are made by PA level and district level specialists.

4. Determine objectives

It is essential in the program planning process that before deciding on the projects to be undertaken, basic objectives of the program are determined by the villagers in consultations with the extension staff. The objectives should be determined on the basis of the situation analysis. Determination of objectives is the most important function of extension program planning. The following conditions or qualities will exist when objectives have been determined adequately and properly.

i) Objectives have been determined related to major problems, need and/or interests as determined by the program planning committee.

ii) Both immediate and long-term objectives have been determined.

In the case of ethno-veterinary practice, the objective can be stated as:
To identify and validate treatments that have been developed by traditional healers whether they need to be improved after testing the efficiency for a season.

Objectives of the extension programs are defined based on the situation of the target groups that is the groups in which the extension organisation intends to serve. Therefore, target group analysis is the next and most decisive step in the extension program planning process for deciding on which:

- Problems that an extension program will be aiming at;
- Objectives are more appropriate to solve the problem of the target group and
- Extension communication methods and contents are appropriate.

In general, the selected objectives to meet in the future courses of actions should fulfil the following requirements:

1. It should be specific that is it should not be stated in general terms. Examples, to reduce disease incidence by 10% by the end of 2002. But not as to reduce disease incidence.

2. It should be measurable by using some performance indicators. Example, morbidity rate/mortality rate;
3. It should be time specific i.e. objectives should have time frame within which they will be accomplished. Example, at the end of 2005, etc.
4. They should focus on results of a given program but not on the activities to be done for the successful achievement of a given project.
5. It should be realistic and achievable; and
6. If possible the people, who will be responsible for its accomplishment, should set it.

5. Plan a Program

It has been said that an extension program is a written statement of situations, objectives, problems and solutions which has been prepared on the basis of an adequate and systematic planning effort and which forms the basis of extension teaching plans.
It is of utmost importance that the staff and the people in each area not only develop an extension program, but also prepare the program in a written form that is readily understood and is suitable for obtaining approval and use as a guide for officials and non-officials.

The problems should be stated from the viewpoint of the farm, the home and the community. They should not be stated in terms of solution. The objective should also be stated a lower level in specific and measurable terms. They should include details about the learners to be reached, subject matter to be taught and the behavioral changes to be effected.

Although the solutions, recommendations or teaching will vary with different situations and although there are many exceptions, it is essential to be concise and clear in starting solutions to the problems. Extension workers should not offer to help the extension public with problems for which no adequate or practical solutions is available.

The following conditions will be met in order to have a good program statement:

i) The written program should be suitable for use by the staff, planning groups and other individuals or groups concerned with the program.

ii) It should state the primary facts that clearly reveal the situations for major subject or problem areas.

iii) It should clearly state the important problems or needs identified by the staff and the people in the programming process.

iv) It should state both the long-term and sort-term objectives for each major subject or problem area that is to be focused on in program execution over a period of time.

v) It should state objectives of the program in a form that-

a) clearly reveals the kind of new conditions or situations desired;
b) is meaningful to the staff and the people; and
c) will serve as a useful guide to program execution

vi) It should specify the subject matter related to each objective that is highly significant to the people, socially or economically or both.

vii) It should include a summary of the long-term program prepared in a form suitable for public distribution, containing the following items:

a) It should be made available in a summary form containing major facts about the overall area situation.
b) Brief statements of the organization and its objectives.
c) Brief descriptions of the situation, statements of major problems, long-term objectives and major means of achieving them for each of the major subject or problem areas.
d) The names of members of the planning groups and the official staff.
e) Other appropriate information.

viii) It should be made available in a summary form to all the members of the planning groups and the professional staff.

ix) It should be circulated by appropriate means so that the general public can understand its nature and objectives.

x) It should be used as the basis for developing annual plans of work.

6. Plan of Work

Preparing a plan of activities directed towards solving selected problems is an important step. A plan of work is the listing of activities by which the objectives already decided upon are to be achieved. It includes the methods of carrying out the programs such as demonstrations, meetings farm contacts by the extension workers etc. It indicates, the places, times and persons responsible for carrying out the program as well as the method of evaluating progress. Thus it answers the questions of what, how, when, where and by whom the work is to be done.

Example of method of implementation for the objective stated earlier.

To identify and validate treatments that have been developed by traditional healers whether they need to be improved.

The trial design will be:

- Worm infected sheep will be selected
- Animals are grouped into five based on their age, weight, sex, origin and level of infestation
- Two groups receive traditional treatment
- Two groups receive conventional treatment
- One group receive no treatment for control

The data collected from the experiment will analyzed to identify efficiency, dosage rates preparation and application.

A well-prepared plan of work will provide details about:

i) People to be reached;
ii) Goals,
iii) Teaching procedure to be followed;
iv) Duties, training and recognitions of leaders;
v) Part to be played by extension personnel;
vi) Part to be played by other agencies.
vii) The plan indicates for each job execution:

a) How it will be done
b) When it will be done
c) Where it will be done
d) Who will do it
e) What people are to be reached

viii) The plan of work includes a calendar of activities and events

ix) Techniques, methods and materials and other resources are indicated for each major problem and are appropriate for the objectives to be accomplished.

x) Identification of subjects matter to be covered is included for the educational jobs to be done.

xi) The subject matter is appropriate considering the people's level of interests, knowledge attitude and available time and technology.

xii) Specific changes to be achieved or evidence of accomplishment are indicated clearly.

7. Implementation Phase

i) Make advance arrangement for inputs and teaching aids

After the plan work is ready, it is necessary to make advance arrangements for the supplies needed, such as drugs, vaccines, acaricides, vet. equipments etc. Similarly teaching aids, such as audio-visuals, literature exhibits etc. should also be prepared and procured in sufficient quantity and well in time.

ii) Interpret the approved program to the staff and the community members

Although the extension program has been planned with the active participation of extension workers and the community members, stills there is need that the approved program be interpreted to the extension staff and the people's representatives.

The following critical will be met to ensure that this step has been adequately undertaken.

- The approved program has been explained adequately.
- The plan of work has also been explained adequately
- They have been explained to all the district staff, all the community members and other important leaders.

iii) Carry out plan of work

The approved program should be carried out, step by step, according to the plan of work and in a coordinated manner. The success of a program depends on the methods used to implement it. There is no single extension teaching method that may be good under all conditions. Further, a proper combination of extension teaching methods is a must. Research evidence shows that there is need for a planned communication strategy for effective implementation of a program.

8. Evaluation of Accomplishments

Concurrent and ex-post facto review of progress towards the objectives is an essential phase of extension program planning. This keeps the extension agency on the right track and helps in differentiating means from ends. Evaluation of the activities should be undertaken jointly by the extension staff and the people's representatives at different levels. Most program organizations make a provision for fortnightly, quarterly and annual evaluations of programs. Planning of future program should be based on the evaluations results of the previous one. Successful evaluation gives a correct direction and speed to a program.

5. COMMUNICATION

5.1. Communication in Animal Health Extension

Communication lies at the core of any extension program. Without good communication new concepts or technologies will not reach the people who might benefit from them. Without a reverse flow of information from the people, research workers or administrators will never really know why promising ideas failed to gain acceptance or even what it is the people think they need to break through the barriers of low productivity or poverty. Unfortunately, many people have failed to recognize fully the problems extension staff experience in conveying to their clients not only the technical requirements of a new process but the logic of the whole process and how it can be presented as an acceptable component of a local production system. A new process is not necessarily an acceptable idea because the developer thinks it is good. A person may question why he should produce more than he needs for his immediate requirements if the items are in adequate supply locally, if market prices are low, if he is held to ransom by an expensive and inefficient transport system, and if there is nothing to buy in the stores with any money earned. An extension effort should arise from the felt needs of the people, not simply the availability of a new process. Good communication helps people to express their needs in an acceptable form and to relate their needs to available resources of techniques and funds.

Extension staffs, many of whom are educated at the vocational or technical levels, are expected to be able to communicate regularly on at least three different levels. They must be able to communicate freely with the community they serve, with their colleagues in other organizations or departments involved in development, and with higher level staff who determine policy or control budget allocations.

Communication attempts to bridge the gap between the sources of ideas and potential users of them. It attempts to make available information or skills in a form the public can understand, examine critically, and incorporate into their regular practice, if they can see any benefit in applying them. New ideas, however, are unlikely to be accepted readily if

they appear to run counter to some established local customs, beliefs, religious or family practices, or a farmer's accumulated understanding of how his land should be farmed.

The possibility of any new idea being adopted widely can only be judged against a sound knowledge of local traditions. Identifying a barrier in traditional practices and a breakthrough point may be as important as the new technique itself in changing practices. Extension staffs at the vocational or technical level are a key factor in the communication process. They are normally in regular, direct contact with their clients and are best able to communicate ideas in the colloquial language and idiom the people can understand. Because there may be fewer social barriers between them and their clients, they are in a good position to gather information on the clients' views on a wide range of topics, provided they know what is of interest, and pass it on to persons who can evaluate and use this information.

Barriers to the acceptance of new technologies or to development are not exclusively technical, administrative or organizational barriers such as a bureaucratic structure or the status some senior staffs confer on themselves and how they expect to be approached and deferred to, may constitute barriers more effective than any language problems.

5.2. The Communication Process

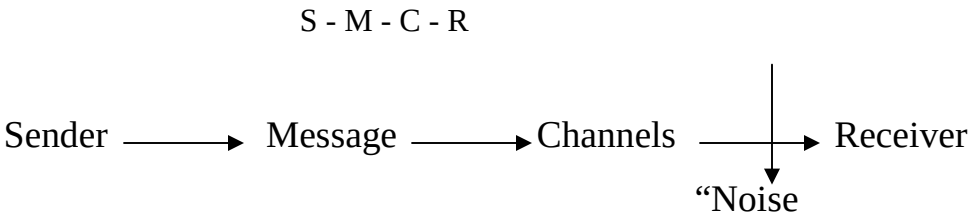
Most communication systems identify four basic elements in the communication process:

- The sender or communicator of the idea;
- The message to be sent;
- The channel or means of communication; and,
- The receiver of the message or the audience.

Working against this is what the communication theorists call "noise", an unfortunate piece of jargon, which for some people may tend to block the flow of understanding rather than facilitate it. A simpler and more descriptive term, such as "barriers" would represent the situation more precisely to many people. Noise, in this sense, is used not simply in its original meaning but covers everything which may prevent a message from

getting through to the intended audience. An example of this may be the suspicion amongst many rural people of strangers and anything they may have to say about their customs or way of life.

This is illustrated in Figure below.



When the Receiver responds to a message this is termed Feedback, and the S - M – C- R process is reversed.

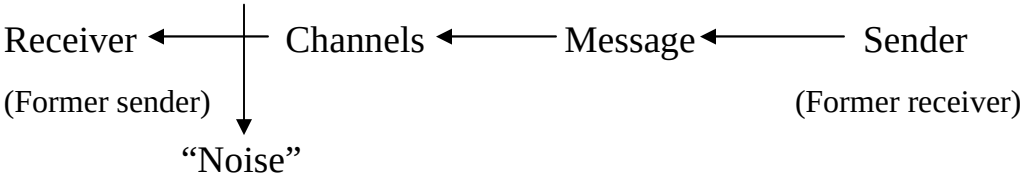


Figure 6: The communication process

In practice, the feedback or response should receive as much attention as the message itself. A message which is either not understood or not acceptable to a community is valueless, no matter how often it is repeated. In fact, continued repetition without modification may annoy the receivers and prove counter-productive.

Feedback is not always complimentary but should be carefully considered.

5.2.1 The Communicator

The communicator is the person who originates the communication or information. As such he must take the initiative of establishing communication links with the community and keeping these functioning. Too often, unfortunately, the original communicators of

ideas have a very limited view of their responsibilities and frame their communications for publication in scientific journals or for discussion with other professionals. They overlook entirely the ultimate use of the information and frame it in technical language understandable only to a limited group in their own field of work.

The task of translating the scientific text into common terms usually falls on extension agents. They have to isolate the relevant information and present it in a form their clients can understand and accept. Communicators at this level need to be believed by and have the confidence of their clients. They can only establish this acceptance or credibility by learning to communicate effectively at the appropriate level.

The success of the communicator depends on having:

- good communications skills - teaching, writing, speaking, drawing, etc.;
- knowledge of and ability to relate to the audience (social/cultural), speaking in terms they understand;
- a positive attitude towards the audience, the topic, him/herself, and the current educational situation; and
- excellent knowledge of the subject and the present circumstance.

A good communicator:

- knows his audience, its wants and its needs;
- knows his message and how to present it to that particular audience;
- knows the most effective channels of communication to reach the audience with his message;
- knows his own abilities and limitations, both in technical knowledge and as a communicator;
- is interested in his audience, its welfare, and how his message can help them;
- is interested in improving his skills in communication;
- prepares his messages carefully, using appropriate materials and aids to arouse interest and ensure a successful reception of its contents;

- speaks clearly and uses terms and expressions the audience can easily understand;
- realizes that establishing a bond of mutual understanding between the speaker and the audience is mostly the responsibility of the speaker;
- is very conscious of the limitations of time and the span of attention of listeners;
- does not try to cover the whole of a major topic at any one time;
- selects only those parts most appropriate to the particular situation; and,
- does not involve the audience too long at any one time.

Based on the same source, a poor communicator:

- omits to supply information which is relevant or useful to the audience;
- fails to give full information and to relate it to the activities of the learners;
- forgets that time and energy are needed to absorb and think over new ideas and practices;
- keeps on talking, even when the audience have stopped, listening;
- fails to develop credibility with his audience;
- fails to understand and allow for the local values, customs belief s and prejudices of the audience; and,
- fails to start out at the correct level .of the audience's knowledge, skills, interests and needs.

5.2.2 The Message

Animal health extension staff normally believe they have some important information and ideas which they hope the people will receive, understand and incorporate into their normal pattern of activities. In some cases they may not achieve this due to incomplete or erroneous information being given to the people, poor presentation of it, or for a number of other reasons. To avoid these difficulties, they need to consider the purpose of the message, its content and how to present it.

