Forestry extension methods

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FOREWORD

This publication is the second in a series of three dealing with forestry extension in its current context. The initial publication, Forestry Extension Organisation, FAO Forestry Paper 66, FAO Rome 1986, dealt with the establishment and organisation of forestry extension activities. This volume covers the design and implementation of forestry extension activities in the field. Throughout these publications, extension is regarded in its widest sense as any 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 mobilised and what additional assistance may be necessary to overcome particular obstacles. It implies action by the people to solve local problems, not action for them, though it does not preclude assistance where local resources are inadequate to meet otherwise realistic and necessary targets. It places particular emphasis on determining appropriate targets for extension work by the people themselves who must be involved in achieving these, and in the identification and mobilisation of local resources.

It was based initially on a report submitted by Vicente Magno (Forestry Extension Methods, V.C. Magno Lesotho: GCP/LES/026/SWE-Forestry Training and Development, 1982), following a programme of training of staff in forestry extension methods in Lesotho. This present publication, however, incorporates much new material and ideas developed since that time and draws on recent experience of FAO staff in these fields. It sets out to provide a minimum of basic theoretical information of the topic of extension and suggestions on activities which should be adapted to meet the situation within which a reader is working. It is written for persons directly engaged in carrying out extension activities in the field. It will be followed by a publication on Forestry Extension Curricula which suggests the scope and nature of training desirable for staff undertaking such activities.
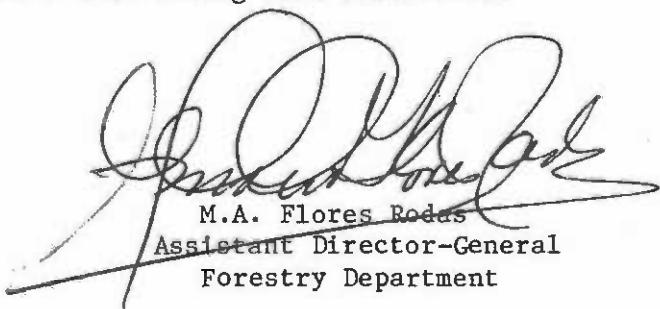
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1. INTRODUCTION TO FORESTRY EXTENSION

This is not a text on forestry. It assumes, on the part of the reader, some knowledge of forestry in his or her local area and describes a number of extension methods which can be applied to bring the benefits of appropriate forestry practices to a wider section of the community. It is not logical to consider forestry extension apart from the general pattern of agricultural extension or rural development in an area. Agricultural changes in developing countries, over the past decades, have tended to favour large scale mechanised commercial production which has required less manpower and has accelerated the movement of population to urban centres often ill-prepared to receive them or offer them suitable employment. This was paralleled by the preoccupation of many forestry authorities with large-scale quick growing industrial tree species plantations in the 1960's and early 1970's.

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, forestry and related activities 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 co-operation between the people and the extension organisation. This concept has led to the development by Compton (Fig. 3.1) of his matrix of relationships between indigenous and institutionally organised knowledge systems and farming systems research, as a basis for the introduction of effective extension into an area. This concept can equally well be applied to extension in forestry which should, in any case, be closely related to agricultural extension activities in any area.

1.1 Definition of forestry extension in this context

In recent years a number of different terms have been used to describe the basic activities of forestry extension. This diversity of terms has not necessarily clarified the issues. The important point, however, is not the particular term used but the acceptance by those concerned of an attitude of approach to the matter. 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 mobilised and what additional assistance is available and may be necessary to overcome particular obstacles.

In this publication, the term forestry extension is used to cover any situation in which local people are directly and willingly involved in forestry activities from which they will derive some recognisable benefit within a reasonable period of time. Where necessary this may include activities by industries or public organisations other than the forestry

authority, to promote forestry 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 recognised 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 forestry can play in conjunction with other rural activities in maintaining the environment, improving living standards and meeting specific needs for forest products. Where the term "community" is used it should be interpreted in its widest possible sense as the population of a village, or an area, or a section of a population, or any group of people having some common interest, as appropriate to the context.

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 forestry extension

The main purpose of forestry extension is to help people to examine problems which are affecting their lives and to consider if they may be solved, or at least alleviated, by using forestry techniques within the range of their skills and financial resources. The views of the people should, in turn, be relayed to the officals 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 recognising a need and deciding to do something about it. The contribution of forestry 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 organisation 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 judgement necessary to improve a whole range of activities to enhance the quality of their lives.

1.3 Function of forestry extension

The function of forestry 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.

Forestry 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 programme 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 crops and animals, to

understand more fully how trees or forests fit into the pattern of their lives and whether they are being used, or cared for, as wisely as they should be. Where a situation arises in which people must reverse recent trends of depleting forest resources, 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 seeds, 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. Though they may, on some occasions, depend on charitable sources to meet a particular need their function is not to dispense charity but to help people organise to achieve the things they desire by their own efforts.

Situations may occur, however, where the living standards of the people are so low or where they have a completely negative attitude to trees and forests, possibly brought about by the activities of government staff employed to safeguard the forests, that different approaches must be used. Great care must then be taken to ensure that whatever inducements are offered, either to enable extremely poor people to participate in forestry activities, or to counteract a very negative attitude to forests, the emphasis is placed on the final benefits that can be derived from the activity and not on the immediate benefits of allowances or assistance in any form being offered to start the programme.

1.4 Steps in developing a forestry extension programme

Too often in the past extension programmes in agriculture and related fields have concentrated on supplying what outsiders thought local people needed, with little or no consultation on how the people themselves viewed the matter. People, out of natural politeness, or in some cases a fear of government authority, might go along with the proposal, to a limited extent, but without any sincere commitment to its success or belief that it would be of any real benefit to them. It was an activity, if not entirely alien to them, at best of little direct concern to them. In these circumstances, many promising schemes have failed, often when the person who promoted the scheme and was likely to have had good relations with the local people, moved from the area and was replaced by someone with a different approach or with new ideas on what the people needed.

The degree of continuity necessary for success, in spite of changes in staff, can only be achieved if the people themselves identify and recognise a need as a result of careful discussion. This phase should not constitute a great problem, as in many countries where forestry extension can operate successfully, public discussion of local issues has been a long-standing procedure for establishing a consensus on matters of public interest. The task, initially, is one of providing sufficient accurate information to the people in a form they can understand to enable useful discussion to take place. This should, however, be done without appearing to push the people towards a particular conclusion.

A further step in the process is to guide people, tactfully, to adopt an objective, and form of work, which are realistic in relation to the resources of time, skill and materials they can devote to it. People may sometimes swing violently from a state of indifference to one of excessive enthusiasm if they believe (often without justification) that they will receive a great deal of assistance to achieve their objective and obtain large benefits from this.

From a generalised objective (e.g. a desire for an adequate supply of building poles or fuelwood for the community), a more specific target which can be achieved within a reasonable period of time must be selected. When a

target has been selected attention must then be centred on what the community itself can do to achieve it.

This commonly results in the presentation of a long list of things which the community think the extension organisation should fund or supply. If the people are to have a proper commitment to the objective, however, they should first be guided to consider what they can contribute in labour or resources to achieve it. At this stage a proper balance of local commitment and possible external assistance must be secured. Extension staff must be aware of the problems of poor and possibly undernourished people taking on a heavy additional work load and the possibility of a clash of new forestry work with their normal farming activities for which their resources may be barely sufficient. Extension staff must also be properly sceptical about offers of assistance from leaders of a community who may well be "volunteering" the services of their wives or less enthusiastic dependant relatives, without first consulting them. Agreement to co-operate must involve the personal commitment of the individual.

In some cases the resources of an area may be so limited that they must be supplemented by rewards in foodstuffs or in cash if people are to be able to undertake any additional work. Assistance in the form of improved tools or the transport of materials may be justified but the benefits likely to result from their use must be carefully measured against the cost. Their provision may in fact be counter-productive and lead to the collapse of a programme if the community cannot sustain these supplies from its own resources once a period of aid comes to an end.

Defining the nature and correct level of assistance to an extension programme requires as much care as the decision taken by the people on the objectives themselves. It involves social and legal questions such as the availability of suitable land, the traditions of individual or communal work amongst the people, their knowledge of appropriate forestry techniques and their willingness or ability to learn them.

Whether work is undertaken on an individual or a community basis it must be clearly demonstrated and understood how this will benefit those who take part in it, and the benefits must be sufficiently attractive to justify the efforts involved. Where the programme involves community action it must be agreed how the actual benefits, either in goods or in cash, will be shared.

1.5 Procedures for change

Some doubt has recently been cast on the belief that if people were shown how to do something useful they would gradually adopt the practice, i.e. a "trickle down" process would operate. This system has undoubtedly conferred some benefits on the strata of society who were sufficiently perceptive and financially secure to risk adopting a new practice but the spread of the new idea or technique has not always moved as far downwards as planned. Those who were most in need of change, and would benefit most from it, often did not have the ability or the resources to initiate the change.

The procedure, now being advocated by Compton, is to adopt a "bottom-up" approach, i.e. to identify the range of indigenous knowledge and current farming systems and, using institutionally organised knowledge systems, to build on to them features which would make them more productive or less harmful to the environment. This approach must give proper importance to both the social and technical aspects of any system. Some earlier extension efforts may have placed too great importance on the provision of technical information to a few people and not enough on the

social justification of the the existing system and the process of spread of change through family or community groups.

The approach to change must also take into account the extent to which the target population are individualists or community orientated. In cases where community action is essential to achieve an objective, e.g. in the improvement of water supplies or erosion control, it may be necessary to concentrate on developing community spirit and resources, possibly in some activity quite distinct from forestry, before the technical aspects of the major task can be introduced.

In some societies to which forestry extension may be introduced, the concept of individual success or individual wealth may not be acceptable. Persons who achieve a high standard of success and personal wealth may be excluded from community activities, (e.g. excluded from drinking from the common cup by other men). The approach via "innovators" or "early adopters" may not always be appropriate and a fresh approach based on action by a wider section of the community may be necessary. The important feature is that extension staff must make an effort to find out how local people view certain situations and not try to apply concepts from different cultures without first giving them a critical examination. They must learn to be good listeners and to understand the culture and concepts of the local people.

Any form of approach must, however, take into account the policy of the local government on development matters, particularly whether it favours individual or collective action. A line of approach which is contrary to government policy will not be acceptable to the authorities if proposed by the extension service and may be viewed with great suspicion, or even as subversive, if proposed by a non-government organisation. Extension should, however, be a two-way process and send back information on the views of the community to the government so that they can adapt their policies to facilitate the achievement of extension goals the people have themselves established.

1.6   Need for properly trained staff

The staff required to implement a programme of forestry extension must differ from those engaged in general protection or production forestry duties in both attitude and technical knowledge. Of these, attitude is perhaps the most important. It should not be too difficult for a well trained forester to acquire the technical skills relevant to extension forestry but if he or she does not have a correct attitude to the tasks, technical skills in themselves will be of little value.

Briefly, the social skills required consist of the ability to communicate on a number of different levels. It is essential to be able to communicate with the local people in the concepts, words and idiom they understand and have the patience to allow them to discuss matters at their own pace and to formulate ideas in their own words. It is equally necessary to be able to communicate effectively with a wide range of colleagues at roughly similar levels in both government and non-government organisations involved in rural development. Ability to communicate on a higher level with scientists and research workers, administrators, and policy or decision makers in the government is also important. Such skills will enable extension staff to assist the members of the community to formulate and present their proposals to the authorities in a form likely to secure the support they require. While social skills may be taught, and should in fact now be included in all courses for staff who may be engaged in forestry extension, they must ultimately be acquired by practice. The procedures, values and characteristics of different groups of people, especially if they

have developed with relatively little contact with their neighbours, differ so widely that no formal course is likely to convey all the knowledge required. If a course can develop in a student a sensitivity to other peoples' feelings and an enquiring mind to probe and classify their ideas and beliefs, it will enable him or her to acquire such knowledge and establish a proper understanding of the people.

The basic skills of communication relating to discussion or demonstration can be taught without too much trouble but the ability to select the best method and to apply it effectively is something that requires judgement and practice. Willingness to conduct an effective discussion with potential clients and to gain a firm understanding of their position before suggesting possible modifications to it, is essential. Successful approaches should be widely publicised and carefully analysed but there is no guarantee they will be equally effective in another situation.

In terms of technical knowledge, the requirements of an extension forester differ in content, scale and standards. A working knowledge of possible extension forestry practices should not take too long to acquire, as in most areas these are still limited in range, but learning should be regarded as a continuous process as developments soon overtake existing knowledge. A certain degree of financial knowledge and skills in planning are required to ensure that any proposals considered will be economically viable. A successful extension forester must, however, be orientated to "think small" and to appreciate the value of projects involving perhaps only a few trees in particular circumstances. It is also necessary to accept that matters such as accuracy of spacing, and the standard of maintenance may differ greatly from large-scale forestry operations. Timing of operations may have to be adjusted to fit into an existing pattern of agricultural or pastoral work. Too often a farmer may find it difficult to grow enough food to support himself and his family. He may only be able to devote minimal effort to the growing of trees. In many areas such knowledge or concepts of rural life may not yet be fully understood and they will have to be developed by staff as they go about their tasks. The knowledge that these matters are important and should be studied in the field will be an important contribution of training organisations initially.

In an ideal situation, it would be desirable that all members of a forestry organisation should be skilled in forestry extension and move between extension and other forestry activities as required. In practice this is unlikely to happen, especially with existing staff whose attitudes to people and forests may already be fixed. The current trend towards specialisation in forestry studies, especially at the higher levels, also makes such flexibility less likely to occur in future. The options of organising forestry extension activities within a country or region, in different forms, have been dealt with in a companion volume. (FAO Forestry Paper No. 66, Forestry Extension Organisation, FAO, Rome, 1986). Whatever option is adopted co-ordination should be maintained between the various activities of the forestry organisation as extension forestry must be regarded as part of the overall forestry strategy of a country and not as a separate activity.

In a similar way, forestry extension must be regarded as part of the overall development strategy for rural communities. In some cases, it may play a major role in meeting needs and increasing wealth. In others, it may play a part in improving agricultural or animal husbandry practices. In either case, co-ordination between technical staff of different organisations concerned with development and with the representatives of local and national government must be maintained. All fields of development in an area must be regarded as part of an overall plan to improve the welfare of the population.

This does not imply that a single multi-purpose development organisation is necessarily the best means to implement development but it should emphasise that the "competition" between various development organisations, which may have existed in the past, is not an efficient way to use limited resources or secure an overall improvement in living conditions.

Suggestions on appropriate training programmes based on the contents of this publication will appear in a separate FAO publication.

1.7   Extension research

The effectiveness of any extension programme will be improved by an appropriate research programme. Some information such as the suitability of species, cultural techniques and growth rates may be derived from research work being carried out for other purposes within the forestry organisation. As the programme develops, extension staff may be able to identify problems or areas of work requiring research and either undertake this work in collaboration with farmers and research staff in on-farm trials or pass them over for investigation in suitable circumstances.

Research into social matters is, however, most likely to be of immediate value to an extension programme. This may not be problem-solving research but the collection and recording of attitudes, family structures, traditional roles, levels of influence and decision-making procedures, land tenure practices and work patterns. In time, research staff may be able to test the impact of various types of approach or the presentation of information and the nature of incentives to the public. This can only be done against the background of a well documented pattern of their attitudes, beliefs and social structure.

1.8   Factors limiting forestry extension

Many factors have, in the past, limited public interest in forestry extension as a means of achieving community-orientated forestry practices and will continue to do so until they are either modified or overcome. Initially, local knowledge limited to certain common agricultural or rural practices has made it difficult to take advantage of introduced forestry species or practices which could prove beneficial. Lack of material and financial resources and problems of education and health have also proved an obstacle to adopting good forestry practices into the normal pattern of life. To overcome these problems, educational support covering all aspects of these problems is required.

Interest in many aspects of forestry extension may also be limited by the length of time between effort and reward in forestry activities. People who have no reserves of wealth in any form require a prompt return on any efforts expended. It is, therefore, important to draw their attention to fast-growing, multi-purpose species which will enable them to secure a crop of fodder perhaps, while waiting for a tree crop to mature. Interest in longer-term crops may develop in due course, but only when the people concerned have reached a stage when they are able to invest effort or wealth for a longer period. An exception to this may be fruit trees, such as mango, where the effort is limited and the return from even one successful tree may be sufficient to induce people to plant. These may sometimes be used as a useful introduction to other types of extension practices.

A further feature which may discourage the development of long-term crops is security of tenure of land. If a person or a community cannot be sure that they will control an area of land long enough to reap the benefits of any crop established on it, they will use it only for the most easily

produced short-term crops. In many cases the only additional areas of land of any reasonable size available for forestry extension are controlled by the central or local government, often through the forestry organisation. Public servants in such organisations are understandably reluctant to give up control of any areas of land which might in turn reduce their authority and importance. Only in exceptional cases, notably Nepal, have members of the community obtained rights to manage substantial areas of forest land for extension programmes with adequate security of tenure. In a number of countries the forestry authorities have declined to accept the inevitable and recognise that areas of forest already encroached and denuded of trees might be better managed by their present occupiers if a form of lease or certificate of occupancy could be given which included requirements to carry out approved forestry extension activities.

Bureaucratic procedures in dealing with permits to cut, transport or sell forest produce may also discourage the adoption of forestry extension practices by people who believe the less they have to do with officials the better. This is a fully understandable attitude in areas where such officials openly seek to supplement their incomes with irregular payments for services performed. Forest produce arising from forestry extension programmes should be regarded as similar to agricultural or animal products and be marketed with as few restrictions as possible. In particular, the levying of taxes on such produce may either discourage production or distort the market, as people adopt various tactics to avoid payment.

In areas where production could be raised beyond immediate domestic needs, the lack of suitable marketing arrangements and an acecptable price structure may be disincentives to increased production. Marketing may be controlled by a powerful middle-man organisation which deprives the producers of a proper share of the benefits. Poor communications and transport facilities or the lack of a satisfactory rural infrastructure are also likely to limit production.

A reliable supply of planting stock, fertilisers, insecticides, fencing materials or other items required, at reasonable prices or on acceptable credit terms must be arranged if these are not to be limiting factors in implementing an extension programme.

On a national scale, since areas operated under extension programmes may not then appear in official records as forest land, or yield any direct revenue to government, there may be a reluctance to devote part of a limited forestry budget to extension which may appear, on paper, to be a non-productive function. In practice, this ignores the fact that crops of trees established by extension activities may have considerably lower direct costs than those established by government organisations, and that lower prices arising from greater supplies of forest produce may benefit more people than a somewhat better balance in the forest authority's financial accounts. The real importance of a successful extension programme can only be appreciated by staff of a forestry authority who have been fully informed and properly orientated to extension forestry, even though they are not engaged in the day-to-day work of extension.

1.9   Benefits of forestry extension programmes

The primary benefit of an extension programme is that it meets a need which people have defined for themselves and have considered sufficiently important to devote their time and resources to satisfy. In doing so, the people may, in many cases, have learned to co-operate and to plan ahead to achieve their objective, skills which can usefully be applied to improve many other aspects of their lives.

In material terms the need may have been for:

- fuel for cooking;
- poles or small timber for housebuilding;
- fodder for animals;
- fruit for domestic consumption or sale;
- shade or shelter for people or animals;
- employment from the manufacture of handicrafts;
- cash from the sale of surplus produce.

Many of the benefits may be difficult to measure and value. The ready availability of fuelwood and materials for house construction may lead in some instances to improved health and to increased time for cultivation of food crops. This may be reflected in higher agricultural output rather than in returns of forest products. Similarly, the establishment of fodder or shade trees for livestock may lead to higher values of animal products before any measurable benefit from forest products arises. If these situations, however, help people to understand the inter-relation of forestry and agriculture, this may lead to a more favourable overall view of forestry extension activities in future.

HANDICRAFTS   POLES & TIMBER

Forestry extension
programmes can bring
a wide range of benefits
to many rural people

FRUIT

SHADE

FODDER   FUELWOOD
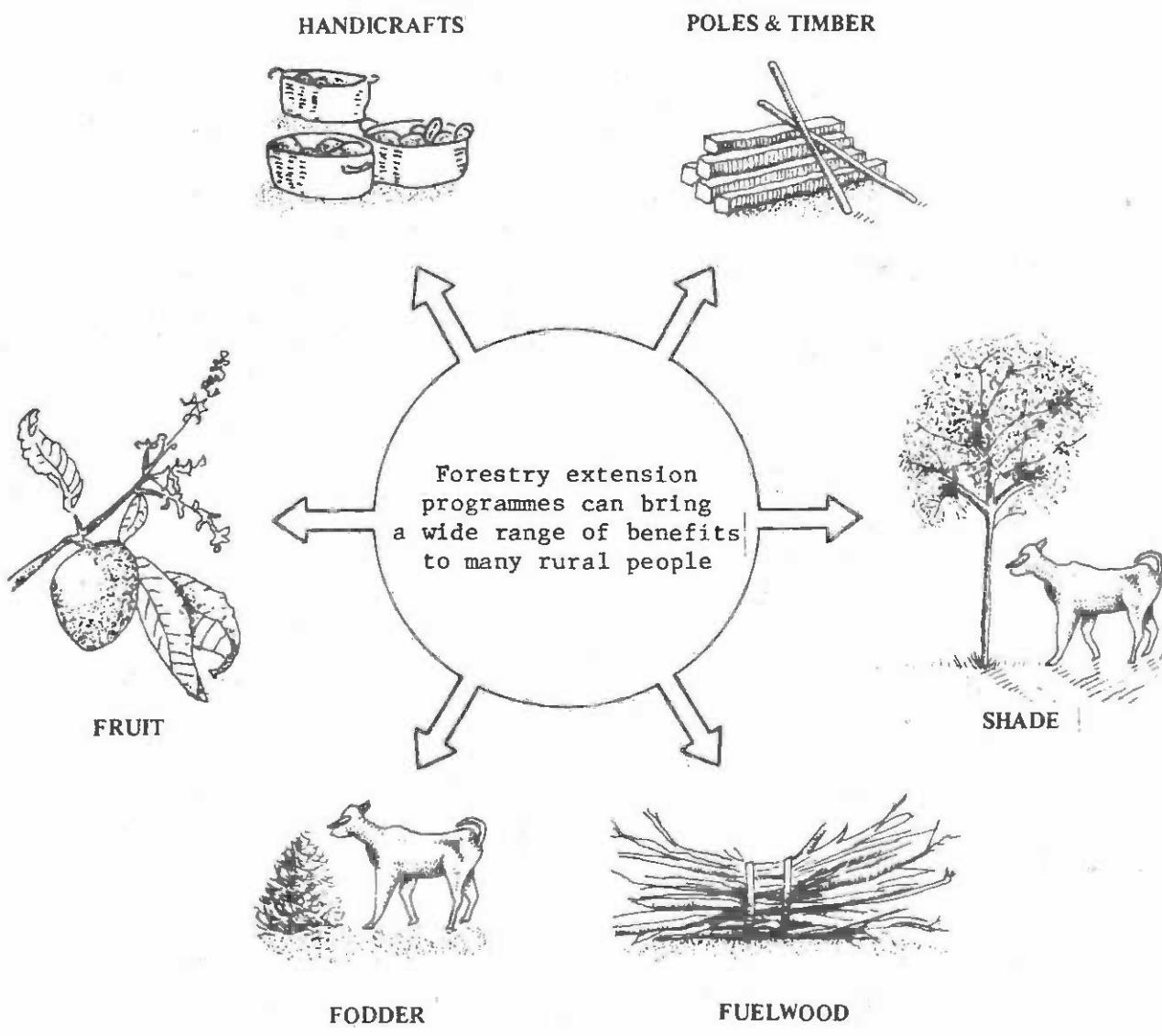
Forestry extension programmes can bring a wide range of benefits
to many rural people

2. FORESTRY PRACTICES FOR EXTENSION

This publication does not attempt to deal with the silvicultural aspects of extension forestry which differ widely from place to place. It describes briefly some of the systems to which extension practices can be applied, suggests circumstances in which they may be used and the benefits which may be obtained from their adoption by individuals or by the community.

2.1 Agroforestry systems

Agroforestry is a collective term for all land-use systems and practices in which woody perennials are purposely grown on the same land management unit as crops and/or animals. This can be either in some form of spatial arrangement or in a time sequence. To qualify as agroforestry a land-use system or practice must permit significant economic and ecological interaction between the woody and non-woody components.

Within this broad definition, a wide variety of both traditional and relatively new systems or practices can be classed as agroforestry. Some important features of agroforestry systems appropriate for use in forestry extension programmes are:

- whenever possible they should be carried out on a person's own land, or on land held under a secure title;
- alternatively they may be on poorly stocked public forest land leased to an individual or to a community group for a reasonable period of time;
- they should aim to create a system under which forestry and agricultural or animal production can continue permanently;
- where possible there should be a beneficial interaction between trees, animals or agricultural crops and the environment such as providing shelter or fixing nitrogen in the soil;
- the persons taking part in the programme should do so willingly and should be quite clear how they will benefit from it;
- the benefits should be related to the particular needs of the people or to earning opportunities which they consider to be important; and,
- the rewards should be enough to compensate them for any extra work involved and for any possible reduction in agricultural or livestock crops.

2.1.1 Distribution of crops by area

Some patterns for the distribution of trees in agroforestry systems are:

- in one or more rows round the edges of fields or landholdings;
- in alternate rows with food crops;
- in alternate strips of two or more rows with strips of food crops or grazing land, preferably following the contours;
- as scattered trees amongst food crops, or sheltering tethered livestock or poultry;
- in vegetable gardens, round buildings or homesteads; and,
- in scattered small groups of trees often in areas difficult to cultivate for food.

The cultivation of trees round the edges of fields and landholdings requires some degree of agreement with the adjoining landholders to forestall

complaints that the trees are affecting production in the adjoining fields. The last three alternatives have some similarity to the form of agricultural practices used for many years, particularly in Africa, where farming was based on clearing part of the forest crop and planting food crops followed by a long period of forest fallow. Under this system, it was common for large trees to stand over the food crops for several of the short periods of cultivation and the intervening fallow periods.

Trees grown round boundaries or in one or more rows between crops can normally produce fuelwood, poles, small sawn timber or possibly fodder depending on the species selected and the form of management adopted by the owner. They can, in time, be managed to give a reasonably consistent return in material or income to the owner.

Scattered trees amongst food crops, in vegetable gardens or round buildings may often be fruit or general purpose trees, some of which may yield fodder in the dry season. Branches may be lopped from time to time for fuel but the isolated location of the trees usually results in a stem form unsuitable for poles or small saw logs. In some cases, e.g. mango, the yield from the fruit may be of considerable cash value but their value in other respects during their productive period may be for shade only. When their effective fruiting life ends the trees may yield a considerable amount of fuelwood and at least one saw log but this occurs only at long intervals and must be considered more as a bonus than a regular element in production. The benefits of such trees in terms of shelter for tethered animals or for the occupants of buildings is hard to quantify, but is never-the-less recognised by local people who carry out many domestic activities in the shade of such trees.

Trees grown in small groups in areas difficult to cultivate for foodcrops may be most suitable for fodder or for lopping for fuelwood. The sites may be used for growing timber species, while providing some shelter for animals, but it is usually difficult to demonstrate to peasants the benefits of planting trees from which they are unlikely to see some major benefit during their lifetime.

Agroforestry provides opportunities for people to meet local needs
for both food crops and forest products

2.1.2 Silvipasture

This involves the growth and protection of suitable trees either in isolation or as small groups on land primarily devoted to grazing. The trees serve a number of functions such as:

- providing shade for the animals;
- promoting the growth of grass under certain tree species (e.g. Acacia) in the dry season;
- providing fodder for animals or fruits for people;
- stabilising soil and moisture conditions;
- protecting riverbanks from erosion; and,
- providing fuelwood or timber when trees are due for replacing.

Since grazing lands are normally held on a community basis, this requires a broad degree of acceptance by the community that the preservation and planting of trees on such areas are necessary. Protection of the trees, which is vital to their survival, is difficult to achieve unless there is a high degree of commitment amongst the community that they should be preserved. It also requires a clear agreement on the utilisation of the benefits both during growth and when trees have served their purpose and have to be replaced. It may, in some cases, require legal powers to ensure that the interests of the community are not damaged by a minority of the people.

The broad general benefits of shade, protection of the soil and promotion of the growth of grass are hard to quantify. Any more immediate benefits such as the collection of fruit or occasional lopping for fodder or fuelewood are limited and require careful control to avoid over-utilisation.
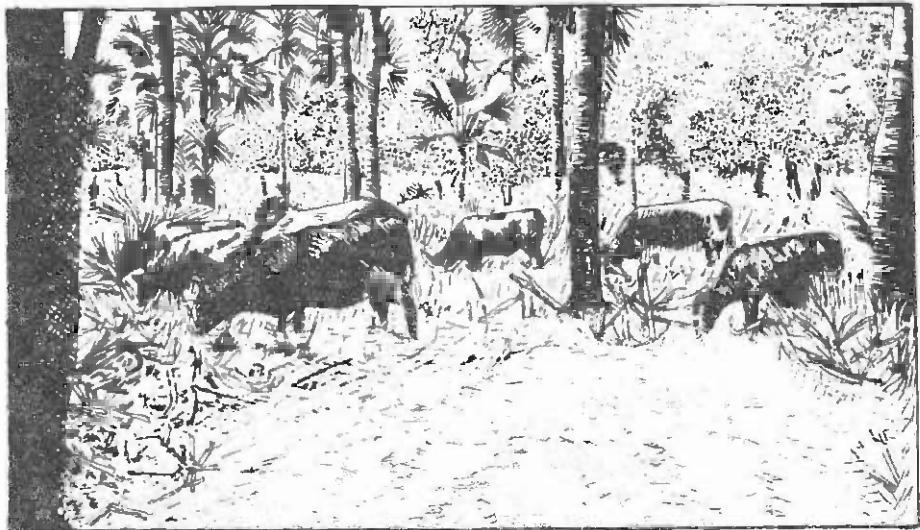
Trees on pastureland have a vital role to play in good animal husbandry

2.1.3 Strip plantations

In some countries, one of the few readily available resources of land for planting are strips of unused land along roads, railways, rivers and canals. Road, railway and canal embankments are normally under the control of the appropriate authorities. They are usually somewhat reluctant to give up their rights in these areas, and where they do, they normally impose strict controls on the type of work which can be undertaken for both

technical and safety reasons. This applies particularly to railway lines. While this does not necessarily exclude individuals from operating in these areas it is usually administratively more satisfactory for the forest authority to negotiate the terms of an overall agreement with the controlling authorities and to make subsidiary agreements with groups of people who are willing to act jointly and to observe the conditions imposed. In the case of roads, there are sometimes limitations on the security of title as strips may be required after some time for widening or other engineering purposes. The cultivation of certain low growing leguminous crops may be permitted in the first year of planting but generally there is a reluctance to allow disturbance of the surface soil in these areas. Subject to these limitations this can be a very valuable source of land for forestry extension projects where land is a limiting factor.

The custom in the past has usually been to concentrate on large crowned shade, timber or fruit species which, once established, required the minimum of attention. Such trees, however, yield few immediate benefits to those who plant them. If strips are properly managed by the local community, with the co-operation and technical assistance of extension staff, there is no reason why they should not be used for shorter term crops producing fodder, small poles, fuelwood, or fruits. Unless there are some early benefits from such crops, even those who participate in planting may be reluctant to protect the trees adequately and unless this is done the results are generally very poor.
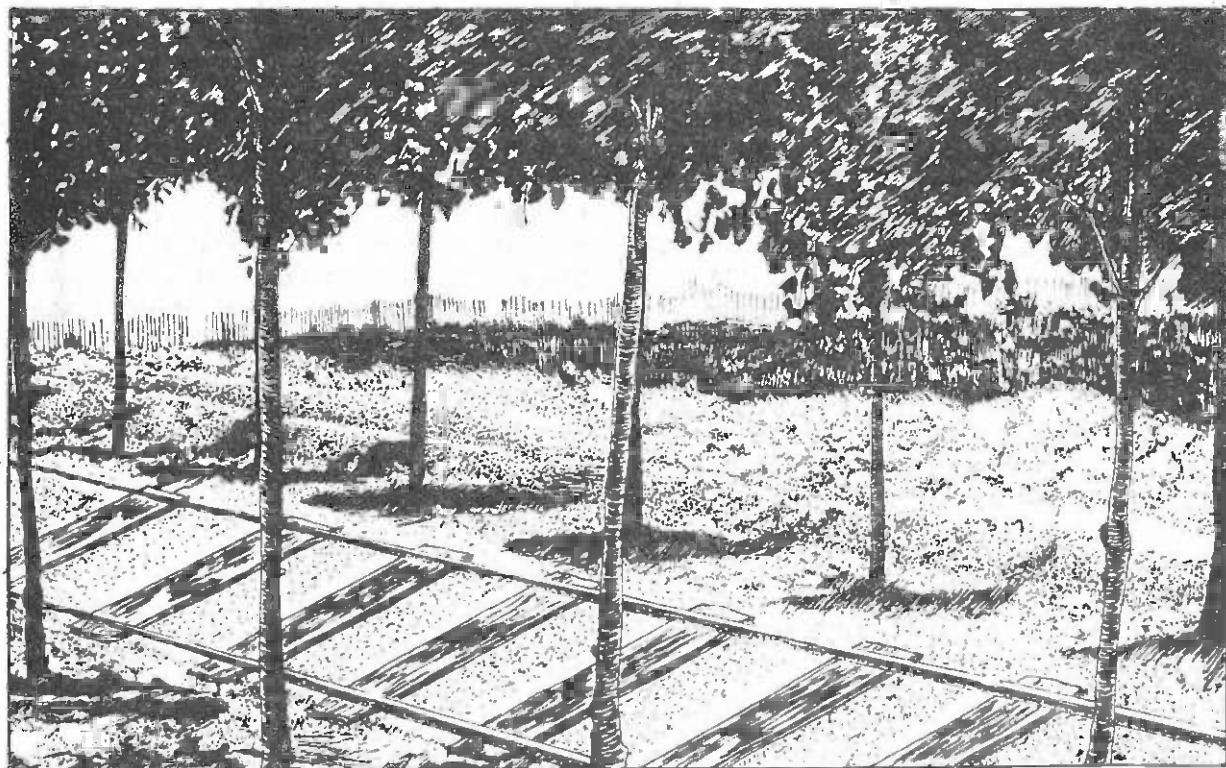
Trees planted along railway lines are a valuable addition to the
forest resources of an area

2.1.4   Tree farming

In some areas specific demands for forest produce or tree fruits may justify a farmer growing trees as a commercial crop on part of his land. This is normally an individual decision and depends on the availability and

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suitability of land for such a crop and a cash return comparable with what can be obtained from agricultural crops in the area. The choice of species and management system depends on local requirements but, other than for fruit production, the most profitable output is likely to be building poles or fuelwood in areas where there is a considerable shortage of these items. This is most likely to be an individual rather than a communal activity and the question of the timing of the yield is of the greatest importance. As the system inevitably causes some reduction in agricultural output a farmer must expect an early return from the trees to compensate him for the initial reduction in income suffered. In theory, there is no reason why timber species could not be grown under this system, but this could only be done by people who are sufficiently rich in both land and other assets to invest in these crops.

Space under the trees may be used to some extent for food crops or for rearing tethered animals or poultry and in this respect it can be classed as an agroforestry system but the emphasis is on the tree crop and any other production is subsidiary.

2.2 Taungya

Though taungya has been in use for over 100 years and is sometimes considered an agroforestry system it is not strictly so in the sense in which this term is used in this publication. It is a very effective way of raising tree crops with the simultaneous production of food over a period of 2 to 3 years, but the land does not normally belong to the persons growing the food and the trees are the property of the authority controlling the land.