The purpose or objective should be clearly defined in their own minds. What change in behavior in relation to animal health do they want to bring about? Is it a change in knowledge, attitude, skill, or in what they expect the audience to do? In general, an objective which is limited in scope to one of these factors at a time is more likely to be successful. The message must be relevant to the receiver. It should be of interest and appear attractive to him. It must be related to something he understands, feels or thinks: something he can accept in relation to his culture and beliefs.

The preparation of a message can do a great deal to make it acceptable to the receiver. It should be organized and presented in terms he understands and in the form of argument or discussion he normally uses. In particular it should conform to accepted social standards and customs of speech, writing or illustrations. Differing treatments can make a message dull, boring, or even totally unacceptable to an audience. Skills in this field, however, are developed more by experience of local reactions to messages than by theoretical training.

5.2.3 The Channels of Communication

The channels of communication may be classified as:

- written;
- spoken; and,
- visual.

There are also combined methods, such as audio-visual which are often more effective than any of the channels used in isolation. A l6mm film with sound or a video tape, may present a complex message more effectively than speech alone.

Written communication

Written communication is indispensable in the day-to-day operations of any organization particularly an extension service.

The advantages of written communication are: -

- with many people, it has greater status and carries more authority than oral communication, particularly if it carries an impressive official stamp;
- in some countries it is essential for transacting any type of official business;
- it provides a generally low-cost method of spreading information to large numbers of people;
- when used in an interesting way, such as in attractive leaflets or magazines, it holds a reader's attention and may stimulate him to seek more information on the matter; and,
- the material can be retained for as long as is necessary and is valuable for confirming detailed instructions given orally or by audio-visual methods.

The disadvantages of this method are:

- many people whom animal health extension staff want to reach are not yet fully literate;
- it is entirely one-way communication unless the reader follows up the contact with a request for further information;
- few people will change their traditional practices just because they happen to have read about alternative methods.

Figure 7: Written material

When planning, developing, and organizing information that may be applied to many forms of written communication, the process that can be used to develop short presentations, radio programs, handouts, and large units of information, such as complete courses of instruction, lengthy presentations, publications, or books include:

Decide on the purpose of the communication and the specific target audience(s). Ask yourself *What do I want to say and to whom do I want to say it?* These should relate to some predetermined communication or educational goals and objectives - perhaps a part of an overall plan. It is helpful to write these down and refer to them during message development to keep your efforts on track.

Make a list of possible points you may want to include. Jot down these ideas without paying much attention to their organization. Concentrate on your target audience and what you believe is most important for them to know about your topic and if the points will meet the intended goals.

Organize an outline of the main points. Consider several possible means of organizing them into a logical, natural-flowing sequence. If you are familiar with the topic, the outline of main points should come primarily from your existing knowledge. These are some possible methods of organization:

- **chronological** - some topics are best-suited to a time sequence; for example, in preparing drug for injection you might begin with cleaning the equipment, followed by sterilization; then preparing drug, cleaning injection area and injecting the drug through proper injection route;
- **simple to difficult** - this method builds from the simpler to the more complex ideas; i.e., in explaining the various methods of controlling ticks you might begin with manual methods and proceed to dusting and spraying with acaricides;
- **known to unknown** - begin with what people already know about the topic and lead into new ideas and approaches;
- **least to most important** - start with less important information and build to the most important (often new) ideas;

- **name the topic** (also called *billboarding*) - begin by listing the points or topics to be covered; then, follow through with each one in the same sequence; and
- **question and answer** - think of the questions the target audience would most likely ask; then, list each question, followed by your answer.

Add the secondary points and supporting information. After organizing the main points, fill in the outline with added information to support the main points. While you may be familiar with the topic and have developed the main point outline from existing knowledge, you may now benefit from some research to generate the best supporting information. Such information may be obtained from an expert on the topic, a publication, or even a library search.

Write without interruption. When you are making good progress with your writing, stay with it to keep the ideas flowing. Don't stop to correct spelling, punctuation, or grammar. Avoid going for a drink of water or to check your mail.

Write like you talk. Ignore the scholarly style of writing and write in short, simple sentences, using contractions, personal words, and sentence fragments.

Link your message to the target audience's experience. Speak the same language they speak; avoid highly-technical words and language. Relate your ideas to real-life examples to which they can relate.

When possible, build some audience participation into the message. Ask them questions to get them thinking. When making a live presentation, plan for some audience discussion. If you ask them a question, give them time to come up with a response.

Spoken communication

Spoken communication takes place during contacts such as:

- home or farm visits;

- enquiries made at offices;
- telephone calls;
- meetings, discussions and demonstrations of all kinds; and,
- radio and TV programs.

Figure 8: Public speaking

Except for radio and TV these contacts allow two-way communication which has great advantages. The initial response or reaction of the recipient of a message may be as important for future planning as the content of the message itself. Lack of understanding can be detected in the reply and may be cleared up on the spot. Gestures, facial expressions and even the tone of voice, both of the speaker and the listener, contribute substantially to an assessment of how well the communication is being received. One obstacle which must be overcome is that: an oral message is not recorded in any way and the receiver may remember it in a different way from that which the sender intended. Particularly, where precise instructions on veterinary techniques are given orally, the receiver has no means of referring back to what was said. For this reason, oral messages are best followed up by some form of written instructions, where these are appropriate, or by a follow-up visit or demonstration to illiterate clients.

Only a limited number of people can be contacted face-to-face in a day. This is likely to be limited as much by the clients' availability based on their patterns of work, as by the extension agents' willingness to meet and discuss matters with them. This makes oral

communication expensive in terms of staff time and effort unless, some form of group contact is organized, but it is nevertheless a very effective method of communication for those contacted and may be the only effective method for people lacking skills in reading and interpreting diagrams. Language itself, however, can be a barrier where the extension staff and the receivers speak different languages or even dialects. Spoken communication then requires a third person to act as an interpreter with all the possibilities of differences in emphasis, or even misinterpretation that implies. The process is awkward, slow and often unreliable. Even when both the extension staff and the receivers speak the same language, differences in dialect, local usages of particular words or expressions, and levels of language may present barriers to effective communication.

The use of language on the telephone must strike a balance between the exchange of lengthy customary greetings common in face-to-face meetings and the highly codified language used, for example, in air-traffic communication. Extension staff should be trained to set a good example in the economical use of limited telephone links in rural areas.

Domestic radio is the quickest and far-reaching medium for conveying oral messages to people in inaccessible areas. It is particularly valuable, and much used, for spreading animal health information in many countries. It is claimed that radio is a low cost method of spreading information. This is true if the information is received and understood by the people, but radio can be an expensive medium, if air-time at peak periods has to be paid for, or if the audience is small or does not fully understand the message.

Without some personal feedback and follow-up, it is difficult to assess how successful a means of communication it has been. Its use is limited normally to giving general information as it is difficult to give specific instructions on technical matters by this method.

Spoken communication enables the communicator to establish a personal bond with the receiver that no other method can equal. In spite of its limitations, when supplemented by

some visual aids, it is likely to remain a most useful method of extension work for the foreseeable future.

Organizing the speech

As with other kinds of writing, you must clarify your purpose for giving the speech and relate that to the target audience. Decide exactly what you want to say, who should hear it, and why they need it. Then outline the important points, organizing them so they flow logically and naturally. Speeches should contain three parts: (1) the introduction, (2) body, and (3) conclusion.

Introduction: As speech length varies considerably, introductions should be planned accordingly. Other considerations relate to what the audience has been exposed to prior to your speech and what will follow. These are some suggested elements of a speech introduction.

Greet the audience - look around the room before you begin to acknowledge their presence. With a short speech, you might merely say hello or good afternoon. With a longer speech, take time to express your appreciation to the organizers and/or agency for the invitation to share your views and ideas. Say some kind words about the group and their activities or reason for being present. Smile. Be positive, with an element of humility.

Set the stage - relate your speech to their previous experience and why they will be interested in your topic. Sometimes it is natural to refer to a prior presentation. Don't be overly promotional, but be motivational; relate your topic to how they will benefit from listening to what you have to say.

Give a brief preview of your message - depending on the topic and the length of the speech, give listeners a preview of your main idea or even the main points.

Get their attention - gain attention by making a vivid statement or presenting an amazing fact or two. Some speakers open with a question relevant to audience interests; others include a bit of related humor, or quote someone famous to gain attention.

Body: Depending on the time and circumstances, you can organize the body of your speech into one to five main points. The points should flow logically and naturally.

Signposts - clearly indicate when each main point begins, such as: My first point is....
Pause between each point; don't run them together.

Enthusiasm - renew your eagerness with each new point. Try to sound excited so they will become interested in your ideas.

Supporting facts - follow each main point with detailed information; do your homework (research), and be creative with supporting arguments. Use facts, quotes, stories, examples, word pictures, etc.

Conclusion: Depending on the time and circumstances, sum up your case in the conclusion.

End cue - indicate you are about to conclude your speech, but be careful not to drag on very long. People expect you to end soon after your ending cue.

Review - don't add much new information at this time. Quickly restate the main points or central idea.

Final statement - possibly add one clinching fact or argument. This should relate to real life so they can see how your idea(s) can be of value to them. End with a challenge, or quickly tell what you expect them to do with the ideas and information.

Eliminating speech anxiety

Everyone experiences some level of speech anxiety or stage fright. Beginning or inexperienced speakers are often so nervous they suffer a partial mental block. Their brains are not fully operational when they speak before a group, especially if they believe the speech is important for one reason or another. Even experienced orators sometimes feel a modest level of anxiety, but they know how to prepare for the presentation and control their anxiety. The answer to reducing anxiety is to have a good mindset, be prepared, and practice. Good speeches take considerable effort. After experiencing several successful presentations, you will gain confidence and your anxiety will lessen.

• **Reasons for speech anxiety:** Others know us by how we look, dress, and act. We instinctively know we are exposing our intelligence and character when we speak and we fear that we will not present ourselves well, that people might think less of us if we don't meet their expectations. These are good reasons to be nervous.

• **Reduce anxiety with a good mindset:** Look around the room at the group to whom you must speak. Is there anyone you want to see fail? Aren't you interested in getting to know the others through their speeches? The truth is that everyone in the room is supportive and wants to hear what you have to say and to see you succeed. They are willing to forgive any mistakes you make (within limits) and are on your side.

• **Prepare by practicing positive imagery:** As you prepare for your speech, imagine yourself successfully delivering it. Imagine an audience that is interested in your ideas and are attentive and supportive. This will help build a positive attitude and inner confidence.

• **Write a good speech:** Take the time to write a speech that will maintain attention - usually with a thorough outline with well-organized information. Find out as much as you can about your intended audience and adapt the presentation to their interests. Include

some attention getters or interest holders that will capture and hold their fascination. Use a variety of methods to add color to your speech.

• **Rehearse:** Practice your delivery by speaking out loud to an imaginary audience. Do this until you are comfortable and smooth with the verbal delivery. Work on awkward spots - those points or ideas that you have difficulty in verbalizing. You may have to try another approach - maybe rewrite a section to get a certain point across. With adequate rehearsal, you will avoid awkward gaps where you stumble around mentally, trying to think of the words you need to proceed with the point. Most of the best professional speakers are best because they rehearse.

Visual communication

Visual aids are teaching aids that are used to support oral presentations, such as flipcharts, slides, overhead transparencies, etc. Display graphics are visual communication materials that stand alone and do not normally have someone nearby to explain them. Common display graphics used in education are posters and exhibits. The advertising industry uses many forms of display graphics in newspapers and magazines. Pictures, charts, diagrams, posters, exhibits, and displays can perform important communication functions in countries where people are familiar with the use of symbols. Visual and oral methods combined are mainly used by extension staff to serve people with a limited level of literacy. Pictorial methods are now being used frequently and effectively to draw attention to an animal health extension message in many countries. Staff must be careful, however, to verify that the illustrations and symbols used are properly understood and mean to the people what they are intended to mean. There can be considerable differences in understanding of what symbols mean between peoples of different backgrounds. Films in particular must not use too sophisticated techniques to present information or they may simply be dismissed as “magic”.

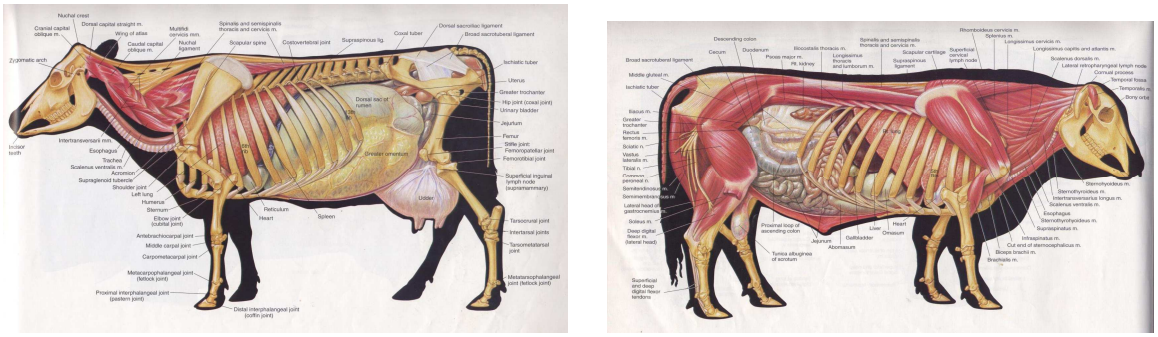


Figure 9: Visual materials

The advantages, of visual communication are: -

- **Visual aids increase learning and retention:** Studies show that visuals increase learning by 35% and retention of information by 50%.

Visuals assist with organizing information - they make it easier to understand and file away. You can emphasize the most important points with visuals.

Visual aids speed up learning - the universal language of visual communication saves teaching time. You can show things that are difficult to explain verbally. Slow learners are especially helped.