It differs from true agroforestry systems in that it does not aim to produce a permanent system of agricultural and forest crops. The cropping area moves from year to year and eventually reaches a distance where the farmers must either give up, as they have too far to travel to the area, or move their homes. The reward to the farmers is limited to the food crops they grow. They have, normally, no rights to, or interest in, the trees apart from the few years during which they are tending their food crops. While this has, in many countries, proved a very effective method of regenerating poorly stocked forest at very low cost, it does not normally establish the very close links between the farmers and trees implied in agroforestry systems.

If it were adapted to growing short term tree crops, e.g. 20 years rotation, and some fertiliser treatment were introduced in the agricultural phase, it might be possible for a group of farmers to operate on a permanent basis. This could be used for the production of large poles or small sawlogs with perhaps an intermediate yield of small poles, fuelwood or fodder. It would be necessary to establish some particular relationship between the owners of the land, presumably the forest authority, and the farmers to ensure that the farmers felt fully involved in the operation and received a proper reward for their efforts. This has proved very successful in raising crops of Eucalyptus spp. in some countries.

On the other hand, farmers themselves could adapt the taungya system to estabishing community woodlots for their own benefit if suitable land were available.

2.3 Community woodlots

These are usually intended to meet the general requirements of a community for fuelwood, poles, light construction timber or similar products, where these needs cannot be met by individual agroforestry efforts. They

may also help to meet the needs of people in the area who do not have land available for planting trees. They face two major constraints, namely suitable areas of land for planting and the willingness of the community to form an organisation to plan and carry out the necessary work and the distribution of benefits. They can be organised by established groups such as development committees, schools, religious organisations or by "ad hoc" groups formed on the initiative of forestry extension staff.

During the establishment period it may be possible to use the taungya method as suggested above, as this replaces the tending required in the early years with the cultivation of food and provides some early benefits from the land. Definite arrangements must, however, be made for any cultural or maintenance activities required later in the life of the crop and for protection against both illegal cutting and fire.

The establishment of woodlots will almost certainly affect a large number of people who may have previously used the land on a seasonal or casual basis and their interests must be taken into account in planning the work. If they feel excluded they are unlikely to co-operate in the protection of the area, no matter how important others feel about this and problems of trespass may make a scheme almost unworkable.

Administrative problems may arise in that some of the members who initiate a scheme may no longer be alive or able to participate actively as it reaches maturity and decisions on their proper share of the rewards may give rise to controversy.
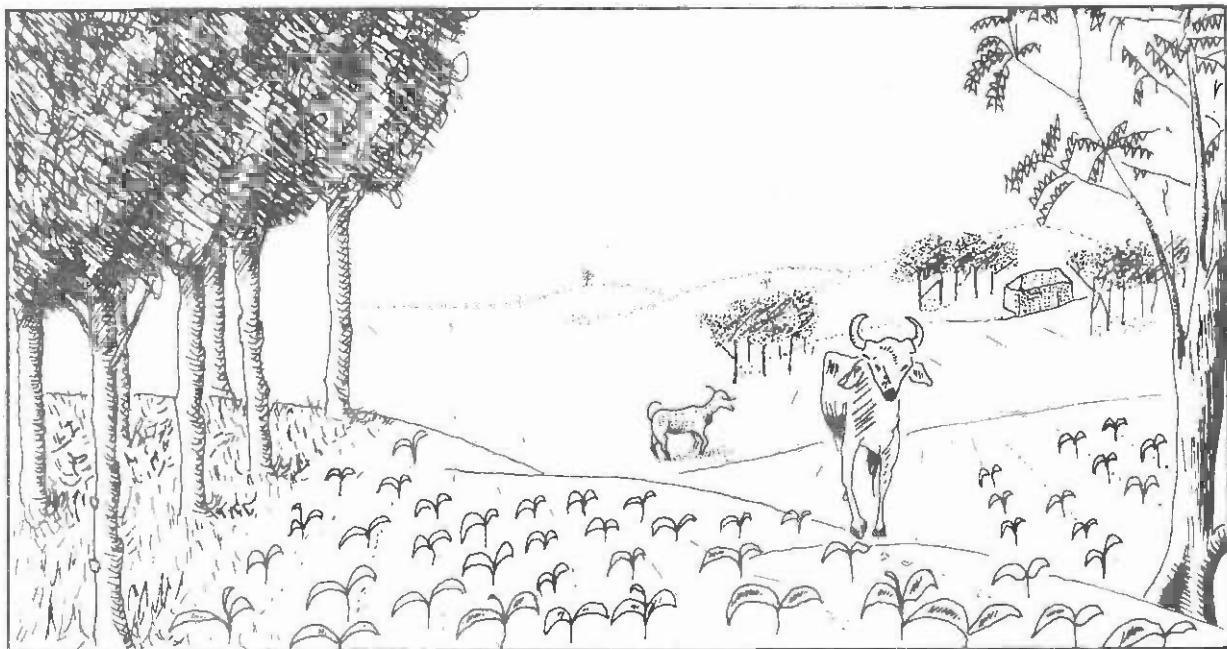
Community woodlots meet some needs which cannot be met by agroforestry

2.4 Management of natural vegetation

In some areas community action, assisted by extension programmes, may be promoted to manage areas of natural vegetation, either held in common ownership or on state or private lands subject to trespass. This, however, is unlikely to gain much support amongst local people until some signs of deterioration are apparent. Management normally involves, initially, a holding operation aimed at avoiding any action which might result in further deterioration of the vegetation. The fact that an area of natural vegetation

is in urgent need of management usually suggests a human rather than a technical forestry or agricultural problem. It is necessary to establish by careful discussion with the local people the main reasons and causes of damage to the area and explore means of overcoming these. If it is a problem of trespass and illegal felling the demand for fuelwood and timber must be met from some alternative source. The demand will not simply diminish if people decide to manage the area on which it is now concentrated. In the last resort it may be necessary, initially, to convert part of the area to more intensive production to relieve the pressure on the remainder and later to establish other resources elsewhere to meet increasing demands for the future.

If the situation is one of trespass or overgrazing by domestic animals the problem may be more intractable. Animal husbandry practices are so deeply rooted in the culture and traditions of many peoples that they prove very difficult to modify. There are often very sound reasons for the original practices though the situation in which they are being maintained has changed, (e.g. the human and animal population may have increased greatly). The practice of grazing domestic animals within a limited area and growing fodder for them for a substantial part of the year raises a number of problems not least of which is the availability of suitable land for permanent pasture and for growing fodder. Hygiene and disease problems may arise when animals are kept permanently in a limited area and veterinary services may be lacking or unduly expensive. Any solution to the problem may have to be found in long and patient discussion and co-operation between the people, animal husbandry, agricultural and forestry extension staff.

Management of natural vegetation implies more than a policy of exclusion or complete protection as has often been the case in the past. It normally requires some positive steps to maintain or improve the existing vegetation. This again may require careful discussion and explanation with local people who may find it hard to understand why certain operations are necessary while other more traditional activities must cease. Material yield from such areas may be limited initially and a time span of 20 to 30 years may be required until it again contributes significantly to local needs. Problems may arise, however, in establishing local commitment to manage, by different processes, an area which for a long period has been regarded as a common resource and managed under traditional practices. The adaptation of the skills of traditional management to changed needs may also take a lengthy period.

2.5 Erosion control or improvement of water supplies

This usually requires community action and often involves the land of several individual members of the community, as well as areas of common land. It requires a strong commitment by the people concerned to carry out the work and to accept any changes in use of the land involved. It can normally be applied only where the community are in general sufficiently prosperous to undertake work which may have no immediate benefits, or where a government or voluntary organisation can compensate those taking part, to some extent, for their efforts or co-operation. This is a situation where an aid scheme such as Food for Work can bridge the gap between effort and deferred benefits.

The benefits are unlikely to be reflected in terms of forest production, unless trees are grown along contour bunds, on filter strips along streams or scattered throughout the agricultural crops. In this case fruit or general purpose trees which can be expected to grow actively for many years are most likely to prove suitable. In general, this work is likely to be undertaken in conjunction with an agricultural extension programme and may provide a useful point of contact and co-operation between

forestry and agricultural extension activities.

2.6 Amenity planting

Amenity planting either of ornamental or fruit trees which, however, almost always have some residual value as timber or fuel, can be encouraged by forestry extension programmes. This work can be undertaken either by individuals round their homesteads or by community groups near public buildings or in parks, round schools or religious institutions, markets or wherever space is available. This often involves the more urbanised sections of the community or school children and does not normally lead to any immediate gain other than beautification of the area or the provision of shade. In terms of time taken by extension staff and numbers of trees established it may not seem very productive. It, however, promotes a community spirit amongst the population which may lead them to tackle other development projects in the area. It may also create an interest in, and respect for trees, which may serve to limit damage or destruction of trees in the area in future years.

2.7 Small scale-forest based enterprises

Small scale forest-based enterprises, e.g. the production of charcoal, the collection of medicinal plants or wild fruits, the collection of honey, the supply of material for local handicrafts such as cane or raphia, may be promoted on an individual or community basis by extension processes. In many cases the resource already exists. The need is for an efficient harvesting, marketing or transport system to bring the materials to potential buyers at reasonable cost and in good condition. If the process succeeds, some guidance or agreement may be necessary to avoid over-exploitation of the resource within a limited area. Some financial arrangements may be necessary to ensure that part of the proceeds are used either to develop the resource or to improve the harvesting or transport systems. Wherever possible existing systems such as local co-operatives should be used to establish the channels of trade or communication relying mainly on indigenous skills and procedures.
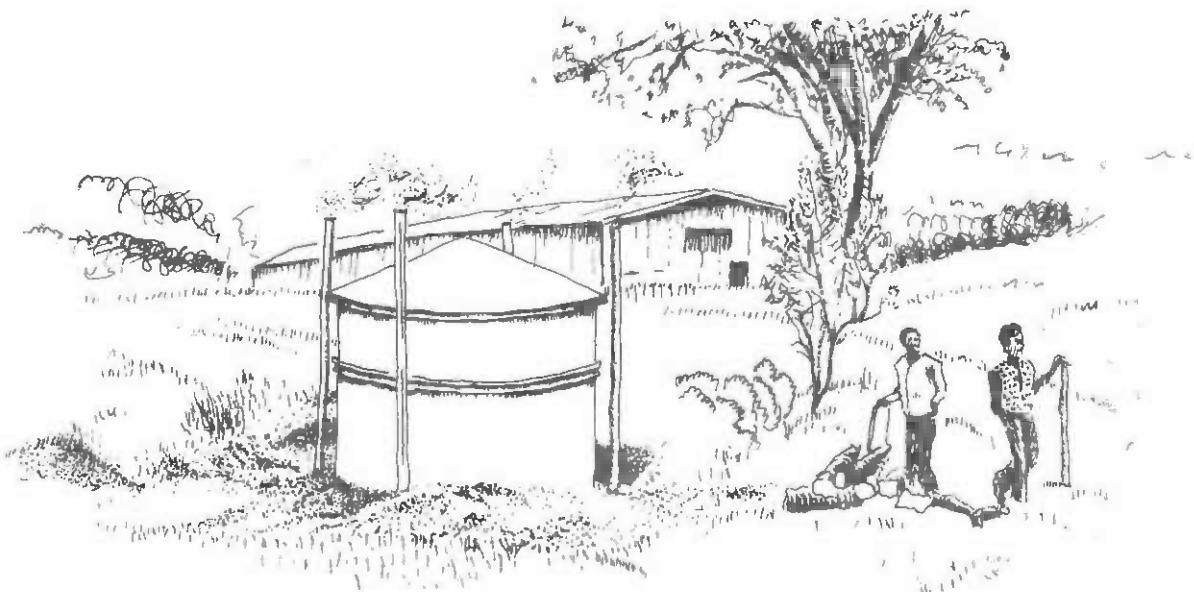
Charcoal production is a suitable small scale forest enterprise provided
the resources are not over utilised

3. GENERAL PRINCIPLES OF FORESTRY EXTENSION

The justification for promoting a forestry extension programme in an area may be a particular forestry-related problem or a general lack of rural development. Many reasons may be advanced for the lack of such development. These include:

- the lack of adequate political commitment and power;
- the lack of an appropriate market infrastructure and transport system;
- insufficient mobilisation and use of local resources;
- the lack of application of existing technical knowledge;
- the lack of financial resources;
- the lack of local organising ability;
- overpopulation of the area;
- the lack of educational facilities;
- poor standards of health; and,
- the lack of physical skill and the ability to overcome local obstacles.

In many cases this may be considered a too superficial assessment of the situation. It does not, for example, attempt to deal with cultural or religious factors which, in some cases, may be as important as economic or technical factors. Forestry extension techniques cannot claim to deal with all these obstacles to development but they can promote an interest in the close examination of local problems and a spirit of self-reliance in tackling them.

3.1 The process of forestry extension

Forestry extension should be viewed as the whole process by which the public, non-government organisations (NGO's) and appropriate government authorities combine their skills and resources to achieve certain forestry development objectives intended to assist people to bring about improvements in their economic and social conditions.

In its initial stages, forestry extension involves three major areas of activity, namely:

- the organisation and sharing of knowledge and skills;
- public information programmes on forestry matters, and,
- informal forestry education on practices to assist people to achieve particular objectives.

The organisation and sharing of knowledge and skills, based initially on a study of indigenous information, must be by methods acceptable to the people involved. The term "sharing" in place of the more customary term "transfer" implies that any skill adopted in extension programmes should be firmly based on the existing knowledge and skills of the people and be a development they can readily accept and incorporate into their normal pattern of work.

The public information phase aims to spread a knowledge of forestry matters to the general public, or to a section of it such as those in a particular region or district, or experiencing specific forestry-related problems. The information must be in a form which the people can understand and accept, and should be communicated to them by all the means available and appropriate to their circumstances. The purpose is to make the people aware of the importance of forestry in their particular situation and the contribution it can make to their welfare or to the environment. It should

also highlight possible future developments in which they may be able to play a part. Work done in this field in Nepal in recent years is an important example of how public information can lay a sound basis for forestry development both by local extension-supported programmes and by direct government action.
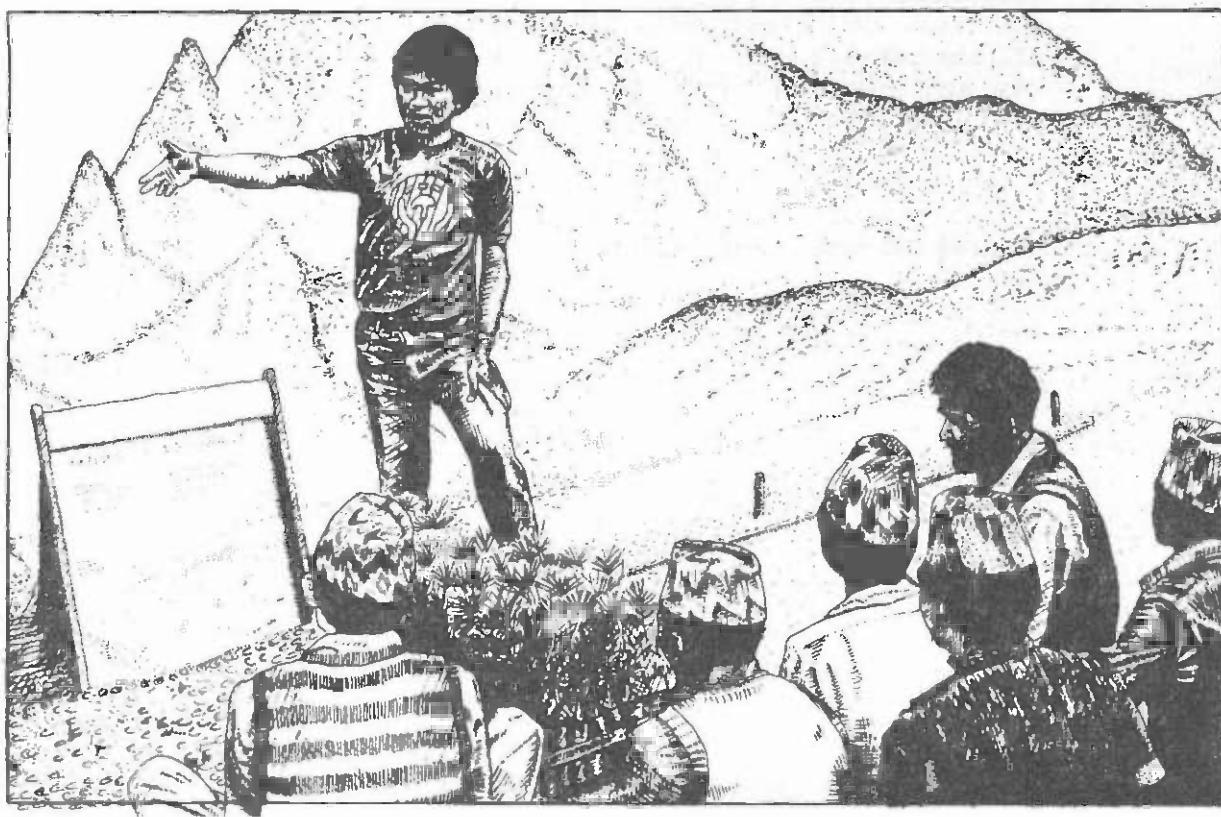
Nepal has recently provided a good example of the effective use of public information campaigns in forestry extension.

Informal education should cover any steps necessary to make knowledge and skills in forestry techniques available to wider audiences, using appropriate methods such as posters, publications, demonstrations or short training courses on relevant forestry topics. It may also involve specific campaigns to educate some members of the public on particular aspects of forestry, such as agroforestry or the establishment of community plantations.

The preparation and conduct of forestry extension programmes must be based on an initial understanding of present practices, the reasons for their development and continued use, and the extent to which they can continue to be used or developed to achieve further objectives. Such a programme usually involves training in communication and instructional techniques and in recommended forestry practices of demonstrators selected from the extension organisation or NGO's and from the local community, who have a basic understanding of existing practices and a commitment to develop them to meet particular goals. The process also involves the preparation and distribution of suitable information and educational materials for motivating and educating all those likely to benefit from the improved practices.

3.2 Some basic principles of forestry extension

A forestry extension programme should observe the following principles:

- the welfare of the people, particularly the poor or landless members of the community, is an essential objective of a democratic society;
- the trees and forests of a country hold potential benefits for all the people;
- the achievement of national objectives in forestry and rural development in many countries depends to a large extent on the support of the people and their willingness to act together, where necessary, to achieve these objectives;
- if the people are fully and accurately informed they will usually accept, and will support and respect, reasonable programmes and laws to preserve and develop forest resources;
- people who are aware of the importance of forest resources to the development of their country will, as far as their circumstances and understanding allow, try to use and enjoy these resources carefully and not to deprive others of their benefits; and,
- both official and voluntary action programmes directed towards the conservation and development of forest resources have a greater chance of success when they are co-ordinated at all levels and directly related to the needs of the people.

This, in some respects, may be an idealistic view of public attitudes towards forestry and tend to overlook the views of those whose daily lives are a struggle for survival and who have had unfortunate and discouraging experiences with forestry administrations in the past. It represents a situation, however, towards which all who are genuinely interested in national development should work.

Activities to promote forestry extension in a country should be based on a desire to promote both efficiency and fairness, while seeking to maintain ecological stability in the area. Efficiency implies achieving the maximum value or productivity, in its broadest sense, of the forest resources of an area without endangering the environment or the economy. Fairness implies sharing the benefits of resources created amongst the community who are responsible for their production. This, in some cases, may involve persons who have not taken an active part in their production but whose rights to cultivation, gathering, grazing or hunting have been limited by the forestry activities.

To achieve these goals of efficiency and fairness, forestry extension must work through two important channels, namely educative and distributive. In its educative function, forestry extension must, in collaboration with other interested agencies, adopt the role of an informal educational process aimed at establishing, in the people, attitudes generally favourable to development. It must also try to sustain interest and involvement in the most efficient use of land and, where applicable, the maximum production of useful materials from it. In its distributive role, forestry extension is concerned primarily with the spread and adoption of forestry techniques which, in conjunction with local practices and culture, can improve the socio-economic well-being of the rural people. In this way, it can become an important factor in social change and development. Through a greater understanding of the needs and aspirations of the people, and by helping to establish a more highly developed and participatory local social structure, forestry extension can help to achieve fairness in distribution of the benefits of development in general.

All those engaged in forestry extension should set themselves goals which should cover the following points:

- the achievement of the wise use of both existing and future forest resources;
- the establishment and maintenance of wide public understanding of the importance and value of forest resources;
- the establishment by the public of respect for, and support of, forestry laws, rules and regulations concerning the proper development and use of forest resources; and,
- the demonstration of the need for, and promotion of public involvement in, research into social factors affecting development and forestry extension techniques and other factors that promote the conservation and development of natural resources.

A forestry extension organisation must therefore serve as an important channel for communication and sharing of knowledge and skills between the community and professional foresters. It should serve as a two-way link between forestry research stations and administrations, who are the sources and organisers of much new forestry technology, and the community who, by their active participation, can contribute to the realism and effectiveness of research programmes. The importance of the two-way flow of information cannot be over-emphasised. The institutions and administrations will themselves benefit greatly from the indigenous knowledge, experience and views of the public, while seeking solutions which adapt new knowledge and skills to established ways of life.

This has been expressed most effectively by Compton in his Structural Units and Functional Matrix. Though devised initially for an agricultural situation it applies equally well to forestry as these activities whould, in most cases, be complementary in rural development activities.

	Research	Extension	Farmer
R.	IOKS	Feed-in	FSR^2
E.	Feed-back	Extension	Feed-down
F.	FSR^1	Feed-up	IKS
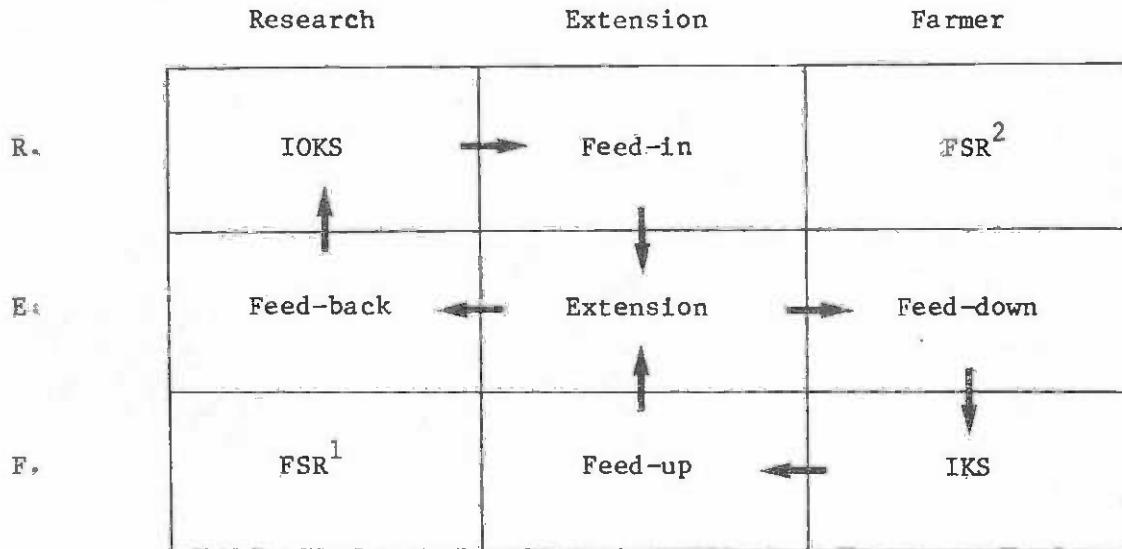
IOKS — Institutionally organised knowledge systems.
IKS — Indigenous knowledge systems.
FSR — Farming systems research.

Figure 3.1 Compton's Structural units and functional matrix

3.3   The nature of forestry extension

Forestry extension serves as an informal self-development process because it does not depend on formal teaching or courses of study. Because of this, it may prove more acceptable to certain people, for example older men or women who may have had no contact with formal education, but who have acquired considerable knowledge and skills by an informal transfer from their parents or family members. It may also satisfy the needs of the young who may have been disappointed by some years of academic education which has left them unprepared for the life they have to lead after they have left school. To these people it may present education in an entirely new light; as a process of sharing, adapting, adopting and using new knowledge and skills with the assistance of a co-worker, rather than under the guidance of a teacher.

Forestry extension neither has, nor wants to have, any power to coerce or direct people to do things, however important or valuable they may seem to be to an outsider. It depends entirely on discussion, demonstration and trial to bring knowledge to people and help them integrate what may be useful in it into their indigenous rural systems. It enables people to build up in time an ability to discriminate between useful suggestions and others and to continue and extend the process of learning into other areas of their lives.

Forestry extension staff should, whenever possible, regard themselves both as full-time learners and guides. They will, however, find it difficult to co-operate fully with the public, to motivate and guide them at one time if, at another, they have responsibilities for enforcing forestry laws and regulations. Because of shortages of staff, it may not always be possible to achieve this clear division of responsibilities but it is an aim which should always be kept in view and accomplished as soon as staff are available.

An extension service exists to serve the whole community and not simply a privileged few. In fact, its greatest value should be to the poorest and least able members of the community, who may initially have great problems in time, energy or available land, in taking advantage of what it has to offer. This often imposes difficult decisions on extension staff, whether to concentrate on the more able and often more affluent members of the community who may adopt extension practices readily, in order to achieve some early measurable results, or on those who need help most but who have particular problems in adopting new practices.

Forestry extension serves
the whole community

People can and do normally make wise decisions on solving their own problems if they are given full information about them, and some relevant advice on possible solutions. Extension procedures should therefore make available information, help people find a solution to their problems, and encourage them to make decisions and to act on them. People have more confidence in decisions they have made for themselves than those that have been presented to them.

Forestry extension is only one of many factors (social, technical, economic and political) which tend to produce change in a rural society. It is mainly concerned with new ideas or techniques to improve local forestry programmes such as agroforestry, silvipasture, small-scale forest enterprises or community participation in the management of natural vegetation. Other organisations may aim to produce change in other aspects of life such as agriculture or animal husbandry. In certain cases, advice given to people from these different sources may be conflicting. It is essential, therefore, for the various organisations concerned in extension or rural development to co-ordinate their programmes and the advice they give to the public. Unless this is done, people will be confused and will lose faith in all such advice.

3.4 The spread of extension activities

Forestry extension organisations should, as soon as practicable, work towards using local people to spread information within their own communities, even though they may not be as technically proficient or as well equipped for the task as professional extension staff. Their standing, and the respect in which they are held by their communities, may be a great advantage to them in spreading information and ideas.
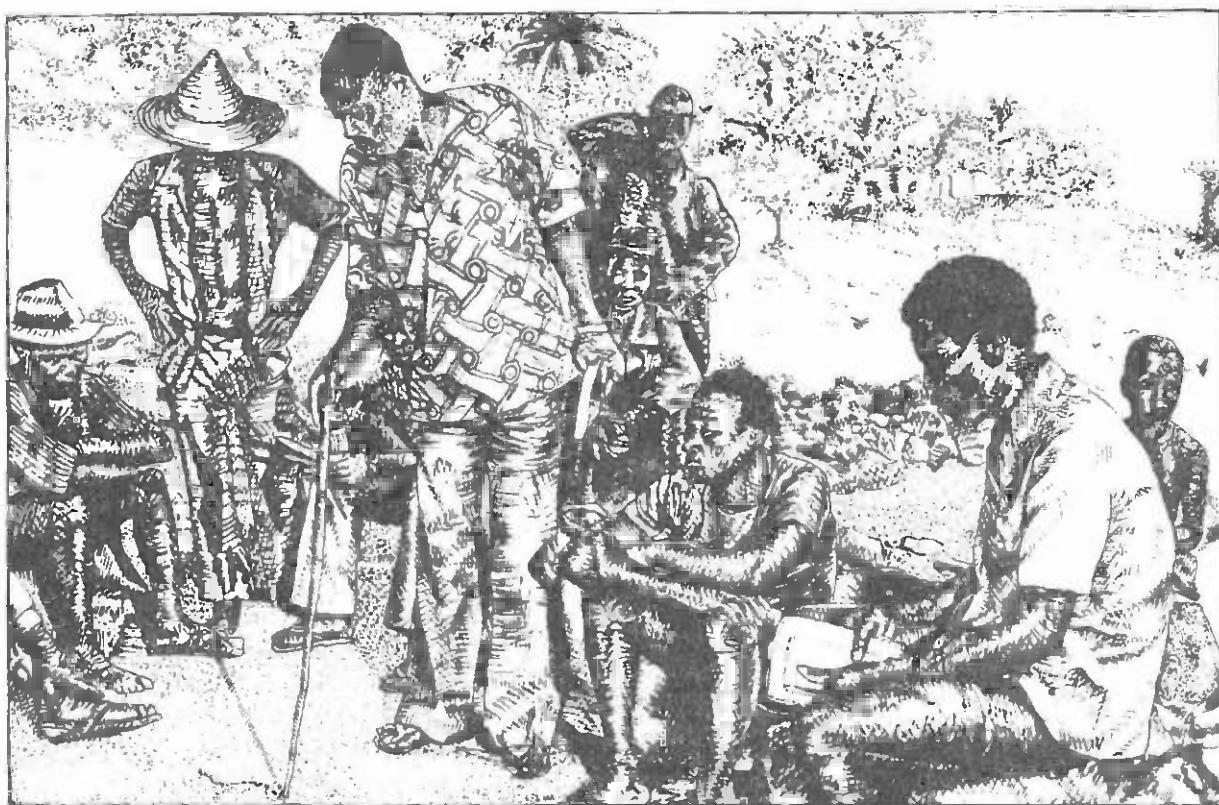
Local leaders play a vital role in the spread of extension activities

In the same way a forestry extension organisation should never neglect the opportunity to integrate sound forestry principles into any related extension programmes, such as agriculture, animal husbandry or social development, so that staff in these fields can reinforce their efforts by presenting a more comprehensive range of information to the people. In turn, forestry extension staff should take the agricultural, animal husbandry, health and social needs of any area into account in any forestry activities or suggestions they may offer to the people.

3.5 Methods of extension

In general, these fall into three main categories. They are mentioned here very briefly and are discussed in detail in Sections 8 and 9 of this publication.

Individual contacts

A most effective way of bringing about change is through individual contact in the home or the work place of people, or in some cases through informal contacts in markets or public places. This raises problems, however, in selecting suitable persons for such contacts, in the limited number of people who can be contacted within a given period and the possibility that this may give rise to feelings of neglect or even of jealousy amongst some members of the community who cannot be included in the programme.

Group contacts

This method is designed to assist specific groups, such as farmers, producers or users of forest produce, women's or youth groups. It is becoming increasingly important as an extension procedure. Not only may information be presented, or techniques demonstrated to several people, usually with a common interest, at one time, but discussion can take place, comments or suggestions can be offered by the group and questions from both sides can be asked and answered. This situation makes learning easier and may stimulate group members to take joint action on a problem.

Mass contacts

In this case contact is more tenuous. It is achieved mainly through the various means of mass communication such as printed matter, broadcasts or audio-visual presentations. The lack of direct contact makes it difficult to assess if the message has been properly received and understood by the audience and more difficult to modify to suit any particular groups of people or areas of the country.

3.6 Some features and strategy of forestry extension

When, after proper investigation and joint consultation between an extension organisation and the people, a decision has been taken to promote a forestry extension campaign in an area, the determination of certain important features and an overall strategy for the campaign is essential.

For successful implementation, an extension programme requires:

- goals, - some clearly defined benefits or results a particular group wish to achieve;
- target groups - groups of people selected as the most likely to achieve particular goals which they themselves have discussed and approved, or people most in need of the benefits

these would bring;

- message – the information or skills which, in conjunction with
  local practices and culture, would help the target groups
  achieve their goals;
- methods – the means by which indigenous and derived knowledge
  or skills can be combined and presented to the people to
  assist them to achieve their goals;   and,
- organisation – the structure set up by local people on their
  own or in collaboration with an extension organisation to
  achieve their goals and to attract the assistance in
  personnel, material or cash that is required for their
  purpose.

All these factors are interrelated.   It is normally not possible to
change one factor without affecting one or more of the other factors in a
programme.   On the other hand, if all factors are properly considered and
established initially, they tend to reinforce each other in operation.

A basic strategy, therefore, to devise and implement an extension
programme may be summarised as:

- a thorough analysis of the existing situation;
- a detailed discussion with the client group;
- the formulation of realistic goals;
- the determination of means and methods;
- decisions on who will do what, where, when and how;
- a programme for the execution of decisions;
- a system of monitoring, evaluation and feedback for the
  programme;   and,
- a system of incorporating the lessons learned into future
  action.

Forestry extension helps to make people aware of the importance
of forestry in their particular circumstances

4. PRINCIPLES OF EXTENSION EDUCATION

4.1 General approach

Though forestry extension has been defined as an informal process of education, the term informal must not be equated with unplanned or unsystematic. Staff engaged on forestry extension activities will, undoubtedly, benefit from a knowledge of some basic principles of education both while they, themselves, are acquiring skills in extension work and later when they are helping the public to acquire skills necessary to achieve particular objectives. An important requirement of extension work, however, is to be able to adapt the basic principles of instruction and learning to the informal situation of the homestead or field.

4.2 Extension teaching

The term "teaching" may not be favoured by some in this context, but it is used here for lack of a better term, for the process of "helping people to help themselves". It is over-optimistic to believe that no assistance or intervention in the process of learning is required in the context of extension activities with mature persons. Effective teaching may, at least, speed up the process of acquiring knowledge and skills: at best it may bring such knowledge and skills to people who would miss out on these entirely. The information coming from many research organisations is published in a form, and expressed in terms, which are largely incomprehensible to many rural people. A basic skill required in teaching is to interpret and demonstrate this information in a form ordinary people can understand and adapt to their own situation, if they see any relevance in it.

Some of the techniques of extension can be demonstrated in a class situation to extension staff but these skills can only be developed and fully acquired by practice and application in appropriate circumstances. Skill in transferring this information springs initially from an attitude and personal commitment to the task. Some features of this are:

- the instructor should have a genuine willingness to undertake this task and to acquire the skills necessary to carry it out;
- he or she must work from the standpoint of the learners and provide what they wish or need to know, not what the instructor thinks he knows and ought to provide;
- they must not under-rate the desire and abilities of people to learn things they believe will be useful to them; and,
- they must have a thorough knowledge of what they are trying to convey to the people and of appropriate techniques for transferring it in the particular circumstances.

It is difficult to define what makes a good teacher or extension worker. In some cases it may be a willingness to "unlearn" some of the very formal practices of teaching, common in the past, in developing countries. It also requires flexibility to adapt the processes to a particular group of people or situation at the time. This should serve to emphasise the care which must be exercised in allocating staff members to extension duties. It is not essential that they should all be volunteers, as people can grow in skill and liking for this work, but anyone who does not show an underlying aptitude for it should be withdrawn at an early stage.

4.3 Some features of learning

It is no part of an extension programme to provide either information or skills as an end in themselves. They must serve a clear purpose, that of filling the gap between what a person would like to be able to do and what he can do at that moment. To acquire knowledge or skills effectively a person must:

- be aware that information exists and is important to himself;
- see some reason for acquiring and applying it in his normal activities;
- be willing to make an effort to do so; and,
- get something of value as a result of his efforts.

In the forestry extension context, this will occur if there have been proper discussions on extension objectives and the people have identified clearly what they would like to do, and the steps they must take, to achieve this, e.g. if their desire to grow trees in their farms is frustrated by the lack of suitable planting stock they may develop a strong desire to learn how to set about growing suitable trees for themselves.

4.4 Some important principles of learning relevant to extension

It is useful therefore for anyone engaged in extension activities to be acquainted with some important principles of learning which are applicable to a wide range of circumstances.