Visually-communicated ideas are stored in the right side of the brain – when visuals accompany a verbal presentation, receivers store the information in both sides of the brain for improved learning and retention.

Visually-communicated ideas interact more quickly with mental images (pictures) drawn from past experience - this increases globalization (fitting new information into one's grand scheme of truths).

- **Visual aids improve the effectiveness of the presenter:** Using visual aids facilitates the following:

Visuals elicit better planning and organization - when planning visuals you must think through your message from the receivers' point of view.

You interact with your visuals - you feel less pressure when the audiences' eyes are focused on your visuals, so you relax and teach better.

Audiences appreciate and enjoy visuals - improved interest raises the presenters' confidence.

- **Visual aids improve the audience's perception of the speaker:** They see you as being better prepared to communicate and/or teach. They see you as looking more professional. They find you as more persuasive and convincing, more credible and trustworthy. They see you as being more entertaining. You hold their interest.

Planning a visual presentation

The first five elements of this process are common to planning any other kind of communication.

- **Determine your purpose:** Be specific about what you want to accomplish. Do you want to change attitudes, knowledge, or skills? What are your goals?
- **Target an audience:** Select a specific target audience and tailor your presentation to them. In addition to the usual audience characteristics (age, sex, income, education, etc.), what are their knowledge and attitudes about you, your organization, and your topic?
- **List the main message points:** Then organize them for logical flow.
- **Add supporting points to the main message:** Add the necessary details to describe and support your principal points. Then rethink the ordering of them. Is

there something missing? Did you include something that isn't necessary? You may need to remove it.

- **Write your presentation out as completely as a script:** This step is not always necessary, but is if you expect others to use it. Writing out a complete script can be very helpful if you wish to do your best job of preparation; but it's important for presenters to deliver thoughts to the audience, rather than reading the precise words of sentences.

Use the left one-fourth of the script page for pictures or descriptions of your visuals.
Leave extra space between each thought - these thoughts may be a word, a phrase, or one or more sentences.

Write as you talk - use conversational language with contractions, sentence fragments, personal pronouns, etc.
Vary sentence length - but try to average about 12 words per sentence.

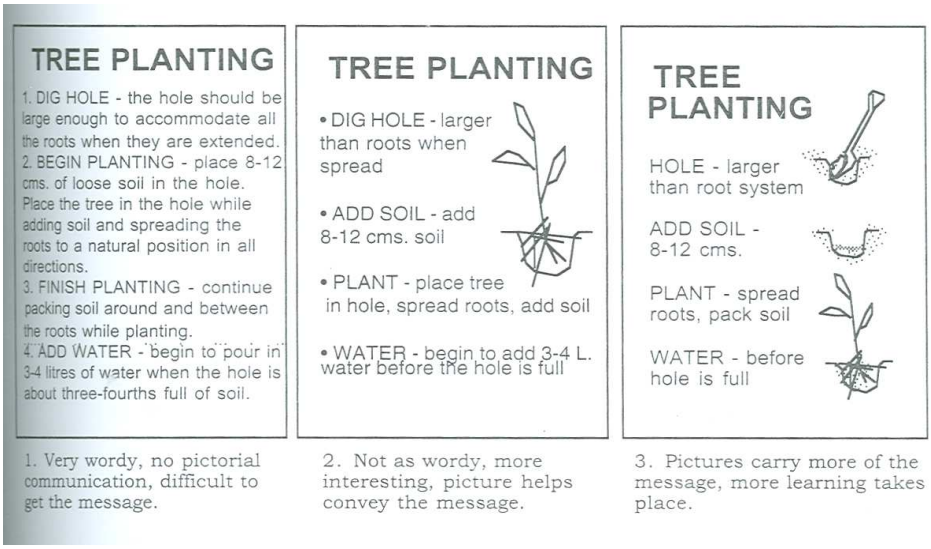
- **Read your script out loud:** This will help you catch certain awkward word combinations that are difficult to verbalize, and improve the flow. Change difficult word combinations into easier language.
- **Mark visual support spots on the script:** Where visuals will be helpful to emphasize an important point or clarify a difficult concept. Visuals may be added to maintain interest and continuity. In the visual description area at the left side of the page, describe or make a sketch of the immediate visual idea that comes to mind.
- **Think through a variety of visual ideas:** Then select the ones that best enhance the communication of that particular point. Simple, to-the-point visuals are usually more effective. Minimize the use of words; maximize the use of pictures, charts, and other visual techniques.

The use of color in visual materials is important; if properly used it can greatly enhance the impact of visual materials. In general, the colors chosen should be "logical", i.e. grass should be green or brown, according to the season or circumstances, tree trunks grey or

brown and rivers blue or fawn according to the state of erosion. Care must be exercised in the use of colors for posters, or for printing pamphlets, circulars, handouts or abstract diagrams. Certain colors may be taboo or "unlucky" in particular areas while others may have a particularly favorable significance. This may be important if "color coding" is used for easy identification of particular types of documents. It may not be easy to extract information on inauspicious colors from local people as the topic may be one they are not willing to discuss with strangers.

The illustrations below show several approaches to designing a visual aid

- *Reduce the words on a visual:* Complete sentences are seldom necessary. Limit the words to key words and phrases; try to include an illustration or graphic to increase interest and learning. The presenter can orally add further descriptions of milking techniques; the visual aid only needs to contain the basic points.



1. Very wordy, no pictorial communication, difficult to get the message.

2. Not as wordy, more interesting, picture helps convey the message.

3. Pictures carry more of the message, more learning takes place.

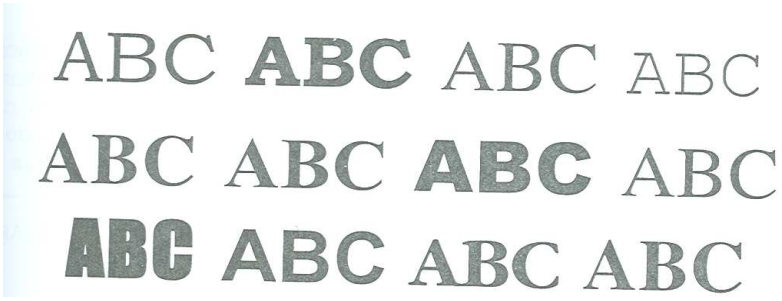
- *Reduce the elements on a visual:* Too many elements on a visual give an overcrowded appearance and discourage viewers.
- *Legibility of visual aids:* As shown above, too many words and elements reduce the legibility of visual aids. With too many lines of letters and/or numbers, there is no space to make them large enough for easy viewing. It is also important to avoid overcrowding so your information is focused; it should be brief and easy to comprehend. The following other factors of legibility apply:

Size - letters, numbers, and illustrations should be large enough for all viewers to see easily. This relates to room size and how far away viewers are from the visuals. There is space for larger letters, numbers, and illustrations if the visual is kept simple.

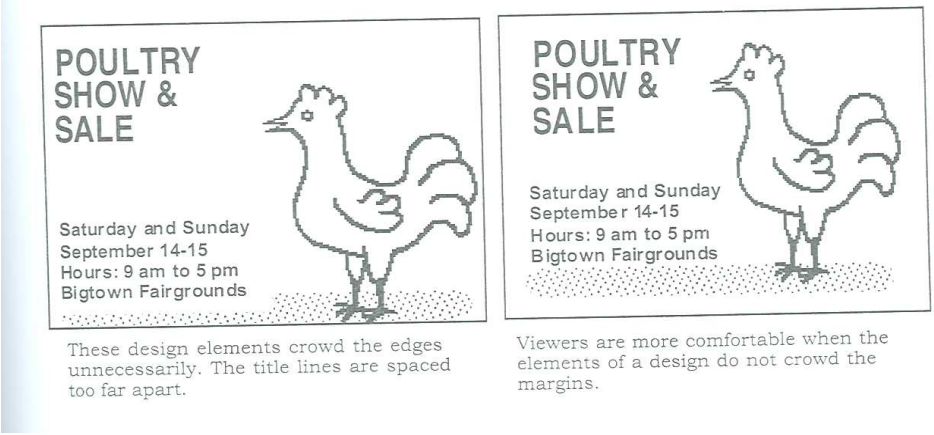
Contrast - lines that form your letters, numbers, and illustrations should contrast with the background. Black on white is the greatest contrast. Dark and medium colors on a very light background work well and are easier on the eyes than black on white. Pale yellow letters on a white background doesn't provide enough contrast for easy viewing.

Line thickness - letters and numbers should have a line thickness of one-sixth to one-eighth of their height. Illustrations also require good line thickness for good visibility.

Style - simple letter styles are easier to see than fancy, ornate letters. Avoid unnecessary detail. Compare the following fonts for easy viewing. View them from three or four meters to see the styles that maintain their visibility.



- Maintaining ample margins to avoid placing elements against the edge of the design area: It gives a crowded look and viewers are less comfortable when the margins are inadequate. Maintain ample margins on at least two or three edges. Compare the appearance of the poster designs below. One has crowded margins and the other allows ample space at the edges.



- Grouping elements to maintain simplicity: It is easier to create a pleasing design when you keep it simple, with only a few elements: The illustrations below show the elements ungrouped in the design on the left, and grouped in the design on the right.

Extension staff, in any field of work, must adapt their methods to the particular subject, to the ability of the audience to understand the different techniques used and to the facilities available. Usually they will employ a combination of two or more channels of communication in the same meeting or presentation. A well written personal letter is attractive to many people.

5.2.4 The Receiver or the Audience

The audience is made up of all those whom the communicator wishes to receive, understand and use the ideas or information he is presenting. Messages are interpreted by

receivers related to their past experiences and are received through their perceptions screen. Message reception is influenced by the receiver's:

- ease of obtaining the message;
- communication skills, such as the ability to read, listen, and interpret symbols;
- motivation to receive information and to learn;
- attitude toward the sender and his or her organization, the topic, and the present situation; and
- knowledge of the subject (prior experience), and if he or she can relate the information to reality.

If an audience is to make progress, an extension agent must help them to change their knowledge, attitudes and behavior. If no change takes place, there has been no effective communication and no progress. Communication has taken place if the people learn useful facts (acquire knowledge), or if some of them begin to feel a new procedure may offer some benefits (change their attitude), or decide to adopt a new technique (change their behavior).

People are different in many ways. One major difference is in their ability to understand veterinary ideas and practices. For this reason, communication sometimes fails because the communicator uses terms too difficult, or too unfamiliar, for an audience to understand. Animal health extension staff cannot expect much progress in getting people to plant forage crops on parts of their land if the idea is presented to them in words and expressions very unfamiliar to them. A good test is for extension staff working in a common language such as English to translate some technical instructions into a local language to appreciate how difficult it can be to find suitable terms to express many important concepts to the people.

Good extension practices, therefore, require a thorough study of the clients in order to know their abilities, interests and backgrounds. This is done normally through the conduct of a study of the social and economic conditions of the area in which they live. In more leisurely times, this was accomplished simply by living and working amongst them

for a considerable period and recording the knowledge acquired. This must often, now, be speeded up by the use of carefully worded surveys or questionnaires. An understanding of the groups with whom extension staffs are to work is essential to plan their approach or strategy in terms of methods and the use of available resources.

An obstacle to good communication is **"noise"** (or barriers). Some basic problem areas (noises) that are inherent in communication are:

- *Encoding deficiency* relates mostly to the sender's lack of communication skills and knowledge of the audience. This might involve using words or examples the receivers do not understand. A sender might refer to prophylaxis when disease prevention would have been understood. He/she might speak with a nasty, scolding tone that confuses the audience.
- *Gatekeepers* are people that control the media or other access to communication channels. For instance, an extension worker might have important message about livestock disease that threatens his district, but a warning message can only be broadcast on the radio if the radio station programmer allows it.
- *Interference* is often a more physical problem to reaching a target audience. If extension worker is allowed to voice an announcement over a local radio station, the receiver may not receive the message because of radio interference, or a baby crying so loudly the farmer can't hear the message.

Experienced communicators can anticipate when barriers are likely to occur, and try to forestall them. For example, the lack of material for an animal health extension project may be such a barrier to effort by the community. To overcome this barrier the extension staff can assist with the provision of veterinary materials before proceeding with the main task. Generally speaking, they should not advocate any change of practice unless they have made provision for overcoming any of the barriers to achievement which are likely to arise.

6. EXTENSION METHODS

Extension methods are communication techniques that are used to transfer information to the receivers or audience. It is the task of animal health extension staff:

- to provide people with an opportunity to learn, by methods, and in circumstances, appropriate to them; and,
- to stimulate in their clients mental and physical activity which leads to effective learning.

To achieve their objectives, animal health extension methods must meet these two major requirements.

People learn in different ways, some by listening, some by observing, and some through discussion. A person will, generally, learn more effectively by using a combination of two or more of these methods. Studies suggest that the more varied the methods of extension used in an area, the more people change their attitudes and practices.

Different extension methods have been found to be more effective in different situations, and at different stages in the adoption process. All people do not learn or change their practices at the same speed. Some may be ready to adopt a new practice and need to know how to carry it out, while others are, as yet, scarcely aware that it exists or are just beginning to show an interest in it. For these reasons, the use of a variety of extension methods, suited to the needs of the people, and used either consecutively or in some cases simultaneously, is necessary to carry out an effective animal health extension program.

Appropriate methods which animal health extension staff can use fall into three main categories:

- individual methods;
- group methods; and,
- mass methods.

Individual and group methods will be dealt with jointly in this section while mass methods follow in the next section.

6.1. Individual Extension Methods

Individual, face-to-face, contact has been found to be the most effective way of facilitating the learning process in an individual. Personal contacts have many important values such as:

- the personal influence of an extension agent is important in securing cooperation and participation in extension activities and in the adoption of improved practices;
- people will listen to the advice and suggestions of extension staff whom they feel they know and like personally, and whose knowledge they respect; and,
- immediate feedback is obtained on whether the message has been understood in the sense intended.