Perceived purpose

A person who has a free choice will learn effectively only if he understands why he should acquire particular knowledge or skills. The value must be related to him, or his particular circumstances. People are not likely to reach this stage spontaneously. A forestry extension worker may have to draw this out of people by introducing topics for discussion and inviting them to see certain techniques in operation, to establish in them an understanding of the benefits of certain operations and a wish to know how to implement them.

Appropriate practice

In the circumstances in which forestry extension is likely to be necessary, it is very doubtful if a person will acquire a new skill or technique on his own account or with little effort. If it involves any manipulative or physical skills, it may involve "unlearning" a previous procedure and adopting a new one against vigorous resistance of the mind and muscles. This is a key feature in any extension activity involving individual skills. The demonstration and trial stages present few problems. The personal persistence to apply the new technique until it proves as easy and efficient as a previous method is sometimes lacking. To secure that, the person trying to acquire the skill must be fully convinced that the skill is necessary to achieve his objectives and that the resulting benefits will justify the efforts involved. He must then continue the new practice till he overcomes the mental and physical obstacles to it. At this stage it is possible that a learner may propose modifications to a suggested practice and he and his instructor should examine these suggestions critically and, where they are justified, adopt an amended method best suited to the circumstances.

In the less tangible skills of co-operation in the management of vegetation or forest areas, practice based on discussion, compromise and formulation of a common solution to an agreed task, is equally important and

likely to involve just as much personal commitment.

Considerable practice and patience may be required to master
a new technique   e.g. preparing cuttings

Knowledge of results

This is relevant, most often, to learning material of a theoretical
nature. In many practical situations in forestry extension, the knowledge of
results will be apparent, though in some cases only after a period of time.
Planting seedlings incorrectly will show up in deaths in two to three weeks
time: the results of poor pruning or thinning practices may not be fully seen
until after the crop has been harvested.

This principle can be viewed from two standpoints. During initial
practice or application of a new skill a learner should be guided on whether
he is applying it correctly or he may slip into a less efficient method for
lack of confirmation that what he is doing is correct. Where he is not
carrying out the correct procedure he should be helped to correct this or he
may fail to achieve his objective and blame it on the system, rather than on
his own incorrect use of it.   In terms of output, he should be encouraged to
measure the results he achieves in comparison with the former method to
confirm the benefits of the new technique. This aspect must, however, be
handled with care as the initial application of a new technique will
frequently result in a fall in output until the "appropriate practice" factor
overcomes this. This requires particular dedication in extension staff to
overcome this difficult phase, where the learners appear to be doing worse
than they were by traditional methods. Again the extension staff must be
open-minded and prepared to modify systems if there are sound reasons for
doing so and if there is no serious deterioration in the end results.

Individual differentiation

People learn or acquire skills at their own pace, based on a great variety of different factors and earlier experiences. This is s strong argument in favour of individual extension methods where a person can develop his own skills at his own speed and make his own mistakes in the privacy of his own land.

Since there are, however, distinct advantages, in savings of time and in mutual support, while working with people in groups, a suitable allowance must be made for this factor. Not all will acquire skills, or acknowledge the benefits of a particular technique or course of action, at the same rate. Handling such a situation often requires considerable tact (and sometimes a sense of humour) on the parts of both the instructor and the learners. Individuals may even have different motives and reasons for wishing to learn similar things and these too have to be taken into account in presenting information or skills to them.

An essential feature is to ensure that no one within the group feels denigrated or shamed by initial difficulties in acquiring knowledge or skills. This requires considerable tact and versitility on the part of the instructor in reviewing information in different forms and from different standpoints, or devising repeated practice till one person grasps the situation. At the same time he must avoid boring or discouraging others who have reached that stage earlier. Maintaining cohesion in a group where rates of learning differ widely is not easy and the resort to forming sub-groups where members can proceed at a more uniform pace may be the only solution. This again requires considerable tact on the part of the instructor to avoid causing offence to some of the learners who may feel they are being down-graded by this action.

Considerable differences may occur in rates of learning
and this may lead to tension between workers

Graduated sequence

People progress gradually from learning simple tasks or ideas to more complex situations. Success in learning simple things usually leads to an increased desire to tackle more difficult situations while failure to master a simple problem leads, often, to a distaste for learning. This is usually reflected in a forestry extension context, by the person "dropping-out" and persisting in his old practices, come-what-may.

The problem in applying this principle to forestry extension practices lies in deciding at which point to enter the sequence of learning. If an extension assistant starts working with a group at too basic a level, the group may reject his help as being of no value to them. If he enters the learning process at a stage which not all the group have reached by their previous experiences, some will be "lost" and gain no benefit from his guidance.

It is doubtful if discussions of more general topics, such as conservation or management of natural vegetation, are of much value until a person can identify specific values in trees or particular types of vegetation. Fairly quick success and the provision of obvious benefits in a simple process can prompt people to attempt more complex tasks of development, spreading out from the initial source.

4.5 Motivation for change

The role of forestry extension staff as agents for change is not easy. They start normally with a population who have considerable experience in doing things, usually entirely to their own satisfaction, over a long period of time. Staff must first establish how and why these customary procedures are followed. They must discuss and consider very carefully with the people whether any improvements could be made and if any suggestions for improvement would be feasable in relation to the existing attitudes, skills and resources of the people. It may, sometimes, be difficult to establish a genuine desire or justification for change.

Change will, however, only come about and be incorporated into the pattern of activity of a people, on the basis of individual commitment to change. The basis of a successful extension programme must therefore be, in helping the people to reach a rational decision on the need for and benefits of, some change in their way of life. Once this has been achieved the people will have the incentive to seek out alternative methods of doing things and persist in acquiring knowledge and skills until they secure their objective.

4.6 Some characteristics of learning situations

Vertical and horizontal learning

Learning can take place either by acquiring new skills, usually with the assistance of a guide or instructor (vetical learning) or when an individual applies certain skills previously learned, to a new situation (horizontal learning). A primary objective of vertical learning must be to provide certain basic skills or techniques which a person can adapt to his own use and encourage him to seek out ways in which these skills can be applied in his daily activities. Horizontal learning, in which a person develops new applications for existing knowledge, is the ultimate aim of learning in this context.

Conscious or casual learning

A person may learn something by consciously setting out to follow a programme to do so, with or without the help of an instructor or guide. He may also learn simply by observation and by "putting things together", changing or adapting actions which he has observed from one or more sources, to achieve a particular objective. Forestry extension staff should not under-estimate the role of casual learning. It is, after all, the method by which most young persons acquire a wide range of skills. Particular care should be taken in following good practices, "setting a good example", in all technical and administrative matters as people may copy the standard set and adopt it as their own without any formal instruction.

4.7   Two-way flow

At all times, forestry extension staff should be conscious of the need for, and value of, a two-way flow of information and learning. The fact that an extension programme appears to be needed in an area would suggest that no matter how well existing practices may have been adapted to conditions in the area in the past, something would appear now to have got out of step. He must find out all he can about existing practices, why they were adopted and how they are handed on traditionally from generation to generation. He must consider what new information is available or might be generated by local investigation and how this could best be injected into the traditional learning process, or if any changes in this process might be desirable. He must be willing to view the learning process as a feature of normal life, not the special reserve of academic institutions and aim at informal learning, in both directions, in all his dealings with the people.

Learning must be a joint activity for extension staff and the people

5 COMMUNICATION

This section deals with the processes of communication in general terms. These have not been extensively linked to forestry problems, as in fact, they can apply equally to a wide range of extension activities. It is hoped readers will be able to examine the points discussed in the context of their own experiences and recognise ways in which they are applicable to their local activities.

5.1 Communication in forestry extension

Communication lies at the core of any extension programme. 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 recognise 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. A 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 staff, 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 organisations 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 staff 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 organisational barriers such as a bureaucratic structure or the status some senior staff 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 Fig. 5.1 below.

S - M - C - R

Sender ⟶ Message ⟶ Channels ⟶ ||| ⟶ Receiver
or
Source

```
          Purpose        (Methods)              Knowledge
          Content        Visual      "Noise"    Persuasion
          Treatment      Spoken      (Barriers) Decision
                         Written                Implementation
                         Combination            Confirmation

                        (Also 5 senses:
                         sight, sound
                         smell, touch,
                         taste)
```
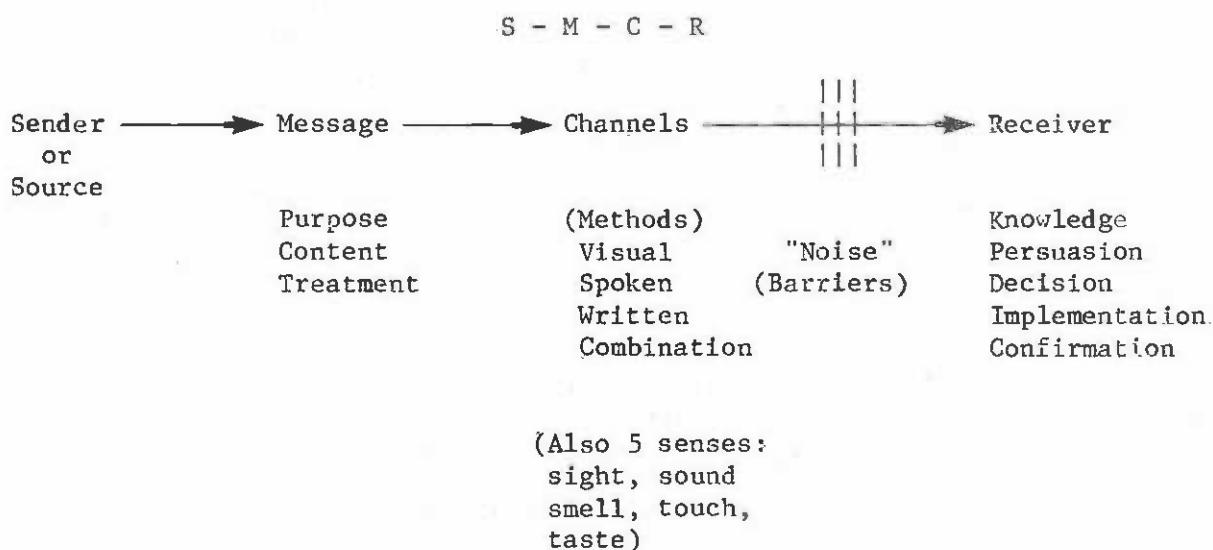
When the Receiver responds to a message this is termed Feedback, and the
S - M - C - R process is reversed.

Receiver ⟵ ||| ⟵ Channel ⟵ Message ⟵ Sender
(former   (former
sender)   receiver)
        "Noise"
        (Barriers)
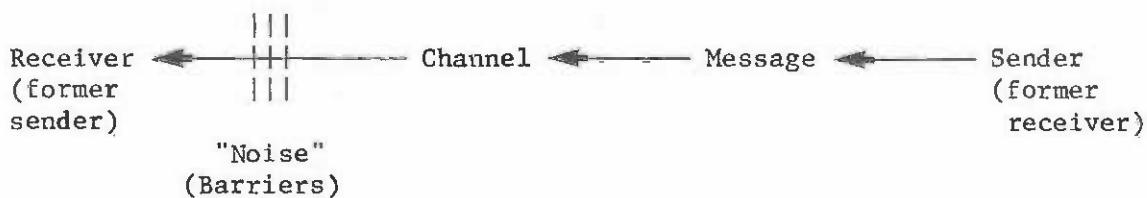
Figure 5.1   The Communication Process: from Agricultural Extension: a reference manual by A.H. Hunter, FAO, Rome, 1973.

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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. 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.

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;
- realises 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 beliefs and prejudices of the audience;   and,
- fails to start out at the correct level of the audience's knowledge, skills, interests and needs.

(Based on J.M. Fenley and S.K. Williams, cited in Agricultural Extension, A Reference Manual, FAO, 1973).

5.2.2   The message

Forestry 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 behaviour in relation to forestry 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 organised 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:

- visual;
- spoken;   and,
- written.

There are also combined methods, such as audiovisual which are often more effective than any of the channels used in isolation. A 16mm film with sound, or a video tape, may present a complex message more effectively than speech alone. Each method, however, has its advantages and disadvantages as explained below.

Visual communication

"Seeing is believing" is an important principle of extension education though it is not necessarily accepted fully in all societies amongst which forestry extension may seek to operate. Pictures, charts, diagrams, posters, exhibits, and displays can perform important communication functions in countries where people are familiar with the use of symbols. Method and result demonstrations are more valuable in other circumstances. These were used so widely in early extension work in the U.S.A. that the local extension staff were called "demonstration agents". 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 a forestry 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".
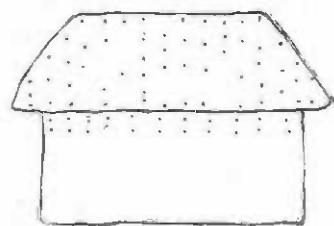
What is it - -
a house,
a haystack,
or a loaf?

The use of colour in visual materials is important; if properly used it can greatly enhance the impact of visual materials. In general, the colours 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 colours for posters, or for printing pamphlets, circulars, handouts or abstract diagrams. Certain colours may be taboo or "unlucky" in particular areas while others may have a particularly favourable significance. This may be important if "colour coding" is used for easy identification of particular types of documents. It may not be easy to extract information on inauspicious colours from local people as the topic may be one they are not willing to discuss with strangers.

Spoken communication

Spoken communication takes place regularly during individual contacts such as:

- home or farm visits;
- enquiries made at offices;
- telephone calls;
- meetings, discussions and demonsrations of all kinds; and,
- radio and TV programmes.

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 this: 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 forestry 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 agent's 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 organised, 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 forestry 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 forseeable future.

Written communication

Written communication is indispensible in the day-to-day operations of any organisation, 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 forestry 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.

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. If an audience is to make progress, an extension agent must help them to change their knowledge, attitudes and behaviour. 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 behaviour).

People are different in many ways. One major difference is in their ability to understand forestry ideas and practices. For this reason, communication sometimes fails because the communicator uses terms too difficult, or too unfamiliar, for an audience to understand. Forestry extension staff cannot expect much progress in getting people to plant tree crops on parts of their land if the idea is presented to them in words and expressions totally unfamiliar to them. A good test is for extension staff working in a common language such as English or French 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 staff 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), the concept of which has been explained in Section 5.2 above. Experienced communicators can anticipate when barriers are likely to occur, and try to forestall them. For example, the lack of planting material for a forestry extension project may be such a barrier to an all-out effort by the community. To overcome this barrier the extension staff can assist with the establishment of small forest nurseries at strategic places to provide the planting requirements 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.

Those who hope to work effectively mainly with rural people should realise that there is no basic competition between the methods or channels of communication. The challenge is that of making meanings clear and of getting ideas accepted. To achieve this aim, forestry extension staff need to use all the methods of communication readily available to them and to improvise others as they go along. It is a question of finding the best combination of channels for the task in hand.

Communication brings people and ideas together

5.3   The adoption process

Consciously or unconsciously, every person goes through certain mental stages before changing his or her ideas or practices. Experienced extension staff understand this process and fit their guidance to the present stage of thinking of their audiences. People go through five clearly defined stages whilst adopting a new idea or practice. These are: awareness, interest, evaluation, trial and adoption.

These are often represented as steps on a stairway as shown below:

```
                                                        ┌──────────
                                                        │ Adoption
                                              ┌─────────┘
                                              │ Trial
                                    ┌─────────┘
                                    │ Evaluation
                          ┌─────────┘
                          │ Interest
                ┌─────────┘
                │ Awareness
────────────────┘
```
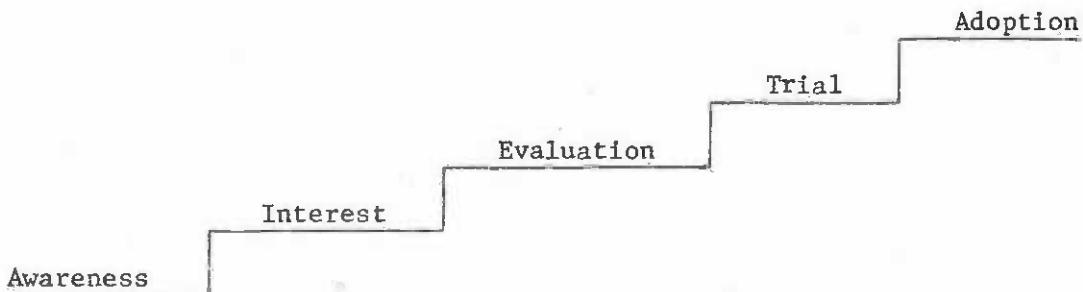
Figure 5.2   Stages in the adoption process

Each stage in the adoption process depends on the preceding stages having been completed successfully. Forestry extension staff might recommend the adoption of a community forestry project which is either too advanced technically or not socially acceptable to rural people. In other cases, the people may not even be aware of the practice and will, therefore, not have any interest in it. The staff, in such circumstances, will not succeed in introducing it as they have not started at the right point in the sequence.

Often the first stage of a forestry extension programme is to bring to people's notice that a new forestry technique has been developed. If the new technique can be shown to relate to their normal practices and have some possible beneficial effect on the people, they may be interested to find out more about it.

Some questions they might ask are:

- is the new forestry practice really as good as it is described to be; if so why are not more people already adopting it;
- will it not be in conflict with their traditional cultivation, grazing, social or religious customs;
- what benefits will it bring to them; and,
- how can it be carried out with the skills and resources they have available?

This step is also the first stage in the process of change which will continue until the new practice is finally adopted or perhaps discarded as impractical or undesirable. Change results from personal decisions, however, and these are affected by beliefs, emotions, customs, traditions and many other personal values. When adequate information is not available, decisions are based on traditional values, e.g. the belief that grazing is more important than the protection of trees. Such a view may be adopted when there is a lack of understanding that grazing and the successful growth of trees in the same area can be compatible, or even beneficial in many cases. Where people lack essential information, economic or social progress seldom occurs. The task of forestry extension staff is to bring new information to the people and help them to use this information to make important decisions.

5.4 Motivation of rural people

A motive is something which prompts a person to act in a certain way to achieve a goal he or she considers to be important at a particular time, within their cultural environment. A study of what people consider to be important at differing stages in their personal development, i.e. their needs, is fundamental to determining what they may be prepared to do to satisfy these needs.