These factors pose considerable problems for extension organizations in developing countries. There are usually serious shortages of mature and experienced staff available for extension duties and the organizations have to rely mainly on young urban, recently qualified, people who lack a depth of field experience and who find it difficult to establish the trust and mutual respect necessary between the extension staff and their clients. This may be a particularly serious problem in communities where there is more respect for age and wisdom than for formal education. The need to move relatively junior staff at short intervals to widen their experience and improve their career prospects, makes it even more difficult for them to establish long-term relations with the people in their area of work. On the other hand, more mature staffs tend to prefer a less active role and are normally offered few incentives to take up such posts, which often involve considerable travel and irregular hours of duty. A small core of experienced and well rewarded staff assisting a larger, more mobile, group of younger and less experienced people may be the best that many countries can hope for at this stage.

The commonly known individual extension methods are:

1. Home/Farm visits

It involves meeting individually with the farmer or farm worker at farm or home. Even though it is a costly exercise, it has some benefits that make it very recommendable.

Some of the purposes of making home visits are:

- to acquaint the extension staff (particularly new members) with the client and his family, to exchange traditional courtesies, and to establish a friendly working relationship;
- to obtain first-hand knowledge of the living and working conditions of the client and his family, and the problems faced by them;
- to supply general information on animal health matters to that family;
- to answer specific requests for help (e.g. requests for information, drugs, or other materials), whenever possible;
- to explain in detail, and demonstrate where practicable, recommended veterinary practices (e.g. helminthes control techniques);
- to adjust general recommendations on veterinary practices given in pamphlets or in radio programs to suit the person's particular situation or problems;
- to follow up and observe the results of recommended veterinary practices which have already been adopted;.
- to identify and arouse interest in problems the person may not yet have recognized as such;
- to plan an activity such as a meeting or demonstration;
- to invite the person and his family to take part in a planned activity; or,
- to recruit, train, or encourage a local volunteer leader to organize or lead a local animal health development committee.

Figure 10: Farm visit

Some features of home visits

Some of the advantages of making home visits are:

- the extension staff gain first-hand knowledge of the actual problems faced by their clients and are able to see the circumstances in which they arise;
- they help to develop the goodwill and confidence of the family visited in the extension agent and in the advice given; and,
- individual teaching provided in this way is most effective as it can take place in the way, and at the speed, most suited to the client.

Some disadvantages of home visits which can be avoided as far as possible by good planning are:

- visits are expensive in terms of time and transport required and can only be made at times convenient to the client;
- the number of people who can be contacted within a given period is limited; and,
- a tendency may develop to visit some families, with whom good relations have been established, more frequently, at the expense of trying to establish better relations with others;

Checklist for planning a home visit

It is useful to have a simple checklist of steps for planning and making home visits, to ensure that each visit is effective and makes the best use of the time involved. Such checklists will develop and improve with local experience but some points which should appear in an initial checklist are as follows.

Planning the visit:

- suggest a time convenient to the person's work or habits,. (e.g avoid clashing with the time of religious observances, known festivals or market days);
- make a firm appointment, if possible;
- decide in advance on a clear purpose for the visit; review any notes made following previous visits to the person;
- check any technical information that may be required on the visit, (refer to publications or to a subject-matter specialist, if necessary);
- collect any pamphlets, instructional material or samples of veterinary materials to be left with the client; and,
- arrange a series of visits within an area to save time and travel.

Making the visit

- be punctual (or follow local custom in this respect);
- give a suitable greeting to the client and his family in the customary form;
- try to find something to comment on favorably to start the discussion;
- let the person and his family talk about their problems (at length, if necessary);
- prompt them to ask for possible solutions to their problems;
- give any relevant information and some suggested solutions or admit where more information is needed before a response can be given;
- demonstrate any skill required, if appropriate;

- confirm any essential information in writing or in diagrams, either on the spot, or as soon after as possible; and,
- make careful notes on what has been discussed or achieved during the visit;

2. Office calls and enquiries

Office calls and enquiries are concerned with personal visits made by the clientele to the extension office, to seek information and assistance.

Office calls may be of limited importance in extension activities in most areas at present, but their importance will increase as telecommunication networks becomes widespread. Telephone calls are becoming increasingly popular in transacting business in developed societies and, if used properly, they can be very valuable in explaining a situation and obtaining advice or instructions over long distances within a very short time.

Encourage people who are interested in animal health extension to call at the extension office if they are in the area and set aside particular times of the week for these visits, if possible, (e.g. market days, when people are likely to be in the area rather than on their farms). The office staffs should be trained on how to receive visitors politely and either deal with simple requests for publications directly, if they can, or refer them to one of the extension staff for more detailed discussions if necessary. Ensure that none of the staff abuse their positions by asking favors from the public for doing this work.

3. Personal letters

It is personal and individual letter written by an extension worker to a farmer in connection with extension work or vice versa.

Personal letters may be of limited importance in extension activities in most areas at present, but their importance will increase as literacy becomes widespread. People

usually derive some satisfaction or pleasure from receiving a helpful, well-written, personal letter. This, in itself, may help to establish good working relations in an area. Letters are the main form of communication both within an extension organization and with other public organizations. All extension staff should try to acquire some skill in letter writing.

Letters play a vital part in transmitting information from the public and field staff in an extension service to administrators, research workers or policy makers. While people at the field level may have some difficulty in expressing themselves in formal language, they should not be discouraged from setting down their views on paper. More attention should be paid to the substance of their letters than to the niceties of language. Though some guidance should be given in the proper format of such letters, this should not receive so much emphasis that it is likely to inhibit people from writing.

4. Informal contacts

Informal contacts are based on casual or chance meetings between extension staff and members of the public, which can be turned to good account by gathering information on attitudes towards animal health extension in the area, or on problems faced by the public. Although totally unplanned, they may provide useful opportunities for exchanging information and for establishing public confidence in the extension staff. If not used with care, however, they can seriously upset a program of work for a particular day. Staff should be encouraged to use them without discretion, so that other members of the public will not get the impression that they are neglected.

Some points to consider and suggestions on informal contacts are:

- they provide many good opportunities for introducing extension ideas to the public;
- at places where people gather informally (e.g. at market places or coffee shops), discussion of such matters is normal and socially acceptable;

- they give extension staff not only an opportunity to learn about other people's views and attitudes on animal health but also their wants, needs and aspirations over a whole range of veterinary practices; and,
- they provide members of the public with an opportunity to seek information or advice on a matter which they might feel did not justify an office call or letter;

6.2. Group Extension Methods

Group methods consist of a number of activities in which there are direct personal contacts between the extension staff and the public, but not on a one-to-one basis. They include such important extension activities as community meetings, method and result demonstrations, field days and tours. Their principal value is to assist people to progress from the interest to the trial stages of learning.

They provide excellent opportunities for extension staff to present information to a group of people, which is often one in which there is already some common interest or bond. They also provide opportunities for discussion and direct contact between the group members themselves and the extension staff. This process can assist people to reach a decision to take joint action on a problem. Groups include, but they also exclude, certain people and those excluded may feel neglected or slighted and adopt a very negative attitude towards the objectives of the group. This is a point which requires very careful consideration in selecting or forming groups to promote extension activities.

Group methods are useful for a number of reasons such as:

- to give or receive information about a proposed extension program;
- to help create a favorable attitude towards a program;
- to focus attention on problems jointly affecting members of the group and possible animal health solutions to them;
- to create awareness and interest in a particular veterinary practice by describing it carefully and discussing its implications for the local community and possible benefits from it;

- to encourage, advise and train community leaders; and,
- to demonstrate basic veterinary skills at a convenient location.

Features of group methods

Group methods are:

- less expensive than individual methods in terms of staff time and effort, to cover a given number of people;
- very effective in that attitudes and decisions arrived at by group discussion usually carry more weight in a community than individual attitudes and decisions and are more likely to be widely adopted; and,
- they are able to assist the learning or change process of individuals by the exchange of ideas and experiences between members of the group.

Some of the disadvantages of group methods, however, are:

- it may take a long period of discussion for a group of people to arrive at a decision on a matter;
- one or two people with strongly-held divergent opinions may deflect the group from a wise decision;
- because of differences in conditions and interests of the group members, instruction in veterinary practices cannot always be related to the particular problems of each member; and,
- it is not always easy to get all the members of a group of people together at the same time for discussion or action.

The advantages, however, of group methods outweigh their limitations and they play a most important part in extension programs. They usually lead to a much more rapid spread of information and change of attitudes than could be achieved by their spread from a few isolated persons enjoying individual contacts with extension staff.

The commonly known group extension methods are:

1. Group meetings

These are one of the oldest and most popular methods of contacting and communicating with group of people. It is a familiar means of receiving and discussing information of importance and taking decisions, in many communities. They are also a very effective method of spreading new ideas in relation to their cost.

Figure 11: Group meeting

Purposes of group meetings

The main purposes of group meetings are:

- to introduce and discuss new ideas or practices,
- to create a favorable attitude towards animal health as a means of local community development;
- to obtain the opinions of some members of a community on possible activities; and,
- to gain support for solving some local problems by means of suitable animal health extension program.

Planning a meeting:

- after taking into account local opinion, decide on the purpose of the meeting and review the subject matter and the information available;
- decide on the form of meeting most suited to the objective, e.g. a lecture or discussion, a large or small meeting;
- decide on the time of the meeting both in terms of day and season; select a convenient time of day for the target audience and an appropriate season to allow people to act on any new information or on any decisions they may make;
- decide on the place of the meeting, one that is familiar to local people, easy to reach, as comfortable as possible in the circumstances and in a location appropriate to the subject for discussion;
- make the necessary arrangements to reserve the meeting place, advertise the meeting widely, erect notices and signposts;
- arrange adequate seating according to local custom or requirements. e.g. special seating arrangements may have to be made for women and children attending; and,
- a chairman and speakers must be arranged and formally invited to take part, some time in advance of the date selected; they should be briefed fully on the purpose of the meeting and the background and numbers of the audience expected and suitable transport arranged for them, if necessary; they should be welcomed on arrival by one of the organizers of the meeting and properly introduced to the audience.

As many as may be necessary of the following arrangements should be made prior to the meeting:

- advance publicity to attract a sufficient number of people to attend;
- a public address system, if the meeting is to be a large one;
- a competent interpreter, if necessary;
- any visual aids which may be required by the speaker;
- handouts on the topic for the audience;

- food and refreshments, at least for the principal guests, if this is appropriate; and,
- toilets for the audience.

Holding the meeting:

- arrange to start on time, (subject to local custom in this respect);
- observe local custom in the procedure for opening the meeting;
- welcome the audience;
- thank the hosts for arranging the meeting, or for allowing it to be held in that particular place;
- introduce the guests who are to speak, or who are present as observers, making sure they are addressed by their proper titles or descriptions;
- describe the purpose of the meeting and outline the agenda;
- start the main part of the program;
- at suitable points during the meeting, encourage questions and discussion of the topics;
- summarize the important points learned or discussed;
- note and emphasize any important decisions taken; and,
- distribute information or extension material on the subject to those present.

Closing the meeting:

- thank the hosts, the guest speakers and the chairman for their assistance; and,
- follow local custom in the procedure for winding up the meeting.

2. Demonstrations

Demonstration is the act of making known or evident by visible or tangible means, or illustration of the practical application of theories or methods.

On-farm demonstrations are effective means of reducing the risks farmers perceive. They are designed to take new innovations out of the 'unreal', scientific realm of the research station and place them firmly within the bounds of a farmer's everyday experience. They are used first to display the results of adopting a new practice and then to give the farmer an opportunity to practice new methods. Both types of demonstrations serve to make clear to a farmer exactly what is entailed in opting for a new farming innovation.

Demonstrations normally fall into two categories:
1. Result demonstrations, and
2. Method demonstrations.

2.1 Result demonstrations

A result demonstration shows what can be expected after a particular veterinary practice has been in use for a certain period of time. It is intended to stimulate interest in the practice and induce people to learn more about it and to give it a trial. The comparison between the old practice or technique and the new one is an essential feature of a result demonstration. The differences are there to be seen and discussed by the group. Questions can be asked and answered and additional information on the time taken, work involved and the costs can be explained by the extension staff. Result demonstrations in animal health involve a much longer time span than in agriculture and it may only be possible to show some stages in the whole process.

Figure 12: Forage varieties demonstration plots

Some of the main purposes of result demonstrations are:

- they provide evidence of the benefits of adopting a recommended veterinary practice;
- they are an effective method of introducing a new topic or idea in an extension campaign;
- they appeal to the individual and help influence the more skeptical members of a group;
- they provide a good source of information for discussion at further meetings, for news stories, pictures, radio talks or interviews;
- a high percentage of the audience is likely to understand the topic due to the combination of seeing and hearing and the availability of additional explanations from staff members on the spot;
- they establish a feeling of confidence by the people in the extension staff and in extension work in general; and,
- they provide a certain amount of entertainment, usually in a relaxed social atmosphere, which helps develop a community spirit.

Some disadvantages of result demonstrations are:

- they may be relatively costly to organize, particularly if travel to the site is involved at the extension organization's expense; and,
- they take time to plan and carry out, especially for veterinary activities.

Guidelines for result demonstrations

It is very important to build up locally a series of guidelines for organizing demonstrations, to review these carefully after each demonstration and to incorporate improvements based on the experience gained. If this is done the standard of organizing and presenting demonstrations can improve greatly over a short period of time. Some useful guidelines to adopt initially are as follows.

Decide on the purpose of the demonstration:

What it is intended to prove; simple clear-cut comparisons between treatments or breeds are easier to understand than more complex demonstrations involving a combination of treatments or factors.

Gather the necessary information:

- technical information based on the history and costs of the work seen, supplemented by any relevant information on the technique gained from other areas; and,
- extension information, taking into account any social, financial or administrative barriers that might exist to the adoption of the practice in the area and any ways of overcoming them, which can be referred to in the demonstration or discussion.