In his study of human needs, A.H. Maslow (Fig. 5.3) has defined a hierarchy of human needs rising from physiological or basic needs through security or safety needs, belonging or affection needs, esteem or ego needs, to self-actualisation needs.

Physiological or Basic needs	→	Security or Safety needs	→	Belonging or . Affection needs	→	Esteem or Ego needs	→	Self- actualisation needs
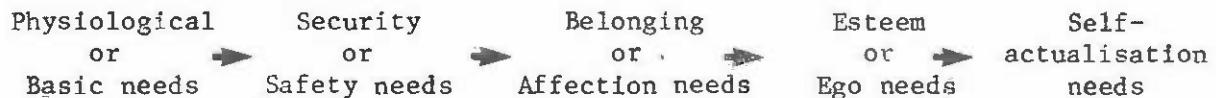
Figure 5.4   Maslow's Hierarchy of Needs.

Physiological or basic needs are needs people must satisfy in order to exist. In their most basic form they include food, drink and rest. In some circumstances they will also include clothing and shelter. The satisfaction of these needs determines a person's ability to exist and advance towards higher needs. They are needs which, in rural areas in developing countries, are normally met by family, or less commonly individual, effort. In less developed areas changes in dress tend to be limited largely by tradition but as an community develops there is often a marked improvement in standards of accomodation after the basic needs of food and drink have been met.

Safety or security needs. These concern self-, or family-protection, avoidance of injury and, to a limited extent, provision for the future. Security may be expressed either in a particular type of house or farmstead construction or in banding together in groups for mutual protection. In many cases, provision for the future may be limited to a prudent store of food to last to the time of the next harvest, or longer, depending on the storage qualities of the food. In other cases cattle may be regarded as a necessary provision for expected or unexpected events requiring exceptional outlays, such as marriages or funerals and their accumulation cannot be judged in terms of the pure economics of animal husbandry. In a few cases provision for the future may consist of burying currency in the ground, which may seem a futile action, but which may be the only solution where no effective savings or banking system has yet been developed.

Belonging or affection needs reflect the fact that everyone needs, to some extent, to give or receive friendship. The expression of this need may differ between an urbanised society where a person may not even know the occupant of the next flat, and a small rural community where almost everyone knows each other, probably over several generations, and may even be distantly related to most other members. The social or fraternal organisations in urbanised societies which are based on trades, professions, religious affiliations or other groupings, meets needs which to a large extent are met in rural communities by family or cultural bonds.

Esteem or ego needs. These may be expressed in certain societies by the desire at a certain age to become independent of the family group, to

secure the respect of others either by achieving certain accepted feats of manhood or undergoing initiation ceremonies to adulthood, or by acquiring certain possessions such as valuable ornaments for women. In close-knit rural communities independence may be less important than a rising position in the family or community organisation. In urbanised societies, where a person is not required to assert his dominance by physical means or attributes, tokens of rank or esteem, such as larger or better furnished offices, official cars, etc., take their place.

Self-actualisation needs refer to the needs of a person to develop his or her skills or capabilities to the highest level and may be expressed in certain societies, in leadership of family or community groups and in others by creative or artistic pursuits. Self-actualisation needs may be more easily achieved in societies where the acquisition of material possessions at lower levels in the hierarchy is not considered to be of great importance. They may be achieved by only a few in urbanised societies where much effort has to be expended in acquiring and maintaining the customary possessions of "civilised" life.

5.4.1   Perception and satisfaction of needs

How persons may view a need and how they may attempt to satisfy it depends on their cultural background, their perception of the need and their individual characteristics. Culture, and in more advanced societies law, affects the way in which a person can satisfy basic needs, particularly physiological ones. The perception a person may have of an area of land depends to what extent their needs have been satisfied. An area may be viewed as a potential food producing area by one whose needs are at the primary level, as a desirable site for a prestige home by one whose current needs are esteem and ego, and as a site for recreation by one whose needs are at the self-actualisation stage.

The individual characteristics of people affect the identification or selection of particular objects or activities to satisfy needs at various levels. In general, in close-knit rural communities there is likely to be less individual expression in both the determination and satisfaction of needs. In urbanised socieies, these are likely to be greater, as is suggested by attempts to "personalise" vehicles or standard housing units in suburban residential areas.

Human needs motivate people
to undertake activities to
meet these needs
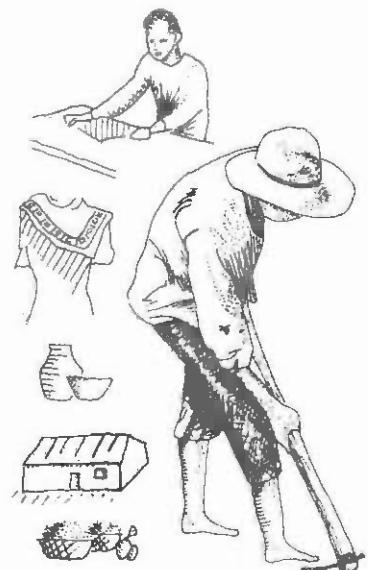
No set pattern can cover all needs but the knowledge that needs do exist and motivate people strongly to satisfy them cannot be ignored. It is the task of extension staff, guided by sociologists, to try to determine the people's current aspirations and motivating factors in their particular areas of work.

An individual's motivation, however, is not static. Whatever need applies at a given time becomes the focus of an individual's struggle to achieve it. If a lower level need is not sufficiently met, there is a tendency to fall back to the lower level, but this lasts only until the need is satisfied. The individual's motivation is once again directed at the appropriate higher level need. However, this does not imply that the hierarchy of needs is arranged like a step ladder with regular intervals between the satisfaction of one need and the next. Needs may have fairly wide areas of overlap. No need may ever be completely satisfied but as each need emerges one set holds the strongest motivating or driving force.

5.4.2 Motivating factors

Many factors can motivate people to accept new ideas and practices. Some of these, which may apply to people in areas where this publication may be used, are as follows:

Psychological factors

- new experience;
- greater efficiency;
- security of earnings or output;
- recognition within the community;
- better life for children;
- more leisure time.

These factors may vary considerably between different societies and it is an important function of sociologists, working with extension staff, to determine the factors of greatest importance in any particular area. These can then be used to good effect in encouraging people to meet these needs, as far as practicable, by participation in forestry extension activities.

Social status

- higher social status;
- greater prestige;
- role expectancy;
- sociability;
- hobbies.

Social status and the prestige associated with a particular role in a community may be be strongly motivating factors in certain areas, more so than individual achievements in economic matters.

Economic factors

- secure food supply;
- better houses;
- safe drinking water;
- health care;
- clothing and some consumer goods;
- education of children;
- higher levels of training;
- more earning power.

Ranking in importance of these factors in a particular community could easily be undertaken by discussion and simple surveys and could serve as an important guide both to what motivates the people and how they might become involved in a forestry extension programme.

<u>Satisfaction of learning</u>

- one set of skills when learned, will help to motivate adults
  to learn more difficult tasks.

This can be a strong motivating factor in peasant communities especially amongst the older groups who may have missed out on formal education. If a skill is properly presented and sufficient training given in a friendly, encourging atmosphere, there is no doubt about the satisfaction some older people get in acquiring it.

The discussion of these points may appear to many readers to be somewhat academic and involve the considerable use of technical terms, a warning against which was given in Section 4.6.4. They are included, however, as an indication of the levels to which a person may have to explore to establish the motivation which may persuade someone to adopt or reject forestry extension practices.

5.5 The diffusion process

Diffusion is defined as the process by which information and improved practices are spread from their original sources, initially to a few adopters, and in time to other users. In the case of forestry, it is the process by which new forestry practices or skills are transferred from their point of origin (forestry research stations or administrations) to the community. A distinction between the terms "diffusion" and "adoption" must be made. Diffusion occurs between persons, usually in a group, while adoption is the result of an individual's decision or commitment to the process. Though this process has been demonstrated to operate in certain more advanced communities there is reason to believe that in societies with markedly different cultures it may not proceed as smoothly as Fig. 5.2 might suggest. This is one area which would justify further detailed study as soon as practicable.

Where studies have been done in developed areas, they show that the most effective means of providing awareness and arousing interest in a new practice are the mass media, printed materials, broadcasts and audiovisual means. Following closely on this is the influence of friends and neighbours. In societies where the art of discussion has not yet been stifled by television or other types of mass entertainment, the influence of discussion with friends and neighbours may be of greater importance then mass media or print. Government agents, dealers and salesmen, in that order, are less effective as communicators of such information in the initial stages. In some rural areas, the population are found to be highly sceptical of any information on agricultural matters coming from anyone even suspected of being a salesman.

At the evaluation, trial and adoption stages, friends and neighbours, are regarded as the most helpful group, followed by government or voluntry agencies. This emphasises the importance of using local volunteer leaders with whom the community can identify, in introducing a new practice into an area, in preference even to full-time paid extension staff. Staff are normally required, however, to follow up the growing interest and to ensure that recommended techniques are properly applied.

5.6 Categories of adopters

Experienced forestry extension staff make full use of all available channels to pass their messages to the people. The speed at which new forestry practices are adopted varies considerably but is normally measured

in years. There are grounds for believing that new practices do spread gradually through families. This may be an important factor in areas where extended families are the social norm. One innovator or early adopter per family may be enough to set the process of change in motion.

Fig. 5.4 shows five categories of people according to the time and speed of reaction to change.

Innovators	Early Adopters	Early Majority	Late Majority	Late Adopters
2.5%	13.5%	34%	34%	16%

Figure 5.4   Distribution of farmers amongst the five categories based on the time of adoption. From Diffusion of Innovations by E.M. Rogers, The Free Press, New York, 1983.

5.6.1   The innovators

These are generally very few in number initially. They are people who are eager to accept new ideas. Usually they amount to only about 1 in 40 of the population in an average rural community. This is not simply a matter of economics: traditional ways of doing things have a strong hold over populations in general. A common reply to many suggestions of new practices in certain countries in Africa is, "It is not our custom". In some societies, innovators may be looked on with suspicion or even jealousy, and yet they are important in initiating an extension programme. They can be persuaded to try new methods and thereby create an awareness of them in the community. However, extension staff should exercise tact and great caution and avoid over praising innovators in public or in spending too much time with them which might foster feelings of jealousy amongst the community.

5.6.2   The early adopters

The early adopters are more willing to see the value of a new practice in their community and will try it, if they feel it has a fair chance of success. They form an opinion on its suitability to their circumstances more through interaction with other members of the community than by official persuasion. It is important at this stage to make sufficient information widely available which people can discuss during this process. Early adopters are usually younger than average and have a better education or more experience of the world. They are likely to be more active in community or political affairs than the late adopters. They are likely to be just a little more prosperous than the average and so able to take limited risks with their land and crops. Their acceptance of a new procedure is not automatic and often involves considerable effort on the part of community leaders and extension staff to lay the groundwork for the change.

5.6.3   The early majority

They are usually of middle age and of average experience and education (if education is the norm in the area). They are usually respected members of their community, reasonably cautious, and adopt a practice only after they are convinced of its value. If the practice involves trade in a commodity they are likely to delay until some established pattern of trading has been developed.

5.6.4　The late majority

They make up about one third of the members of a community. They are the more conservative and less wealthy section, and adopt a practice only when it is becoming generally accepted by the community.

5.6.5　The late adopters

These are commonly the older members of the community, very conservative in outlook, close observers of tradition, and seldom willing or financially able to take risks. Because of their age and general background they are also likely to be less able to understand and apply a new technique.
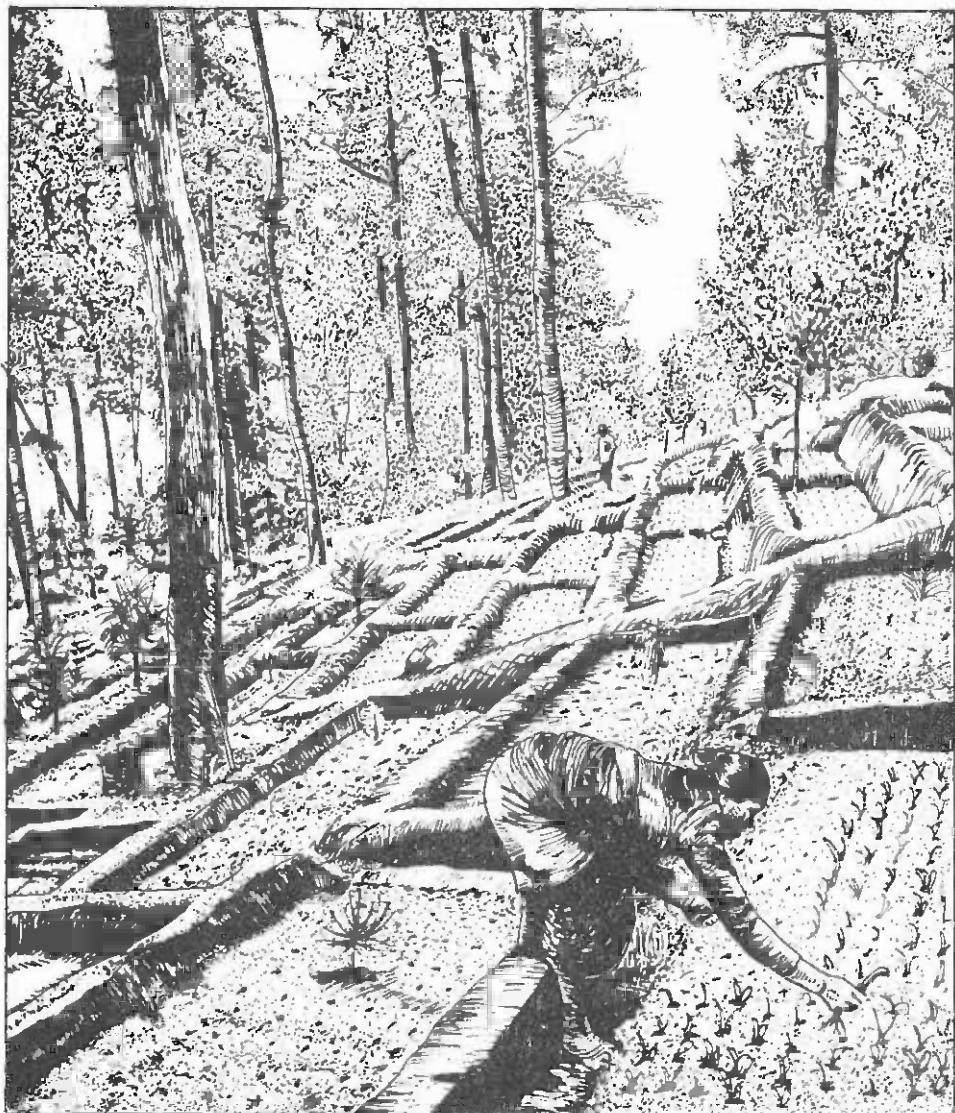
Early adopters play an important role in introducing a new forestry or agricultural practice into an area

The main purpose of this classification is to understand how people come to adopt new ideas which extension staff are hoping to introduce to them. It also indicates the percentages of the population they can reasonably expect to have convinced at various stages in the diffusion

process. It should narrow the field of those who may prove suitable for selection as voluntary leaders to help achieve their objective and communicate effectively with the bulk of the people. Serious thought must, however, be given to how the early and late majority groups can be involved. Unless a new technique can penetrate these groups, its main impact will be to make the prosperous members of the community even more prosperous and widen the gap between them and the bulk of the population. If there appears to be a significant check in the spread of a practice it is important to find out if there is any underlying social or cultural reason why this is so.

Innovators and early adopters may also assist in presenting information to the people in an acceptable order. If people are not aware of a new idea it may be better to show them what it looks like and what benefits they may expect from practising it before showing them how it should be done. The innovators and early adopters can help to show to a wider public how a new method could be of benefit to the people of an area.

However, when people are selected to demonstrate on their own land, on a wider scale, a new practice which it is proposed to introduce, it is preferable that those who have average resources (i.e. in land, labour, capital and skills) should be chosen. They will be more credible if they are typical of the community or section of the area which is the target of the extension programme. This cannot normally be applied in the initial stages of a campaign, however, as those with limited resources are unlikely to be innovators or early adopters.

These points emphasise the importance of extension staff really getting to know and understand their clients thoroughly and the need to gain their confidence. Finally, it is necessary to know how to put this knowledge to use by selecting the most efficient extension methods and working through the most suitable people. These methods are described in the Section 7 through 9 of this publication.

6. AUDIO-VISUAL AIDS

People learn by the use of their senses (i.e. through what they see, hear, smell, feel and taste). When more than one sense is involved the opportunities for learning are increased. Research findings indicate that people remember 10% of what they hear, 50% of what they see and up to 90% of what they see, hear, and do, in a combined learning situation. Audio-visual aids are means available to forestry extension staff to use, in addition to practical activities, to make learning more effective. They can, however, never replace personal contacts between staff and the public.

AV aids enable people to understand the message more clearly. Not only do they hear the words but they can see the shape, size, or colour of an object, or the appearance of an area of land, and carry away a mental picture of it which makes the forestry message being put over to them more understandable. Some of the more elaborate AV aids, however, are not suitable or available to rural extension workers working in remote areas. In this section, attention will be focussed on the use of some appropriate AV aids without going into details of their construction.

Though the use of AV aids in field extension activities is limited to their simpler forms, where farmers' training centres and rural development centres have been established they provide greater opportunities for the use of more complex aids. AV techniques are very effective when used to support instruction in a "classroom" situation, though this does not necessarily imply a formal classroom. AV aids must, however, always be regarded as a help to more effective learning. It is a mistake to think of them as making the job of instruction easier. In fact, they often take considerable skill and time to produce, or even to set up for use. Their use with a group must be carefully planned and adequate time allowed for members to see or get acquainted with them. An object passed round a group while the speaker is continuing to talk is a considerable distraction and may have a negative effect on understanding the message as a whole. In the same way a single specimen available for examination by a large group for only a few minutes at the end of a session, cannot fulfil its function properly. When properly used, however, AV aids make learning easier, more interesting and more complete.