Make a detailed plan:

- decide on who is to do what, where, when and how;
- consider what evidence is needed to convince the community and how proof of this can be established;

- identify the area most suited for the demonstration and the source of any materials needed (e.g. tools, equipment, visual aids, etc.);
- decide on the number of demonstrators needed and their roles in the demonstration; and,
- prepare a written plan covering the entire demonstration step by step.

Select and train the demonstrators:

- consult with the community leaders to arrange the most convenient date and time for the demonstration, the persons to take part in it and the persons to be invited;
- as far as practicable, involve the local people so they will be convinced of the suitability and value of the recommended practices;
- agree on the procedures to be adopted with the demonstrators and give them the training and practice required if this is necessary; and,
- rehearse the demonstrators in the parts they have to play and the staff who will describe and explain the activity. (This is often the most difficult part of the whole procedure; it is sometimes very difficult to persuade local demonstrators to practice sufficiently to achieve the smooth performance required for a convincing demonstration.)

Publicize the demonstration:

- do this by word of mouth, through local leaders and other influential people; their endorsement of it will be of great value; by letters of invitation, posters, press and announcements on the radio, where possible; and,
- make any arrangements for transport widely known to the persons invited to attend.

Conducting the demonstration:

- welcome the persons attending the demonstration;
- thank the hosts for allowing the demonstration to take place in that particular area;
- explain the purpose of the demonstration and why the practice is believed to be of value to the people;
- introduce the persons who will do the demonstrations;
- explain what they will do and what the expected result will be;
- arrange a clear commentary so that everyone can understand what the demonstrators are doing;
- invite, and answer as fully as possible, any questions from the audience; note the names, and addresses of persons who cannot be given' a full answer at the time and arrange to let them have one as soon as possible; and,
- distribute extension literature or materials relevant to the situation to those attending.

Complete the demonstration (after a suitable period of time):

- summarize the various steps taken during the demonstration and the information recorded;
- show photographs of various stages in the development and prepare exhibits or displays of the highlights; and,
- distribute literature about the practice demonstrated.

2.2 Method demonstrations

Method demonstrations are the oldest form of teaching. In extension, they can be used to show a person how to do a job, such as dipping or vaccinating, step by step until they have acquired sufficient proficiency in the task.

The purposes of method demonstrations are:

- to teach basic veterinary skills to small groups of people; and,
- to teach how to do certain things, (rather than why they should be done, as in a result demonstration);

Some advantages of method demonstrations are:

- it is possible to instruct a reasonable number of people in basic veterinary skills at a time;
- people attending can see, hear, discuss, and participate in the demonstration;
- this results in much more complete learning than passively listening to a talk, even if illustrations are used to support it; and,
- if properly carried out demonstrations can generate a great deal of interest and enthusiasm for a practice, as well as providing the skills required for it.

Some disadvantages of method demonstrations are:

- if there are too many participants some of them may be unable to hear and see clearly what is being demonstrated and may adopt wrong techniques ; and,
- many people may not be able to practice the skill demonstrated adequately due to shortage of time or facilities.

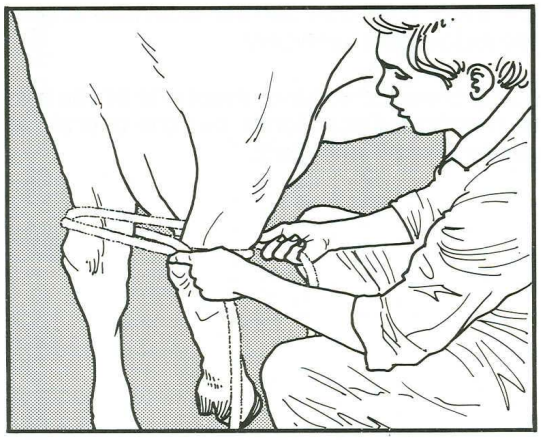


Figure 13: Method demonstration

Guidelines for method demonstrations

Many of the points noted in the guidelines for result demonstrations apply equally well here and should be modified to suit local conditions. This applies particularly to advance planning and publicity for the demonstration.

Guidelines more specific to method demonstrations are as follows.

First decide on the objectives and what should be covered by the demonstration. Then check these objectives against such questions as:

- is the practice, and the way it is done, really important?
- can people afford to follow it in their present circumstances?
- are supplies or materials required readily available in sufficient quantities to allow it to be adopted in the area?
- is all the information about the practice readily available and fully understood by the staff? and,
- have any social, cultural or economic problems been fully discussed with the local leaders?

Preparing and presenting the demonstration:

- gather all the necessary materials required in convenient places;
- decide on each step in the operation which must be shown;
- instruct the demonstrators on the correct performance of each step in the operation;
- rehearse the presentation, whenever possible, at least three times until the staff are thoroughly familiar with it, know the most suitable pace and the times required for it;
- when people have gathered to watch the demonstration, welcome them and explain what is to be done and why it is important for them to learn the new method;
- ask for volunteers from the audience to assist if necessary;

- go through the demonstration, explaining it step by step, repeating, difficult steps when necessary;
- encourage the audience to ask questions;
- check the effectiveness of the demonstrations by inviting some of the audience to try one or more of the steps involved and discretely correct any errors they may make;
- allow as much practice by members of the audience as circumstances permit; and,
- summarize the importance of the operation, the steps involved and the materials required.

3. Field days

A field day is a day or days on which an area containing successful forage farms or veterinary practices is open for people to visit. Field days are best held on land belonging to local persons who have successfully adopted improved veterinary practices, or if this is not possible, on experimental stations or government demonstration centers.

Figure 14: Field day

Purposes of field days

The main purposes of field days are:

- to commence, or inspect progress, or observe the outcome of result demonstrations; and,
- to see, by field demonstrations, the scientific basis on which advisory work is based.

Some considerations in planning field days

Some factors which should be taken into account in planning field days are:

- they are usually organized for limited groups of people;
- it is usual to allow plenty of time for discussions, questions and for a careful inspection of the area;
- the number of people invited should be limited to those who will benefit most from the visit and who are likely to be most effective in supporting the extension program;
- the program must be planned carefully to obtain the best results for the time and expenditure involved;
- for a field day, adapt the checklists and guidelines for extension meetings and result or method demonstrations to suit the particular circumstances, and make the necessary preparations;
- extension staff should limit themselves to introducing the hosts, and commenting briefly and favorably on the most important and successful aspects of their activities;
- the hosts should do most of the talking and demonstrating during a field day;
- extension staff should be ready to explain any technical points to visitors in terms they can, understand;
- at the conclusion of the briefing they should thank the hosts for their co-operation in making the field day possible and the visitors for attending;
- at the end of the visit the extension staff should summarize the main points of the discussion; and,

- distribute reading materials related to any subjects raised during the discussion, if available.

4. Field trips and tours

Field trip is a method in which a group of interested farmers accompanied and guided by an extension worker goes on tour to see and gain first-hand knowledge of improved animal health practices in their natural setting. Field trips and tours can be regarded as a series of field demonstrations arranged in sequence. They are extension activities which appeal to people's desire to travel and to see things in other areas. On account of the expense involved, however, they can only be undertaken occasionally and must, therefore, be very carefully planned and carried out to gain the maximum benefit from them.

Purposes of field trips and tours:

- offer people the opportunity to see for themselves valid evidence of improved veterinary practices in a number of different areas; and,
- may be devoted to a single topic or to a variety of topics,, thus acquainting the public, through their leaders, with several important aspects of a animal health extension program.

Advantages of field trips and tours Field trips:

- can present information in a clear way to enable the visitors to understand the message; and,
- considering their important educational impact on the members they may be amongst the most effective and economical methods of teaching the broader aspects of extension.

Guidelines in arranging field trips and tours

Some useful guidelines in arranging effective field trips and tours are:

- decide on the purpose of the tour;
- consult local leaders to select places and things to be seen, the time required for each visit and the people to be invited;
- work out a detailed schedule of visits;
- visit the area to inform the hosts on the purpose of the visit; and,
- rehearse the tour to check the adequacy of the time allowed for visits and the arrangements for travel and accommodation.

Factors in planning field trips and tours

Some factors which should be taken into consideration in planning field trips and tours are:

- smaller groups are more manageable than large groups and the members of a smaller group may, therefore, get more benefit from a visit;
- the maximum number any tour leader should attempt to manage is 30 participants;
- keep the party together and persuade them to move quickly from point to point;
- use a small portable megaphone if necessary as an aid to holding the attention of the participants; and,
- the extension staff should be prepared to provide technical, background and interpretive information on activities visited.

6.3. Mass Extension Methods

As neither individual nor group methods can reach everyone who may want or need information on animal health extension matters various methods of mass communication such as print, broadcast or audio-visual methods are employed to reach large numbers of people quickly and often at low cost. The information they convey must be, in most cases, generalized but it can play an important role in certain phases of an extension campaign.

Functions of mass methods

Mass methods are used for a variety of reasons which include the following:

- they help carry animal health information to many more people in a short period of time than can be reached by individual or group methods;
- they help create general awareness and interest in a new topic or veterinary activity;
- they help form favorable attitudes amongst the general public towards animal health extension programs; and,
- they provide helpful repetition and reinforcement of extension messages to those already contacted personally through individual or group methods;

Features of mass media

Some of the positive features of mass media are:

- they can increase the impact of extension staff in the field by the rapid spread of information, though they involve no personal contact;
- many more people can be influenced, over a given period of time, than by individual or group methods; and,
- news stories, repeating basically the same information on radio, TV and in press releases, help the people to remember the message.

Some of the less favorable aspects of mass media which must be taken into account in planning their use are:

- comparatively few people in rural areas in developing countries have access to newspapers regularly;
- the number of television sets in these areas is also limited by national coverage and cost; and,
- the amount of detailed information, on which people can act, that can be transmitted by mass media, is limited.

Some examples of mass media and the ways in which they can be used most effectively are considered below.

1. Newspaper

Newspaper is a bunch of printed papers properly folded, which contains news, views, advertisement etc. and is offered for sale at regular intervals, particularly daily or weekly. Newspapers vary greatly in their audiences and coverage, ranging from the large urban daily newspapers to the small community paper. They are published by governmental and private organizations and can provide valuable channels for extension news.

Some of the functions of newspaper in animal health extension are:

- to create awareness of and interest in a new animal health topic of general interest;
- to give advance warning or advice on important animal health problems, such as shortages of building materials;
- to increase people's knowledge and understanding of new veterinary techniques, e.g. controlled or rotational grazing;
- to create more favorable attitudes towards extension programs and new veterinary techniques;
- to publicize extension meetings and demonstrations; and,

- to inform people of ways to save time or money by adopting new and better veterinary methods.

Use of newspaper stories

Some of the advantages of using newspaper stories in extension campaigns are:

- more, people will be able to read newspapers as literacy and the availability of papers increase;
- rural people in general tend to place great reliance on what they read in newspapers;
- newspaper can reach many people who might not normally attend extension activities or contact extension staff directly;
- they are an inexpensive extension method as they only require the staff to write acceptable stories or press releases and send them to suitable outlets; and,
- they reinforce other extension activities such as radio an4 TV programs or demonstrations.

Some of the disadvantages of using newspaper stories which should be taken into account are: -

- in rural areas in developing countries many people still do not have easy access to newspapers because of their cost or limited circulation;
- some people may not be able to read them with ease or pleasure, particularly if the production standards are poor;
- editors often shorten stories for their own reasons and the full information intended may not be included; and,
- editors may omit to print a story at an important time, without giving any notice or reason for doing so.

Planning newspaper

Some steps to be considered in planning a news story are:

- determine the purpose o the story;
- identify the problem;
- identify the target readers;
- consider how much they already know about the subject;
- consider their attitude, if any, to the subject;
- decide what you want them to know or do;
- make sure the information you give is accurate and practical;
- make sure the timing of the story is appropriate;
- use only information directly related to the problem;
- list the facts in logical order;
- make a rough outline of the story; and,
- adopt the style normally used by that particular paper, so the editor will be encouraged to print.

2. Posters

A poster is usually a large sheet of paper or cardboard with an illustration and usually a few simple words. They may, less commonly, be painted or enameled metal which is more durable but much more expensive.

Functions of posters

Posters are intended to:

- catch the eye of passers-by;
- impress on them a fact or an idea; and,
- encourage them to support an idea.

Design of posters

Some simple factors to bear in mind in the design of posters are:

- passers-by will only look longer if something particularly catches their attention and stimulates their interest;
- the message on a poster must therefore be simple, clear and direct;
- A brief glance is all that people usually give to a poster.

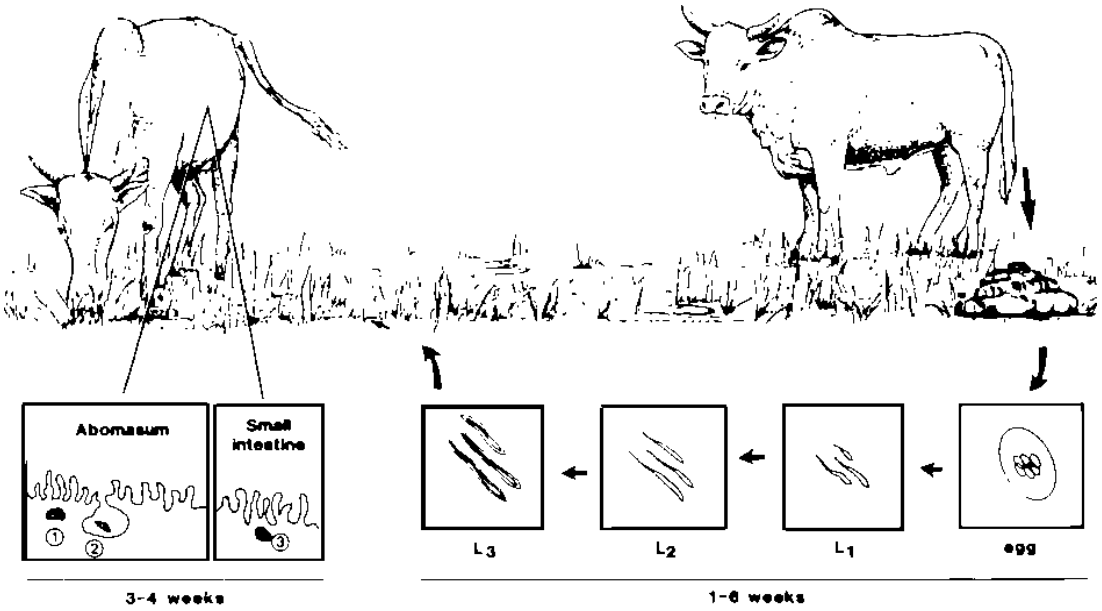


Figure 15: Poster for literate people

Suggestions for poster design

Some useful suggestions for designing posters are:

- consider who the audience will be;
- decide what it is hoped they will do as a result of the campaign;
- put down on a sheet of paper words and rough sketches that express the message simply and clearly;
- put the message into a very few words, as a concise, striking slogan;
- visualize, and put into picture form, the central idea of the message;
- make a rough sketch of the poster on a small scale, 1/3 or 1/5 of actual size initially;
- use plain bold lettering and lines throughout;
- use colors to attract attention and for contrast, but not so that they cause confusion; and,

- do not crowd the letters, words or illustrations.

Figure 16: Poor poster

3. Pamphlets and leaflets

These printed materials can often be produced locally, quickly and cheaply and can be used in many ways in animal health extension programs to give detailed information about a particular problem.

Functions of pamphlets and leaflets

Some of the functions of pamphlets and leaflets are:

- they may be used as single items, for example, to explain proper forage planting techniques;
- they may be used in a series covering broader topics such as rotation grazing establishment, with separate leaflets on land division and grazing management;
- they may be used in conjunction with other visual aids at meetings and demonstrations in long-term campaigns;
- they are useful to supplement larger publications when new information is available but when reprinting of the whole publication is not necessary or practicable; and,
- they can be handed out after meetings and offered to listeners on radio programs to supplement the information given in the program.

Advantages of using pamphlets and leaflets

Some advantages of the use of pamphlets and leaflets are:

- their production cost can be low;
- the time required for preparation is short;
- they can get a message across to the public quickly;
- their small size and general layout encourages the writer to eliminate nonessential information from the message; and,
- they serve as a lasting reminder or further explanation of matters a person may have heard about at a talk or demonstration.

Guidelines for producing pamphlets and leaflets In preparing pamphlets and leaflets, a writer should:

- write in a simple form and in words the intended readers can understand;
- write about things that interest most of the people;
- avoid difficult scientific and technical terms, such as the specific names of forages or diseases;
- use simple illustrations whenever possible;
- adopt a good layout, (i.e. arrange material in a simple, logical, easy-to-follow manner and make it attractive);
- realistic illustrations (i.e. pictures) are usually most effective in extension work, though they are difficult to reproduce with simple equipment;
- clear line drawings are usually more effective and attractive than unclear pictures produced by mimeograph;
- good illustrations make any publication easier to understand and more interesting to read; and,
- they should have an attractive and colorful cover which should impel the reader to look inside.

4. Radio

Radio is an electronic audio-medium for broadcasting programs to the audience. Radio is one of the fastest, most powerful, and in many countries the only effective way of communicating with the majority of rural people. It can be a very valuable and inexpensive means of spreading an understanding of animal health amongst the people.

Figure 17: Farmer radio club

Purposes of radio programs

The main purposes of radio programs are:

- to create awareness and interest in veterinary practices;
- to give early warning to the public of possible animal health problems;
- to inform the public about on-going animal health extension activities;
- to stimulate people to contact and seek the advice of animal health extension staff; and,
- to help build interest in extension activities in general and to support them.

Features of radio programs

Some of the advantages of radio programs are:

- the message reaches the people more quickly than printed material, which takes time to be compiled, printed and distributed;

- it reaches people of all cultural levels who can understand the language of transmission, at little or no cost to themselves;
- an animal health radio program is not, normally,' a costly extension method, as there is often no charge for air time if the topic is of wide public interest;
- it is an extremely useful and effective method o communicating with people who are not fully literate; and;
- listeners come to like the personalities who are often heard on radio programs and the organization can capitalize on this by arranging for them to make personal appearances at other animal health extension activities.

Some of the disadvantages of radio programs which must be borne in mind are:

- the number of people owning, or having access to, a radio set may be limited in poor, rural areas;
- there is no easy means of telling if the message is fully understood by the listeners; and,
- a message may promote more interest in a topic than local staff can conveniently handle or follow-up at that time.

5. Television

Television is an electronic audio-visual medium, which provides pictures with synchronized sound. Television adds both vision and colored movement to broadcasting and in many areas; these qualities greatly increase its 'value as an animal health extension technique, where an effective TV service exists and where there are sufficient sets to cover a reasonable proportion of the population. This stage has, unfortunately, not yet been reached in many developing countries and its spread to rural areas may take several years. In other countries, however, TV is playing an increasingly important role. Sets have been installed in suitable rural locations at government expense, to enable large numbers of people to receive broadcasts of educational and entertainment value.

Uses of TV in extension

On national networks, animal health items may occupy a relatively minor part of the program schedule. They may ‘appear as occasional general interest programs, features to support the awareness and interest phases of extension campaigns, or as reports on outstanding achievements in animal health.

TV can, however, play a major role in training extension staff and in promoting extension work in rural areas. It may soon not only take over the role of cinema films in extension, but also greatly widen their scope by presenting more immediate and localized material for training.

Figure 18: Extension TV program

7. WORKING WITH LOCAL LEADERS

Extension services seek to help people to make decisions which should lead to an improvement in their environment and standard of living and to assist them to acquire the knowledge and skills to implement these decisions. To do this, they rely on effective communication with the people. Extension staff must, therefore, be at all times in close contact with the community and must acquire the characteristics and skills necessary to work closely and harmoniously with them.

7.1. Personal Characteristics Required

To serve effectively in an extension organization, staff must have, or develop progressively, the following characteristics.

Creativity

Extension staff should not propose a solution to a problem just because it appears to be the "stock answer" to the situation. They should think round the whole situation, try to study the problem from every possible angle, e.g. environmental, technical, cultural, and financial, and generate a number of possible lines of approach to solving it. They should be willing to examine every possible solution suggested, develop any favorable points in it and if necessary combine these with favorable aspects of other possible solutions. They should present new ideas or viewpoints for the people to examine critically and make their own decisions. As agents of change, they should, by their own example of flexibility, try to bring about constructive changes in the way people think and act.

Initiative

When a situation arises they should try to take appropriate action on it, using their own resources. They should discuss all developmental problems with the local community concerned and encourage them to make an appropriate decision for themselves on the basis of existing knowledge and skills. If the situation is too complex for them to give proper advice they should define the problem clearly, first for discussion with the community, and then refer specific points to subject-matter or administration specialists

at district or central level. This is not likely to happen unless the extension staff have confidence in themselves and are able and allowed to make decisions about their own work.

Organizational ability

The work of the extension staff themselves must be well planned and organized, if the local people and their leaders are to support a program of extension. Good organization leads to the most effective use of limited resources. Success in this area will increase the reputation of the members of the extension service and the willingness of people to seek out and follow their advice.

Problem-solving ability

Extension staff must be able to recognize and define the essential elements of a problem, and equally, recognize any extraneous factors which may be attached to it by a special interest group. They should measure the problem against their own knowledge and experience and, if possible, suggest solutions to it. They should discuss the options and possible solutions with the community and encourage them to take an appropriate decision. They should observe closely the factors which influence the community in decision making, e.g. personal influence, cultural values, finance, and take these into account in making any further proposals.

Judgment

Extension staff should always consider the effect which their actions, general behavior and the language they use, will have on the community. They must learn the significance attached to certain words by particular groups of people. They must exercise tact and discretion in all their dealings. They must never let their words or actions arouse hostility to the general concept of self-help through extension.

Self-improvement

Extension staff must follow the principle that learning is a continuous process for all people and apply it conscientiously to their own activities. They should take every

opportunity of keeping their knowledge up- to-date by private study, reading, discussion with knowledgeable persons and attending demonstrations of new techniques.

Reliability

Extension staff must be aware of the importance of keeping any promises they may make to people and limit their commitments to what they can be sure of delivering. If they fail in this, confidence in them and in their organization may be destroyed, and this is difficult to restore.

7.2. Working with local leaders

A major objective of any extension program must be to establish a local organization which is capable, both of implementing the program and of ensuring its continuation after any official support ends. To achieve this, extension staff must work through local leaders. There are never likely to be enough paid staff, either to contact all the people who should participate in such a program, or to influence or train them effectively. For this, the co-operation of local leaders is essential. In addition, people are likely to be suspicious of any activity which appears to by-pass the local leadership, and the obstacles which this could raise might prove disastrous.

The leaders, through which extension staffs have to work, are both formal and informal. Formal leaders are people who hold positions in society which carry some official status and responsibility. By their influence, and the respect in which they are held by the people, they can gain support for a program. Informal leaders are people who thought they do not hold any official positions, are regarded by their neighbors as responsible and prudent people whose judgment and advice are valued locally. If they adopt a new procedure, or express support for it, others will follow their lead. They can be of great value in organizing meetings or demonstrations locally and generally in promoting and encouraging the adoption of new ideas. The support and assistance of both types of leader is essential to the success of a development program.

Formal leaders

Some examples of formal leaders whose support is important for success are:

- political leaders, such as members of the legislature or the cabinet, or party officials at national or local level;
- cultural leaders, leaders of religious groups, teachers in public or private educational institutions;
- leaders of the administration, officials of other government organizations e.g. agriculture, animal husbandry, health or community development;
- traditional leaders, village or district chiefs, leaders of clans or community groups; and,
- special interest groups, heads of local development groups, businessmen, farmers' associations, women's or youth organizations.

The support of these leaders can spread initially through the organizations they represent and, in time, through the general community who note any statements they may make on the matter. To secure their support it is necessary, initially, to ensure that the leaders are fully informed on the background and reasons for any extension proposals and their relevance to the particular area. They should be encouraged to attend local meetings or demonstrations both to widen their knowledge of the topic and to indicate their support for it publicly.

Informal leaders

These can normally be identified by maintaining close contact with the local people over a wide range of activities and observing those who meet the following criteria:

- show good judgment in the conduct of their own affairs;
- possess considerable practical experience in such activities as farming, animal husbandry or rural development;
- show an interest in following new practices before the majority of the people;
- seek out information on new practices in any appropriate way;
- have a reasonable standard of wealth and education;

- are unemotional, and convinced only by facts;
- are able to speak convincingly to their neighbors; and,
- are sought out by others in their group for opinions and advice.

Their support is important in spreading an interest in new activities throughout their communities. Their assistance is most effective if they can be persuaded to carry out some appropriate activity on their own and then act as a leader in spreading it to others.

Figure 19: An extension agent informing the local leader the program to be implemented

7.3. Training Local Leaders

Local leaders, both formal and informal, should be encouraged to take up any training opportunities which might improve their leadership qualities. For formal leaders, training should centre on the general requirements of extension and the broad reasons for promoting or adopting a particular course of action in an area. They should be supplied with any appropriate documents and be encouraged to speak informatively about the matter on any suitable public occasion, and to show their interest by attending appropriate meetings, discussions or demonstrations.

Informal leaders should be given all the appropriate information available but should also be offered opportunities to attend courses or programs in:

- how to carry out particular techniques;
- how to organize meetings and demonstrations;
- how to reconcile or justify new practices in terms of local customs and beliefs; and,
- how to express the benefits of a practice in terms the public can understand.

In offering this assistance, however, extension staff must be careful to avoid creating the impression that the local leaders are particularly favored by the organization or are in any way directly a part of it. Their impartiality and leadership may be compromised if they are thought to be representatives of an official organization.

In spite of this, it is important to recognize the services of informal leaders in some ways. They can be acknowledged by pointing out their achievements to political or formal leaders, particularly in a speech on a suitable public occasion, by sending them letters of thanks for particular services or by recording their activities in official reports. Photographs and brief accounts of their work may be displayed on bulletin boards or in wall newspapers. They may also be included in parties invited to make official tours or visits to suitable activities. However, it must be made clear to the public that they are informal leaders, and not in any way employed, or dependent on, the extension organization.

Some benefits which can accrue to an extension organization by developing a network of local voluntary leaders are:

- they are an important source of detailed information on local customs, viewpoints, attitudes, etc;
- they in turn normally have good contacts with the local people whom they can inform or influence on appropriate topics; and,

- the views they express are more likely to gain acceptance locally than those of a paid extension assistant.

Some problems which may arise in their use, however, are:

- the difficulty of finding people willing to take on these responsibilities on a voluntary basis; and,
- the need to ensure that the information and advice they give is accurate and genuinely available to all.

8. ORGANIZING A TRAINING PROGRAM

8.1. Basic Concepts of Training

Training is about extending and developing individuals' capabilities for better performance in their jobs. It involves the transfer of new knowledge, skills and attitudes to develop and maintain trainees' competencies to perform specific roles at their work place.

There are many definitions in the literature. Here are some that may be helpful in summarizing many of the ideas on training:

Training is the process of acquiring specific skills to perform a job better (Jucious, 1963). It helps people to become qualified and proficient in doing some jobs (Dahama, 1979). Usually an organization facilitates the employees' learning through training so that their modified behavior contributes to the attainment of the organization's goals and objectives. Van Dersal (1962) defined training as the process of teaching, informing, or educating people so that (1) they may become as well qualified as possible to do their job, and (2) they become qualified to perform in positions of greater difficulty and responsibility.

Education also provides knowledge, skills and attitudes and brings about changes in behavior of individuals. However, training differs from education.