Learning is aided by the use
of all the five senses

6.1   Non-projected aids

Non-projected aids form the basis of a whole range of teaching and extension aids. They are generally simple and often relatively inexpensive and can be used to re-inforce or clarify a speaker's message.

6.1.1   Some advantages of non-projected aids

Non-projected visual aids:

- normally require no power or light source for their use, which is an important advantage in remote areas;
- are usually easily available, or can be produced by local staff;

- are usually more easily amended or altered to apply to
  particular areas or circumstances;
- can be of great variety of size, shape or colour, with local
  interest or appeal;
- can be adapted to the needs of a variety of subjects; and,
- may give a learning group the opportunity to take part in
  their creation, which is, in itself, a valuable part of the
  process of learning.

6.1.2   Examples of non-projected aids

Real objects:

- these should be used whenever practicable because people often
  know, or at least recognise, them;
- they are generally easy to obtain and to use;
- they can usually be seen and handled by all the group, with
  little risk of damage;
- where appropriate, people can handle, taste, smell or even
  hear them; and,
- their proper use can often be fully explained or demonstrated
  on the spot.

Samples or specimens:

- these are often real objects mounted in a special way,
  (e.g. sometimes enclosed in plastic) to protect them when they
  are being examined and studied; and,
- while, perhaps, not making such a direct impact as a real
  object, they are a sensible compromise for any equipment or
  biological specimens which might suffer from unskilled
  handling.
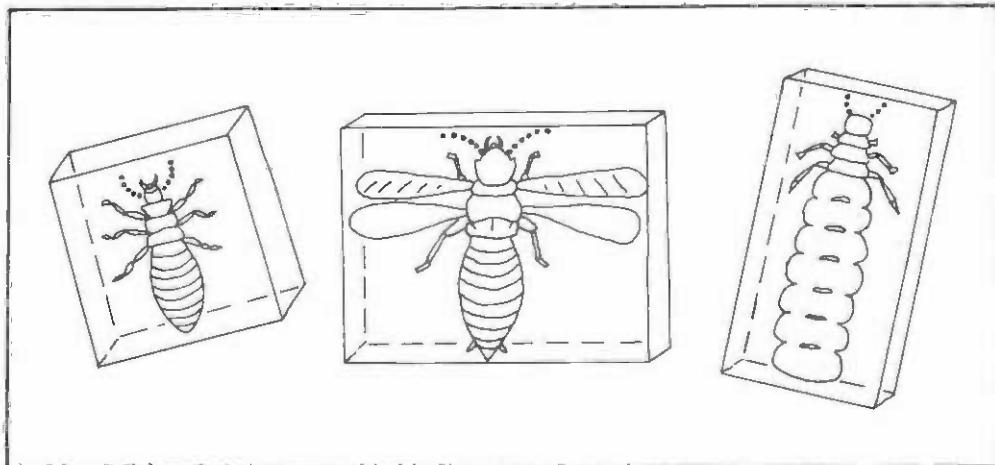
Specimens and models are valuable learning aids

Models:

- these are replicas (often on a different scale) of real
  objects which are either too large or too small to be studied
  conveniently in a learning situation;
- they are often used at public events such as agricultural
  shows or fairs to make the objects more understandable to the
  visitors, (e.g. models of different types of saw teeth); and,

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- because they often involve considerable effort and expense in construction and should be made as robustly, and handled as carefully, as possible.

Photographs:

- photographic prints, if clear and enlarged to a suitable scale, can present good visual evidence of certain forestry activities;
- they can be used to illustrate objects or activities, which would be impossible or inconvenient to demonstrate physically in certain areas;
- each should illustrate clearly one point only, show the main point predominantly and where possible have some local or human focus of interest; and,
- they should be available on a wallboard or display case for study after the discussion, as it is unlikely that all the members will be able to see or absorb all the information in them during the brief time the photographs are in use with the group.

Blackboard or chalkboard:

- this is one of the commonest items available and the basis of many valuable visual aids to learning;
- it is inexpensive and either generally available or can be easily improvised in many learning situations;
- it can be used by extension staff to convey messages in words or illustrations, cheaply and often in an attractive form;
- it can be used to record important points during talks or to draw diagrams to illustrate particular points in them;
- it is very flexible; any written material or diagram which is not readily understood can be erased and presented again in a new and more understandable form;
- the audience can see a diagram "grow" during a talk; this takes away much of the mystery of posters which are sometimes too complex to understand quickly;
- when appropriate, diagrams and text can be written on the board before a talk starts, to avoid interrupting the delivery by drawing or writing, and help to hold the attention of the audience;
- on the other hand material set out in this way may distract the attention of the audience before it is required in the talk and may introduce an element of confusion;
- coloured chalks are inexpensive and can greatly improve the quality of diagrams and text and assist understanding; and,
- considerable skill in the preparation of diagrams or the lay-out of text can be acquired by practice, at little cost other than the initial time devoted to acquiring the skills.

When using a blackboard, do not talk to the audience while writing on the board. This is sometimes difficult to avoid, but the message is likely to have much less impact if the voice is unclear or the listeners are concentrating on two things at the same time.

Flannelgraph:

- flannel or felt has a surface which when pressed against a similar surface will remain in position because the fibres interlock;

- pictures or cards can be backed with felt which will then adhere to the felt board by simply pressing them into place;
- in some cases, the felt on the card is replaced by a special material with dots of a synthetic fibre on one side which adheres to a felt board in the same way;
- it is easy and inexpensive to make; a rough blanket stretched tightly over a board will serve if nothing else is available, though a proper covering of felt is much more satisfactory;
- it can form a colourful and attractive aid if suitably prepared shapes or cut-out pictures are used;
- cards can be moved around and regrouped as necessary to illustrate a talk or support particular views;
- it can also be used to build up or illustrate a complex idea using a series of individual steps;   and,
- the materials can be prepared and tried out in advance and re-used many times, if the cut-outs are stored carefully, preferably between sheets of cardboard;

Some disadvantages of flannelgraphs are:

- they require a certain amount of flair and aptitude on the part of the extension staff to design and produce attractive material;
- they are difficult to use at outdoor meetings because wind may blow away the cards;   and,
- there may be some difficulty in getting suitable sources of cut-outs.

Some guidelines on the use of flannelgraphs:

- use them only when the instructor has a clear conception of how the topic is to be covered;
- decide in advance how the subject matter is to be presented (either as a story or as a series of explanatory symbols);
- select and prepare the pictures or key words which may be used;   and,
- rehearse the presentation and lay out the cards in the correct order, for easy use.
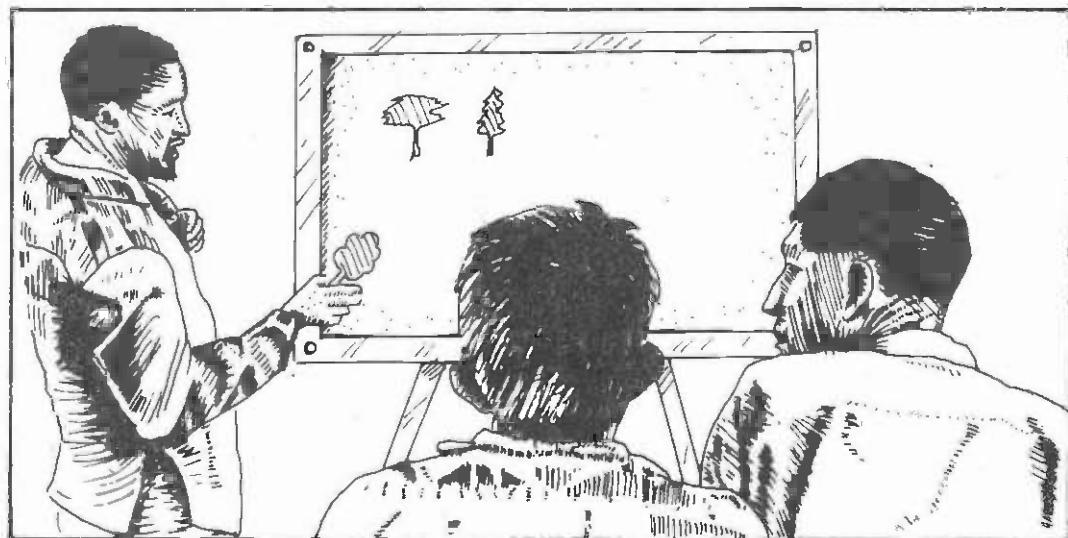
Flannelgraphs are usually best used indoors

When using flannelgraphs in a presentation:

- ensure all the audience can see the flannelgraph easily;
- stand on one side when placing pictures or words on the board, or when commenting on any of them, to avoid obstructing the view;
- do not clutter the board with too many words or pictures;
- remove them and repeat the presentation if it is necessary to achieve full understanding;
- encourage the audience to ask questions on the topic or the pictures or symbols being displayed; and,
- invite members of the audience to review the important points of the presentation using the flannelgraph to check their comprehension.

Flip-charts

Flip-charts are a useful alternative to flannelgraphs:

- they are generally easier to transport and use than flannelgraphs;
- they are made with several large sheets of paper, as available, fastened between two hard covers such as plywood or hardboard;
- they can be opened out so that the covers form a free-standing unit;
- each page has a picture or a diagram relating to one stage in a talk or demonstration;
- the pages can be turned over to expose the next stage to the audience;
- they can also serve as a handy form of teaching outline for the speaker; and,
- they are generally easier to use out of doors than flannel-graphs.

Posters, wall charts, and other large illustrated literature are good sources of illustrations for enlarging and transferring to the flip-chart pages provided this does not infringe copyright. Broad tipped marker pens are most suitable for adding titles or additional information to the sheets during use.
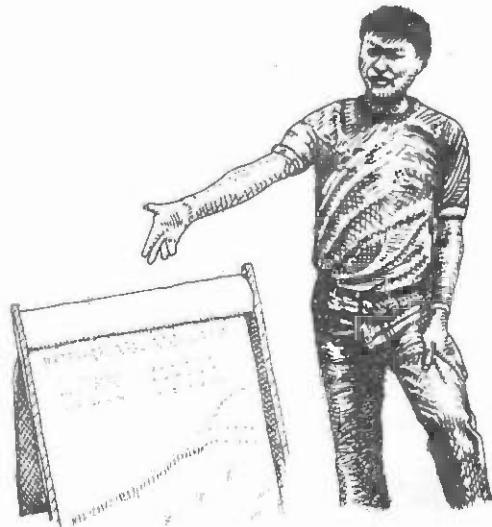
Flip-charts are convenient
to use in the field

Flash cards

These are small illustrated or lettered cards which can be produced during a talk and affixed to any smooth surface by one or more small pieces of plastic adhesive placed on the reverse. They serve as emphasis or as a reminder of some particular point in the talk.

Some useful points to consider in using flash cards are:

- the illustrations or text on the cards must be large enough to be seen clearly by the whole audience;
- illustrations can be drawn, printed or cut out from posters or magazines, subject to the agreement of the copyright holders;
- they can be used to portray different forestry systems;
- their use should be carefully planned and rehearsed; and,
- the illustrations should be pre-tested on a suitable target group to ensure that the symbols are understandable.

Lettering and drawing

Although free-hand lettering using felt tipped marker pens is satisfactory in most cases, there may be some advantages in using large stencils or self-adhesive plastic letters, where these are available, to establish a style of text easily recognisable and understandable by people with limited literacy skills. Whatever solution is adopted, it is important to note that neither words nor diagrams will serve as effective visual aids if they are not neatly and clearly prepared and immediately recognisable by the audience.

6.2 Projected visual aids

The most common feature of this system is that a bright light is shone through a transparent picture and, by means of a lens, an enlarged picture is projected on to a screen. There is, however, another less common form of projection which is mentioned below.

6.2.1 Classification of projected visual aids

Opaque projection

In this case, the material to be projected is not transparent. It may be an item such as a black and white or coloured picture, a book or even a solid object such as a piece of wood or a rock. A special projector called an episcope, which uses a bright light and mirrors to project an image, is required. It is a relatively expensive and heavy piece of equipment and most suited for use in a central location such as a community training centre, where it can serve a variety of different courses. It is also useful for projecting illustrations from books on to a large sheet of paper. The outlines can then be traced with a crayon and used as the basis of a poster or diagram. Permission from the copyright holder should, however, be obtained before these are used publicly.

Transparent still projection

The materials projected in this case are non-moving transparent pictures in the form of slides or filmstrips. Some black and white film-strips may still be in circulation but they are much less common and there are great advantages in preparing or ordering all new material in colour. The difference in cost is very little. Both pictures and projectors are relatively cheap and easy to obtain.

Cine projection

This involves the projection of moving pictures with or without sound, in the form of either 8mm or 16mm films. 8mm films are mainly the result of amateur photography and are now so rare that the purchase of an 8mm projector is seldom justified. Films themselves are generally expensive, especially

when made for a specific purpose and for only a limited audience. A 16mm projector is also expensive and requires careful handling and regular expert maintenance. In future, the role of films is likely to be taken over progressively by video tapes.

6.2.2. Some advantages and disadvantages of projected aids

The advantages of projected aids are, briefly:

- the viewers' attention is directed towards a bright picture in a darkened room;
- the whole atmosphere promotes a feeling of anticipation and interest; and,
- as there is only one centre of interest, the screen, casual distractions are avoided.

Some of the disadvantages of projected visual aids are:

- if they are made specifically for a target audience they may involve a considerable amount of work and expenditure of time and money in preparation and organisation; this work can in itself, however, be a useful learning experience and lead to a fuller understanding of the subject and of communication techniques;
- if the material is obtained from commercial sources, it may be expensive and too general or too sophisticated for a particular audience and have more entertainment than educational value;
- staff sometimes feel discouraged as they cannot influence the content of films or filmstrips and they feel they are playing very little direct part in the learning process; and,
- they may be somewhat envious of the resources used in the production of commercial projected aids and discouraged in their attempts to work effectively with much more limited resources.

Projected and non-projected aids are complementary and should be used either together or individually as circumstances require.

6.2.3 Examples of projected visual aids

Projected visual aids include the following items:

Colour slides

- these are photographs taken on colour film, which is relatively cheap and is now widely available, and after processing mounted in a slide frame, through which it can be projected by means of a slide projector;
- for repeated use in extension work, it is best if the slides are mounted in strong plastic frames with adequate protection for the coating of the film;
- they are useful for illustrating a long sequence of events, such as the development of a plantation, and compressing it into a convenient viewing time;
- they can provide out-of-season demonstrations of forestry extension activities, such as nursery work or tree planting, to prepare people to engage actively in the real task at the proper season;
- they can bring a particular activity to the attention of

people in their home area, saving the cost and organisation required for a field day or tour to view it;

- slides can be copied cheaply and distributed widely for use in publicising an activity;
- they are easy to store and to transport;
- light, easily transportable, projectors are available for use either on mains electricity or with car-type batteries;
- if no slide projector is available, a number of battery-operated, or daylight, hand viewers can be used with small group of people, if multiple copies of the slides are available;
- the pace and the content of slide projection can be altered to suit the needs of the audience (cf. cinema films, the speed and content of which cannot be changed);
- close-ups or enlargements of a subject, illustrating details which could be overlooked by many people during a field demonstration, can be shown;
- specific features of certain tasks can be clearly illustrated for discussion;
- the commentary can be varied to suit the requirements of a particular audience;
- slides cannot show movement, which is a disadvantage;
- the audience cannot participate in their use as they can with a flannelgraph;   and,
- colour slides cannot, normallly, be left displayed for a long time for personal study by individuals.

Some other important considerations and suggestions for the use of slides in forestry extension activities are:

- it is essential to darken the room adequately if used during the day, unless special equipment for back projection on to a screen in daylight is used;
- before giving a slide show, check the projector and screen and ensure that there is a spare lamp available;
- slides need a commentary; someone must explain what each slide demonstrates unless it is a presentation using slides in conjunction with a pre-recorded commentary;
- the slides should support the commentary which should be suitable for use on its own, if the projector fails;
- prepare a script on which to base the proper arrangement of the slides, and select slides to illustrate important features of it;
- limit the show to about 40 slides unless it is a prepared slide-tape show, where the pace of the commentary may require the use of more slides;
- include pictures of local interest or people, whenever possible;
- set up the projector and screen in advance and arrange the seating so that everyone can view the screen easily;
- rehearse the presentation before the audience arrives;
- introduce the show with a brief explanation of what the members of the audience are going to see, relating the subject to local problems and experiences;
- each slide should be shown on the screen long enough to be fully understood by the audience;
- encourage the audience to ask questions at convenient points in the presentation;
- answer these carefully but briefly but do not turn the answer

into an impromptu talk; and,
- distribute literature on the subject, if any is available, at the end of the show.
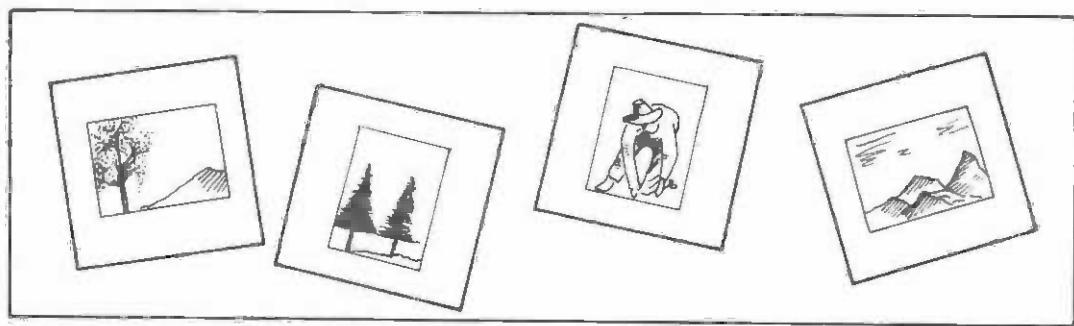
Slides are cheap and
easy to use

Filmstrips

Filmstrips are lengths of 35mm film showing a series of pictures forming a natural sequence. A filmstrip projector is used to project this non-motion film and is sometimes referred to as a 35mm still projector. It is basically the same as a slide projector and, in fact, most good slide projectors are available with the necessary attachments to show filmstrips. Masks are also available to reduce the picture to half-size to suit some commercial filmstrips which are produced in the half-frame format. Some filmstrip carriers, however, are difficult to load and the film may be damaged in the process. People who use them should always be trained initially with strips of film which are of no value.