Training	**Education**
- Usually short term - Narrowly focused & specific - Designed to meet a specific need	- Long term - Broadly focused - Aimed at preparing people and has immediate application for the future.

Training may be necessary for many reasons:

- When there is a discrepancy between an employee's current performance and the required standard of performance in his / her present position.
- When there are changes in a job description or the addition of new responsibility in the present position.
- When an employee moves to a new position and acquires a new set of responsibilities.
- When some new way of doing something is developed.

8.2. Types of training

Training may broadly be categorized into two types: pre-service training and in-service training. Pre-service training is more academic in nature and is offered by formal institutions following definite curricula and syllabuses for a certain duration to offer a formal degree or diploma. In-service training, on the other hand, is offered by the organization from time to time for the development of skills and knowledge of the incumbents.

Pre-service Training (Education)

Pre-service training is a process through which individuals are made ready to enter a certain kind of professional job such as agriculture, medicine, or engineering. They have to attend regular classes in a formal institution and need to complete a definite curriculum and courses successfully to receive a formal degree or diploma. They are not entitled to get a professional job unless they can earn a certificate, diploma, or degree from the appropriate institution. Pre-service training contents emphasize mostly technical subject matter such as crops, animal husbandry, and fisheries as well as pedagogical skills to prepare the students to work in agriculture.

In general two types of pre-service training are available for agricultural staff. These are (1) degree level (at least a bachelor's degree in agriculture or related field), which is usually offered for four years by a university or agricultural college; and (2) diploma level, which is mostly offered by the schools of agriculture for a period of two to three

years. The entry point for the former is normally twelve years of schooling and for the latter ten years of schooling.

In-service Training and Staff Development

In-service training is a process of staff development for the purpose of improving the performance of individuals. It promotes the professional growth of individuals. "It is a program designed to strengthen the competencies of extension workers while they are on the job". In-service training is a problem-centered, learner-oriented, and time-bound series of activities which provide the opportunity to develop a sense of purpose, broaden perception of the clientele, and increase capacity to gain knowledge and mastery of techniques.

In-service training may broadly be categorized into five different types. All of these types of training are needed for the proper development of extension staff throughout their service life.

1. Induction or Orientation Training. Induction training is given immediately after employment to introduce the new extension staff members to their positions. It begins on the first day the new employee is on the job. This type of training is aimed at acquainting the new employee with the organization and its personnel. Induction training for all new personnel should develop an attitude of personal dedication to the service of people and the organization. Van Dersal (1962) said that when people start to work in an organization for the first time, they are eager to know what sort of outfit they are getting into, what they are supposed to do, and whom they will work with. They are likely to be more attentive and open-minded than experienced employees. In fact, the most favorable time for gaining employees' attention and for molding good habits among them is when they are new to the job.

2. Foundation Training. Foundation training is also appropriate for newly recruited personnel. Besides technical competence and routine instruction about the organization, every staff member needs some professional knowledge about various rules and

regulations of the government, financial transactions, administrative capability, communication skills, leadership ability, coordination and cooperation among institutions and their linkage mechanism, report writing, and so on. Foundation training is made available to employees to strengthen the foundation of their service career. This training is usually provided at an early stage of service life.

3. Maintenance or Refresher Training. This training is offered to update and maintain the specialized subject-matter knowledge of the individuals. Refresher training keeps the specialists, administrators, subject-matter officers, extension supervisors, and frontline workers updated and enables them to add to the knowledge and skills they have already. Maintenance or refresher training usually deals with new information and new methods, as well as review of older materials. This type of training is needed both to keep employees at the peak of their possible production and to prevent them from getting into a rut.

4. On-the-Job Training. This is ad hoc or regularly scheduled training, such as fortnightly training under the training and visit (T&V) system of extension, and is provided by the superior officer or the subject-matter specialists to the subordinate field staff. This training is generally problem or technology oriented and may include formal presentations, informal discussion, and opportunities to try out new skills and knowledge in the field. The superior officer, administrator, or subject-matter specialist of each extension department must play a role in providing on-the-job training to the staff while conducting day-to-day normal activities.

5. Career or Development Training. This type of in-service training is designed to upgrade the knowledge, skills, and ability of employees to help them assume greater responsibility in higher positions. The training is arranged departmentally for successful extension workers, at all levels, for their own continuing education and professional development. Although extension workers are responsible for designing their own career development education, the extension organization sometimes sets some criteria and provides opportunities for the staff by offering options.

8.3. Steps in Organizing a Training Program

Training is a circular process that begins with needs identification and after a number of steps ends with evaluation of the training activity. A change or deficiency in any step of the training process affects the whole system, and therefore it is important for a trainer to have a clear understanding about all phases and steps of the training process. In the broadest view, there are three phases of a training process: planning, implementation, and evaluation.

Planning Phase

The planning phase encompasses several activities, two of which - training needs assessment and curriculum development - are very important.

Implementation phase

Once the planning phase of a training program is complete, then it is time to implement the course. Implementation is the point where a trainer activates the training plan, or it is the process of putting a training program into operation.

Evaluation phase

Evaluation is a process to determine the relevance, effectiveness, and impact of activities in light of their objectives. Raab et al. (1987) define training evaluation as "a systematic process of collecting information for and about a training activity which can then be used for guiding decision making and for assessing the relevance and effectiveness of various training components."

8.3.1. Planning Phase

The planning phase has three parts which are executed step by step. These steps are:

- Training Needs Assessment
- Design and Preparation of Training
- Cost estimation

A. Training Needs Assessment

A training need is said to exist when a gap between the work performance of an individual or organization and a desired level of competency is perceived. This suggests that a training need can be described as a set of specific skills, knowledge, and attitudes, which are needed by individuals in a given organization or occupational category in order to perform a particular job or task more efficiently.

Training Needs Assessment refers to the process whereby such training needs are identified, prioritized, and selected for specific action as part of a training program. The first step of the training cycle is the identification of training needs. Training should never be provided unless needs have been clearly analyzed and identified. Once a problem has been identified, a number of solutions may exist. It is very important, however, to realize that training is not always the answer.

Whenever a deficiency of knowledge, skill or attitude exists, it is all too easy to fall into the trap of thinking that some form of formal training program is necessary. It is often better to decide what we must not teach or need not teach, in order to determine what we must teach.

Gane (1972) also notes that before deciding to provide training, one should consider whether changing the organization, the equipment or the job itself, or changing the people concerned by the selection, would ease the problem, before the expensive, uncertain process of training is embarked on to change people's performance directly.

It might be asked why training is not a cure for all performance ills. The fact is that training has high costs. Men and women are taken away from productive work and time and money are spent on achieving objectives which might have been managed more cost-effectively.

Before considering training, therefore, the situation should first be analyzed carefully in order to decide whether a deficiency in performance can be rectified using non-training

measures, such as making changes in human, technological, financial, organizational, social and information systems. Specific examples could include making changes to the working environment, improving housing, transport or the general infrastructure or, in an organization, altering the criteria used in selecting staff.

Training should only be carried out when it is believed that the same results, in terms of job performance, cannot be obtained so efficiently, effectively and economically by any other strategy.

Needs assessment is concerned with identifying the type of training needed, as well as those in needs, down to the level of the individual, organization and its constituent elements (departments, units and individuals)

Three levels may be identified specifically. These are:

1. Organizational level needs: Concerns identifying the type of training needed by organizations and /or units and departments within them.
2. Occupational level needs: involves identifying the attitudes and knowledge refinements for carrying out a particular type of job or function.
3. Individual level needs: deciding the organizational and occupational needs leads at the question of who or which individuals are in need of what type of training.

Individual level Needs

Individual level needs assessment is an example of identifying needs as ability gaps, i.e. deficiencies between existing and desired levels of knowledge, skill and attitudes required by individuals to perform a job. In fact, to the extent that the ultimate aim of all training is to equip individuals with the required levels of competency to perform their jobs. This level of assessment provides a common interface between all levels of assessment discussed so far.

Its importance is in helping trainers find out:

- Who needs training?
- What training they need most
- How this can be best achieved

The knowledge gained from this is indispensable for:

- Planning new training or;
- Tailoring the content and design of an existing program to the needs of prospective trainees.

Methods of individual level needs assessment

The two most common and useful methods of individual level needs assessment are:

- Performance Appraisal
- Gap Analysis

Common techniques of investigation and data collections may be used to operationalize them. Examples are:

- Observation
- Questionnaires
- Interviews
- Group Discussion
- Tests
- Records /Reports

Performance Appraisal

The main purpose of a performance appraisal is to locate any short comings in the performance of appraises based on their actual job performance. However, not all performance appraisals are intended, or designed, for identifying individual training needs.

In fact, in many organizations performance appraisal is a part of an annual activity the results of which are left without adequate analysis. Technically many methods may be available (examination of work sample, observation, etc). Interviews of a semi-structured nature are likely to be more appropriate.

Gap Analysis

Gap analysis involves finding out whether there is a gap between what prospective trainees know, and what they need to know in order to function effectively in their jobs. The purpose is thus to find out if there is a gap, and whether training is a remedy.

Gap analysis is a follow-up to job and task analyses.

Job analysis: A job or function consists of a number of tasks. The clear advantage of a job analysis is to assist trainers to avoid some tasks and to focus on others. In practice, however, job analysis is much more complicated.

The main outcome of this type of analysis is, therefore, a list of the tasks that make up the job and their assessment to define the focus of the training program. The assessment is in turn based on three sets of considerations:

- the relative importance of each task
- the frequency with which they are carried out
- the frequency with which they are carried out
- the envisaged learning difficulty

Suggested procedure for completing job Analysis Worksheet

Steps	**Comments**
1. list all tasks that might be included in the job	You'll not necessarily teach all these tasks, some will be deleted, later an in the analysis
2. Determine how frequently each task is performed	Use a scoring scheme 1. very / quite frequently 2. regularly 3. Occasionally 4. Seldom
3. Indicate the relative importance of each task	Rate each task 1, 2, or 3 to indicate your judgment of their importance : eg. 1. Extremely important 2. Moderately important 3. Marginally ''
4. Estimate the difficulty of learning the task	1. Extremely difficult 2. Very difficult 3. Moderately '' 4. Easy
5. Tally up the total score	Tasks with the lowest total score will be the priority tasks to be included in the training activity.

Job Analysis Worksheet

Job: Vaccination

Tasks	Frequency of Performance	Importance	Learning	Total Focus?
Preparation equipments				
Cleaning and disinfecting				
Preparing vaccine				
Vaccinating animals				

Frequency	Importance	Learning Difficulty
1= Very / quite frequently	1. Extremely important	1. Extremely difficult
2= Regularly	2. Moderately important	2. Very difficult
3= Occasionally	3. Marginally important	3. Moderately difficult
4= Seldom		4. Easy

Task Analysis

Just as a job consists of various tasks, so does a task comprise of a number of steps or components. As indicated earlier, in case job analysis fails to yield sufficient insights into the nature of activity covered under a given job, it may be necessary to take the analysis further to analyze each task. A study of these tasks, known as task analysis, enables trainers to develop a fuller understanding of the detailed activities covered by a job, and to determine, at a more detailed revel, the desirable focus of the training program. The procedure used for task analysis is very similar to job analysis.

B. Design and Preparation of Training

Course development is an important part of the overall planning of training. It follows needs assessment in the training phases and comprises typically of the following components:

- Defining training objectives in the light of needs identified
- Developing course curriculum to achieve there objectives
- Selecting and developing instructional design to ensure effective delivery of the training course. This last step in turn involves decisions about designing and preparing training materials and choosing appropriate aids.

Training Objectives

An objective is a statement of what is to be accomplished by an activity. In the training context, objectives arise out of ‘gaps’ and ‘deficiencies’ identified in the process of needs assessment. They indicate what is to be done about these gaps by stating an end-of-training performance out come.

Objectives thus link two important stages of planning in the training phase: need assessment and the design and preparation of training. Defining objectives is also important for the delivery of training as well as for evaluating its outcomes.

How to Write Objectives

Clear objectives need to let the trainee and the evaluator know exactly

- What improvements are being sought
- Under what conditions these standards are to be attained
- What standards of performance are to be attained

To achieve these would in turn require that the specified objectives are observable, measurable and understood by all.

The three essential components of objectives are performance, conditions and standards.

Performance

Performance is stated in terms of what the trainee will be able to do by the end of the learning experience.

In converting needs into objectives, three areas of performance may be focused on:

1. Skills: it is normally easier to write learning objectives for skill related jobs. As skills are more readily observable or identifiable, they can be stated fairly specially compared to the other two categories of learning.

Eg. Action verbs for constructing skill related objective

Assemble	Design	Make
Collect	Fix	Measure
Construct	Install	Perform
Demonstrate	Locate	Show

2. Knowledge: Most learning objectives involve some kind of knowledge, although knowledge does not by itself change performance. One potential difficulty in writing knowledge related objectives is to differentiate those which raise general awareness and understanding.

Eg. Action verbs for constructing knowledge related objectives

Analyze	Describe	List
Categorize	Evaluate	Match
Compare	Express	Order
Define	Group	Relate

3. Attitude: This is perhaps the most controversial areas of learning, and one which is least susceptible to measurement.

Eg. Action verbs for constructing attitude related objectives

Accept	Defend	Prescribe
Agree	Encourage	Recommend
Choose	Help	
Cooperate	Lead	

Examples of performance statements are:

- The trainee will define in writing…….
- The trainee will collect fecal samples…….

Conditions

This specifies the limitations or constraints under which the performance is expected to take place. It should be noted that these are not limitations of the learning situation, but of the terminal performance

Examples of conditions are:

- Given list of words……
- Using sampling equipments…..

Standards

This states or defines what an acceptable standard of performance is. Under the first component, we were only looking for performance, and under the second the condition under which that performance should occur. Under standards we lock at the required criteria for judging performance or how well the learner is expected to perform.

Examples of performance standards

- …… the accurate meaning.
- …… according to the step listed in the manual.

Examples of training objectives

- Given the list of words the trainee will define in writing the accurate meaning.
- Using sampling equipments the trainee will collect fecal samples according to the step listed in the manual.

Training Course Development

After training objectives have been clarified, it becomes necessary to define the scope of the training course, known as curriculum development. This is an important step in the translation of training objectives into actual training program.

Generally a curriculum development is a listing or outlining of the content which is to be learnt. It contains the main topic headings, sub- headings, headings, and may go to

several levels of specificity. The curriculum does not normally indicate how learning is to take place, rather what is to be learnt. It spells out learning units, their sequence, and degree of importance or priority.

The main purpose of curriculum development is to clarify the subject matter to be trained and to show how it will be approached. It can at the some time be seen as a form of remote control over the composition of the training to be recruited.

Three stapes are involved in the design of training curriculum:

- Defining the course content or components (in terms of parts, chapters, sections or sub-sections.
- Establishing the relative importance of each components, and
- Deciding the sequence in which they are to be covered

Training Materials

Training materials refer to all forms of support prepared for, and used in, training. Training materials can be divided into two major types:

- Print materials and
- Audio-visual support

Print materials include handouts, worksheets, boxed extracts, selected articles, exercises, posters, leaflets**,** etc.

Audio-visual aids include chalkboard, white board, flip charts, overhead projector, film slides, video and film and audio cassettes, etc.

Training materials can be used in a variety of circumstances and for a variety of purposes:

- The spoken word may not be sufficient to convey complicated information. Some illustration or attempt at representation may be additionally required. Thus, supplementary aids may be used to reinforce the training massage.

- They can help store the conveyed information in the memory of trainees.
- They provide interest and attraction to trainees, who may other wise succumb to the monotony of verbal presentations.
- They promote participant involvement in the learning process.
- As a resource for future referencing, they extend the 'shelf life' of leaning well beyond the training session(s).

C. Estimating Training Costs

Organizing and conducting an effective training program takes time, effort and money. Unfortunately, money is not always available in the amounts organizers would like. It is, therefore, important that those responsible for a training program learn to budget accurately for any necessary expenditure to ensure that they can justify fully the requests they may make for funds.

The financial allocation for a training program must be based on a properly prepared budget which can stand up to close scrutiny and be defended during discussion. No overall amount per person can be suggested for a training program as the costs vary according to:

- the type of training provided;
- the size of the training group;
- the administrative costs of training such as supplies and classroom materials; equipment and field materials; travel expenses; number of training staff involved; and, other staff expenses.

A framework within which estimated training costs may be allocated is given below.

Item	Cost

Transport

Numb of participants x cost of transport for each round trip.

Number of guest staff x cost of transport for each round trip.

Per diem or subsistence allowance

Number of participants x amount per day x number of days on course, plus an appropriate number of days for travel to and from the course.

Number of guest staff days required x appropriate allowances per day and for travel time.

Supplies and materials

Number of participants x cost of training materials per participant.

The accuracy of this estimate can be improved steadily if records of materials issued and unit costs are maintained by the Documentation and Proceedings Committee.

Honoraria for lecturers

Number of hours (or teaching units) taught by lecturers x rate of honorarium per hour or unit.

Educational field trips

Determine the number of field trips planned.

Compute costs on basis of vehicle distance covered at the standard rate per kilometer for each vehicle used.

Include overtime or any special payments for drivers.

Overhead expenses

This item may be hard to determine precisely initially and it is often simply quoted as a percentage of the overall costs of the program. It should cover any additional secretarial or domestic staff requirements during the course. An allowance of 10 - 15% should be made initially in most cases. This can be adjusted for subsequent courses on the basis of records of the actual costs incurred.

Miscellaneous

This is frequently computed on the basis of 10% of the total budgetary requirements, including overhead expenses. It should be held in reserve to finance any item of expenditure which could not reasonably have been forseen and which, if not met, would seriously affect the standard of training offered.

8.3.2. Implementation phase

Training Techniques

In principle, there are a wide variety of techniques that trainers can employ to conduct their courses. In practice, however, choice is constrained by such factors as trainer's confidence and competence, and resources available for training.

The use of a variety of training methods or techniques not only increases the interest on trainees but also the program effectiveness. It also encourages active participation by the audience. A training method is a strategy or tactic that the trainer use to deliver the content so that the trainees will achieve the objectives. Using a specific training method, the trainer may also employ a variety of training methods or techniques to enhance the effectiveness of the learning process. These training methods or techniques are classified into three groups, reflecting their broad common areas of functionality. These are:

- Presentational Techniques (lecture, demonstration)
- Participatory Techniques (group discussion, case study, role play, workshop)
- Exploratory Techniques (field trip/visit, assignment)

There are a variety of training methods or techniques available to a trainer to deliver his training content. The eight most commonly used methods are:

- **Lecture:** the trainer orally presents new information to trainees.
- **Group discussion:** the trainer leads the group of trainees in discussing a topic. Group size may vary but discussion may be less effective if the group is too large.
- **Demonstration:** the trainer shows the correct steps for completing a task, or shows an example of a correctly completed task.
- **Reading:** the trainer gives trainees written material to be read that presents new information.
- **Exercise:** the trainer gives trainees assignments to be completed related to the topic of the training activity.

- **Case study:** the trainer gives trainees information about the situation and directs them to come with a decision or solve a problem concerning the situation.
- **Role play:** trainees act out a real life situation in an instructional setting.
- **Field visits/Study tour:** trainees are given the opportunity to observe and interact with the problem being solved or skill being learned.

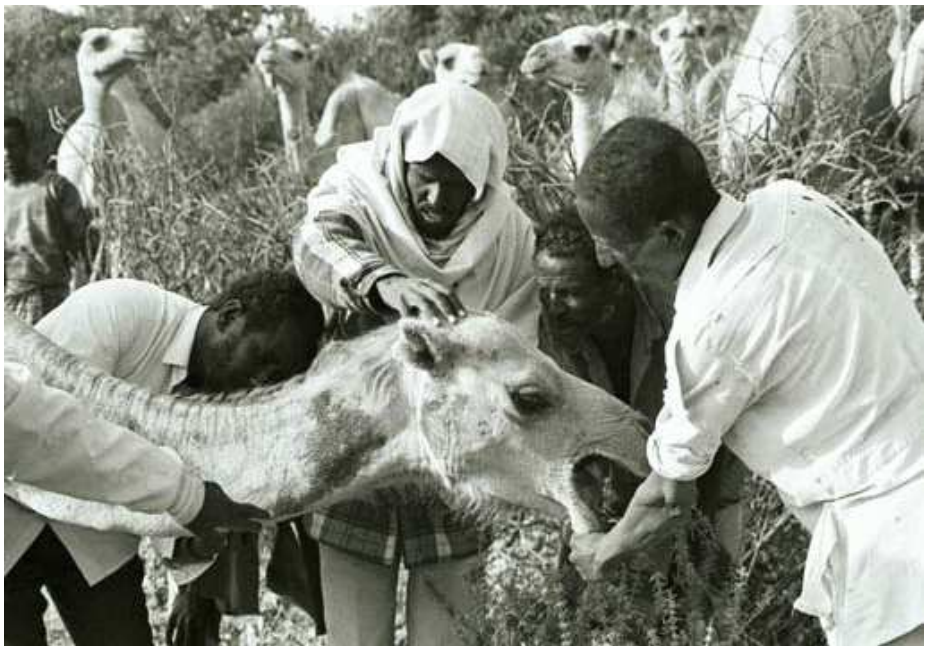


Figure 20: Training of CAHWs in the Action Aid Animal Health Program

8.3.3. Evaluation Phase

Evaluation is a process which attempts to determine as systematically and objectively as possible the relevance, effectiveness and impact of activities in the light of their objectives, i.e. their aims and purposes.

Training Evaluation is a systematic process of collecting and analyzing information for and about a training activity which can be used for planning and guiding decision making as well as for assessing the relevance and effectiveness of various training components. It is also used to determine the immediate results of the activity. Process implies that it must be undertaken **before, during and after training.**

Types of Training Evaluation

Basically, there are five types of evaluation. These are:

- Evaluation for Planning
- Evaluation of Methods and Materials
- Process Evaluation
- Terminal Evaluation
- Follow-up Evaluation

Evaluation for Planning

Training needs assessment is a tool for evaluation for planning. It provides the baseline date upon which all planning decisions are made. This information will enable to make critical decisions regarding formulation of training objectives and course content, etc.

Evaluation of Methods and Materials

There are many instructional methodologies and types of materials from which to choose. However, not all are equally effective for reaching all types of trainees or for teaching specific content.

Each instructional method/material has specific characteristics and advantages and depending on such factors as types of trainees, subject matter being taught. It is therefore suggested that all instructional methods intended to be used should be evaluated for their effectiveness with the target audience.

Process Evaluation

Process evaluation is conducted to detect or predict defects in the procedural design of a training activity during the implementation phase. Key elements of a training activity are monitored in a systematic manner with the goal of identifying potential problems before they become serious.

It is also used to measure trainee progress toward the objectives set during the planning phase.

Process evaluation is a tool to help improve the efficiency and effectiveness of a training program. The overall process evaluation strategy identifies and monitors on a continuous basis the potential sources of failure and also tells about trainee progress towards achieving training objectives.

Process evaluation is conducted periodically throughout the duration of the training. It focuses on anything that occurs during implementation that has an important effect on success of the training activity. It examines such contributing factors as:

- Change in trainee knowledge, attitude or skill
- Effectiveness of training methods and materials
- Interpersonal relationship among trainees
- The performance of trainers
- The extent to which people involved in and the training activity are in agreement with its intent.
- Adequacy of the resources, the physical facilities, staff and the time schedule.

Both formal and informal methods are commonly used in process evaluation. *formal method* include knowledge, attitude or skill tests (exam) and instruments that may require trainees, instructors, administrative staff, and service personnel, to give their opinions on various aspects of the training activity. *Informal methods* such as round table discussions and individual interviews can also used. There are no hard and fast rules on selection of methods.

Remember that process evaluation is conducted so as to have some idea of the progress and to identify potential problems before the end of the training activity. If done early, there will be time to make adjustments and corrections.

Terminal Evaluation

The primary objective of terminal evaluation is to determine the degree to which the intended training objectives and goals have been met and to relate these findings to evaluation information collected earlier in the training process. It is conducted at the end of the training activity.

The major focus of a terminal evaluation is learner performance. Learner performance can be assessed in various ways. One way is by comparing pre-training measurements with post-training measurements. In this method, the trainer will present results as learning gains. Another way is by comparing the objectives of the training activity with what has actually been learnt. Trainers who resort to the latter procedure tend to concentrate on full competency. The first method is closely related to norm-referenced evaluation while the second is known as criterion-referenced evaluation.

Terminal evaluation focuses on many of the same areas as process evaluation, including organization, facilities and resources. Terminal evaluation, however, tends to concentrated more on trainees overall impression of the training activity.

By far the most common method used in terminal evaluation is to test knowledge, attitudes and skills. Test results are then compared either with pre-determined standards (as specified in objectives) or with entry level knowledge (as measured by a pretest).

As in process evaluation, training activity evaluation forms completed by trainees can also provide valuable information on such organizational factors as length, focus, facilities and resources.

This means that two general methods are used in terminal evaluation:

- Actual measurement of change in trainee knowledge, attitude or skill competence,
- Measurement of trainee perceptions about the training activity.

Many training activities use trainee perceptions as the base for this evaluation. This kind of evaluation information can reveal a great deal about a training activity. Trainee

perceptions can be very valuable in pinpointing reasons for training activity success or failure.

Potential problem areas about which trainees should be asked include:

- Training activity organization and management
- Physical resources and facilities
- Appropriateness of objectives
- Training content
- Trainers
- Training methods and materials

Follow-up Evaluation

Follow-up evaluation is a method of assessing changes in on-the-job behaviour (i.e. improved performance) as a result of training efforts. It attempts to measure the adequacy of a training activity in preparing individuals for job tasks in real life and trying to discover areas where it can be improved. It is a valuable tool for gathering information on the strengths and weaknesses of a training activity from those who are in the best position to judge former trainees and their employers. It provides feedback on how well the training has prepared trainees for actual job, and tells the trainee which aspect of the training activity might benefit from improvement.

A follow-up evaluation focuses on measuring change. Development projects, programs, and training activities are all efforts designed to produce changes, and the change desired is outlined in the stated goals and objectives.

In measuring change (impact), a follow-up evaluation of a training activity would concentrate on answering such questions as:

- Are trainees actually using their newly acquired knowledge, attitude or skill?
- Do employers notice any differences in trainee behaviour?

- How do employers feel about the changes in trainee knowledge, attitude or skill?
- Do trainees feel more confident and better equipped?

The methods most commonly used in a follow-up evaluation are:

- Trainee follow-up survey
- Employer survey

Questionnaires, telephone interviews, and personnel visits are all valuable tools which can be used in surveys.

Collecting information from trainees who have participated in a training activity can provide valuable insights into the strengths and weaknesses of a training program. Such information is extremely helpful in preparations for future training activities.

The most commonly used information collection technique involves sending out mail questionnaires. Many trainers who have adopted the technique of mailed follow-up questionnaires have learned that the biggest problem they encounter in carrying out a trainee follow-up involves the low response rate of trainees. It is very difficult to draw valid conclusions when only a small fraction of former trainees filled out and returned the questionnaires.

Some suggestions on how to develop an effective follow-up instrument and increase the rate of return questionnaires are:

- Prepare trainees before graduation concerning the purpose of follow-up studies and the kinds of information they will be expected to provide.
- Use short and uncomplicated questionnaires and ask only necessary and relevant questions.
- Provide prepaid return mail.
- Avoid personnel information as much as possible.
- Place difficult questions last.

- Use colored or unusual types of questionnaires to attract their attention.
- Include a personalized cover letter

Employers will usually cooperate and provide accurate evaluation of the trainee or employee and the changes they can see as a result of participation in the training program. They are also in a position to know what changes are coming in the work place.

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