Some of the features of film strips are;

- the sequence of pictures in filmstrips cannot be altered at will to suit local interests;
- unsuitable pictures cannot be eliminated and may lead to some unnecessary discussion by the audience;
- filmstrips are usually supplied by commercial organisations and are aimed at a wide audience; they may not, therefore, be particularly well adapted to local conditions;
- they are reasonably inexpensive; and,
- they are easily transportable.

Combined slide/tape presentations

Projectors with facilities for synchronising the showing of slides or filmstrips with a commentary prepared on magnetic tape, where the projector responds to signals from the tape to change the picture, are now readily available and not unduly expensive. Preparing the tape to support a series of pictures, however, requires some expertise. Assistance to carry this out may be available at the local broadcasting organisation. Such tapes normally use music, at least for the introduction and the ending, and it is worth seeking professional help in selecting and recording this.

Tape/slide presentations standardise the presentation of an idea wherever they are used, which can have both positive and negative values. They must still be presented, however, by someone who can answer questions on the topic authoritatively, if they are to be effective.

Overhead projector

This apparatus projects large transparencies from a horizontal table, through a lens-prism which focusses a brilliant image on to an angled screen usually located behind the speaker.

The main features of an overhead projector are:

- it can project charts, diagrams or written material prepared in advance on a sheet of transparent plastic film;
- it can be used to project complex diagrams which can be copied on to treated film by a copying machine, known as a transparency maker;
- a series of overlays, i.e. one sheet containing additional material placed on top of another, can be used to build up a complex diagram;   and,
- it can be used in place of a chalkboard by writing with special pens on a roll of clear film fitted to the machine.

Some of the advantages of using overhead projectors are:

- they enable the speaker to face the audience while writing or explaining a diagram, which is not possible with a chalkboard;
- the image on the screen is normally large enough for all the audience to see easily and to read any captions;   and,
- complete blacking-out of the room is not necessary as the image is very bright.

Some disadvantages are:

- the intense light can cause eye-strain for the instructor if used for long periods, and particularly if he writes a great deal on a transparency while it is in use;
- the equipment and materials used are costly initially, particularly if a transparency maker is required, but they can serve for a number of years if handled carefully;   and,
- standard classroom projectors are difficult to transport and liable to suffer damage in handling, but special portable models are available.
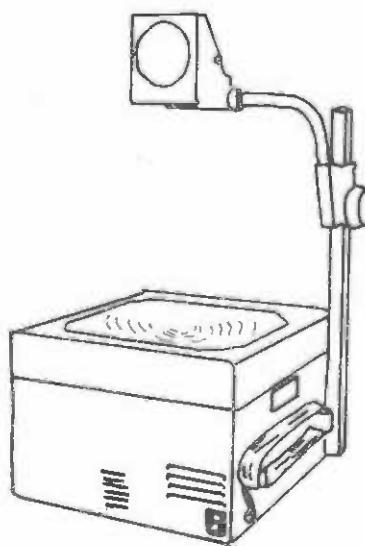
Overhead projectors are particularly valuable once a stock of transparencies has been built up

Cinema films

Cinema films are undoubtedly very effective "crowd pullers" in rural areas in developing countries. Their real value as a teaching aid is, however, limited as they are very seldom sufficiently specific to be able to relate their topic directly to the needs of the people in the area. In countries where a film industry is being built up there are greater possibilities for films to be made for particular requirements at a reasonable cost. The local content of such films usually proves very attractive and should compensate for any slightly less sophisticated production techniques. Even if they only entertain a crowd and put them into a friendly, receptive, frame of mind films provide an opportunity for extension staff to take advantage of the situation and get over a serious message.

Judged on their teaching value some advantages of using cinema films are:

- they show movement and can be used to demonstrate working techniques in suitable locations, often as skillfully as a personal demonstration;
- people may find topics illustrated by films easier to understand than static aids because of the movement and the setting in which they are filmed;
- a long sequence of events which takes place at a result demonstration can be compressed into a short period of time and can make an interesting and entertaining film;
- they can, to some extent, be used in place of long and expensive tours to bring the experiences and success of people in other areas to the attention of local people; and,
- they can be used to get a message over in identical terms to very large numbers of people in different locations.

There is always the possibility, however, that some points in a film may be misunderstood by the audience and it is important that the showing of any film should be followed by discussion to verify that it made the right impression. It is particularly important, if films are being made for a specific audience, that they be carefully validated before the final prints are made to ensure they do not contain any points of doubt or confusion or scenes unacceptable to the intended audience.

Some of the disadvantages of using cinema films are:

- people often regard them more as entertainment than education but, nevertheless, they may learn something from them; a combination of entertainment and educational films in one programme is often an effective way of presenting a message;
- there may be no electricity supply in areas where there is most need to show the films; a mobile unit is, therefore, required to provide power and possibly to transport the equipment; this is generally very expensive;
- the cost of making films, or even of purchasing copies of existing films, is high;
- copies of films have a relatively short life if they are used intensively in the field;
- many films are not effective as teaching aids because they are too fast a medium of instruction for certain audiences; an activity may be shown very briefly and followed too quickly by an entirely different sequence for a rural audience, used to a much slower tempo of life, to comprehend; and,

- modern film editors often include extraneous scenes (side-cuts) for artistic reasons which are quite incomprehensible to rural audiences and detract from their understanding of the message.

Some considerations and suggestions on the use of cinema films in forestry extension programmes are:

- there should be sufficient movement and activity in the film to justify its use;
- for study purposes films made in the same locality are often more effective even if they are not as expertly produced as films made outside the area;
- silent films (which are now rare) can be shown with a person supplying a commentary in a local dialect; they operate at a lower speed than sound film but most projectors can adjust for this;
- films using a foreign language are often more value if the commentary is turned down and replaced by a commentary spoken by a person in the local dialect; the terms used are likely to be more understandable and a good operator can soon acquire a considerable degree of skill in providing a commentary; and,
- diplomatic missions and international organisations often maintain large libraries from which films can be borrowed, usually without charge.

Some guidelies in the use of cinema films are:

- all films should be carefully reviewed before being used in forestry extension programmes, or even as entertainment, to ascertain their suitability for a particular audience; films from certain countries may include scenes which are considered offensive in others;
- exercise discretion in selecting films for any given learning situation and eliminate any likely to cause confusion or to be too sophisticated for the target audience;
- take into account the objective of the programme, the previous experience of the audience, their age and education level, interests and customs, particularly in the matter of clothing;
- a film should only be used as a learning aid; it should be followed up by a talk, discussion or demonstration to consolidate the message it aimed to convey;
- before showing a film, explain briefly the information it contains and tell the audience why it is important to them;
- alert the audience to look for certain points in the film;
- always allow an adequate period for discussion or further explanation of the film; when this procedure is followed many useful points may be raised in the discussion; and,
- always hold one short film in reserve, preferably a comedy or general interest film, to wind up the programme or the audience may leave before adequate discussion of the main theme has taken place.

The question of the suitability of a film for a particular audience is not likely to arise if locally made films are used as these will, already, have taken such points into consideraton.

Check the following points before showing any films:

- make sure the power supply is reliable and at an acceptable voltage; (most modern projectors can be adjusted to a range of voltages around the common standards);
- check the electrical connections and extension cord, if one is required; carry screwdrivers, multiplugs or adaptors where there is a variety of sockets in common use;
- darken the room adequately without cutting off ventilation;
- keep spare projection lamps easily accessible; (there is often a holder on the projector case for these);
- set up the projector, thread the film, focus on the screen and test its operation in advance of the arrival of the audience; reset the film to the starting point;
- make sure the sound is set at a suitable level for the place and the number of people expected;
- mount the projector high enough to project over the heads of the audience and to avoid a distortion of the picture on the screen; and,
- erect the screen so the base is at least 1.30m above the floor.

Films can combine entertainment with information
for effective learning

6.3   Tape recorders

The use of tape recorders is discussed in more detail in Section 9.9 Radio. Tape recorders are useful for recording interviews and discussions for use on radio or as a special item at an extension meeting. They can also be used to record songs or plays for entertainment to draw people into meetings where more serious discussion can take place.

Preparing a tape recording describing a common forestry task can, in itself, be a very valuable teaching experience in planning and organising the content. It can also highlight odd mannerisms of speech which a person can correct and so improve his or her extension skills. Both tape recorders and tapes are relatively inexpensive and so widely used in most countries they can play a major part in forestry extension programmes. Most countries have some commercial or official facilities for editing and reproducing tapes to enable copies of a good standard to be produced and supplied at a reasonable cost.

6.4   Video recorders

The use of video recorders is also referred to in Section 9.10 Television. They consist of a video camera with a portable unit which records both pictures and sound, a battery pack or leads to draw power from a vehicle battery, and an AC adaptor to allow direct operation from the mains or for recharging batteries. A video recorder, and a television set or video monitor, are required for screening the picture, which is accompanied by the sound recorded during filming. For some purposes additional lights and external microphones may be desirable. A sequence can be reviewed on the monitor of the camera immediately after recording and can be retaken if it is, in any respect, unsatisfactory.

Small format video equipment, i.e. home-grade video using ½" tape, is by present standards, reasonably inexpensive, and easy to operate. It is valuable for quick, simple recordings of on-going activities but it has the drawback that editing the tape inevitably leads to some loss of picture quality. It is not, therefore, suitable for recordings which are to be widely copied and used for more formal study purposes. Semi-professional equipment, which uses ¾" tape, is more expensive. As such tapes are normally carefully edited and more widely used for study, operation of the camera requires a higher degree of skill, and some detailed thought particularly at the planning stage of the programme.

The initial value of video recordings to extension staff is likely to be more as a learning aid than teaching aid. Planning and recording simple activities may bring to light many personal mannerisms or difficulties in expression which a person may not have previously recognised and which can be easily corrected. It can also lead to very valuable self-criticism of the manner of presentation of training material. In time, a collection of short excerpts can be built up which, while lacking the qualities of a professional programme, can still be used as aids in introducing either extension staff or limited numbers of the public to new skills. The facility of immediate review through the viewer of the camera should lead to very rapid improvements in both planning and recording the activity.

The use of more sophisticated recording equipment was found in Chile and Peru, where video has been extensively used in rural education, to justify the recruitment and training of a group of specialist "audio-visual trainers". If this is adopted, very close co-operation between the group for whom the material is being made, and the programme makers is necessary to ensure that the technical content is correct. The experience of its use in Latin America suggests that video could be much more widely used in rural training programmes and may largely replace films and slides as a training medium in the forseeable future.

The main difficulty with the use of video equipment in rural areas, apart from making the right choice of equipment and the availability of television sets or monitors for viewing the results, has been problems of maintenance and repair. However, even this is being reduced as local technicians acquire more skill in the repair of domestic television sets. The national television network in a country is also likely to have the necessary skills to undertake maintenance and repair of the more sophisticated types.

6.5 Puppets

Puppetry is an aid which communicates ideas through entertainment. Puppets are small, doll-like, figures representing people which are manipulated either by strings or by the hands by one or more puppeteers screened from the audience, often in a decorative booth or stand. There is usually a considerable element of entertainment in the performance, though a serious message should run throughout it and be brought out prominently at the end. They may be used either to mobilise people for a specific objective, or to stimulate discussion of a sensitive, or embarrassing, issue which "puppets" may argue about but which "real people" may wish to avoid.

In general, if puppetry is already an established art in a country, it is useful to put it to work to spread forestry extension ideas. If it is not, it is a matter of ascertaining how easily the skills can be acquired and whether this novel type of presentation would have a major impact on the people.

The preparation of a puppet show involves:

- defining the message to be conveyed and the target audience;
- writing a script incorporating the intended message;
- devising suitable characters and creating the puppets;
- training the puppeteers and the persons to speak the lines and allowing them to rehearse together; (in some countries puppets "speak" in a very stylised way);
- selecting and recording appropriate music to accompany the performance;   and,
- making a sound recording the complete performance so that it can be presented later with only the help of the puppeteers.

Staging a puppet show involves arranging a suitable booth, which in the field may have to be the back of a vehicle. Any windows in the vehicle should be curtained and a backcloth and simple stage curtains devised to heighten the illusion of the performance. In general, the performance is likely to have more impact if some trouble has been taken to make an attractive booth for the purpose.

6.6 Music and plays

The use of a theme song, particularly a short, simple, attractive tune with words people can sing or hum as they go about their normal business, and which can be played frequently on radio programmes or at meetings and other extension activities, is of great value. It serves the dual purpose of getting over a message and creating a favourable attitude to it. "Smokey Bear" songs have entertained and educated many children in America on the dangers of forest fires.

The use of plays, like puppetry, depends very much on the traditions of the area and on local skills in devising and performing suitable material. Where these exist they should be developed and used as widely as circumstances allow. Where there is no tradition of local live theatre, the problems of introducing it may not be worth the effort involved when compared to the use of other aids such as radio programmes, television, videos, slides or films.

6.7 Mobile units (audio-visual vans)

These are, preferably, all-weather cross-country vehicles which can generate their own power to operate a wide range of audio-visual equipment carried on the vehicle. They are used to support extension activities such as meetings and demonstrations or as a mass contact method particularly during an extension campaign.

6.7.1 Normal facilities of a mobile unit

The facilities found in a mobile unit would normally be:

- a public address system (i.e. microphone, amplifier and loudspeakers);
- record and tape players for providing music and recorded messages through the loudspeaker system;
- slide, filmstrip, video recorders and monitors and film projectors and screens suitable for both indoor and outdoor presentations;
- stocks of suitable slides, filmstrips, video tapes and films related to the current campaign;
- additional popular records, tapes and films to entertain and attract crowds to presentations; and,
- adequate stocks of suitable extension literature and posters for distribution to the public.

6.7.2 Purposes of mobile units

The main purposes of mobile units are;

- to supplement the activities of local extension staff at key points in the awareness and interest or implementation stages of campaigns;
- to help create more confidence on the part of the public in the local extension staff when the information they have been giving is authenticated and reinforced by recorded messages from leaders and other important sources; and,
- to stimulate people to seek further information and advice on extension matters.

6.7.3 Advantages and disadvantages of mobile units

Some of the advantages of mobile units are:

- their visits are generally attractive to people in rural areas, as they have a high entertainment as well as an educative value;
- they have a wide range of facilities available for presenting a message which can be supported by some attractive music or visual entertainment;
- they are highly mobile and can penetrate even into remote areas of a country;   and,
- the fact that the staff are willing to visit and provide information and entertainment for people in remote areas few other officials visit, creates a favourable attitude locally towards them and their message.

Some of the disadvantages of mobile units are:

- they are costly to purchase and maintain in use because of the special equipment they carry and there are normally few available in most countries;
- they need to be staffed with persons of very special qualities; sociable, friendly but knowledgeable persons capable of conveying a wide range of information to a great variety of people, and willing to work at nights, and on rest days whenever an audience can be gathered;
- proper maintenance of the vehicles is not easy to arrange if they are intensively used in remote areas;
- they require a back-up organisation to prepare and replace programme materials as necessary and to ensure the supply of literature and other consumable items;   and,
- some areas of the country may still be inaccessible to them.
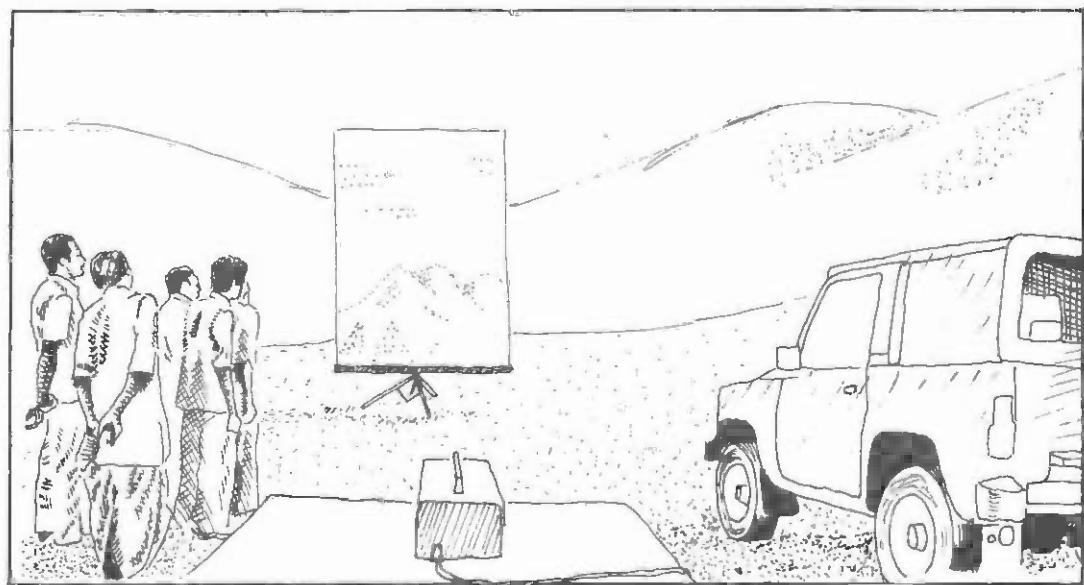
Mobile units can play a valuable part in extension campaigns
but they are expensive and not always easy to staff

6.8 Display visuals

This is a general term for various items used to convey information which are discussed in detail in Section 9 in relation to their functions in mass education. A few more specific points concerning the use of these items as visual aids are given here.

Posters:

- these serve primarily to announce or publicise extension activities or campaign objectives;
- they have very little training value unless they are followed-up by other activities such as meetings or demonstrations; and,
- they are useful in reminding the public of a campaign message when used with other extension methods and information materials.

Wallcharts

Though somewhat similar in appearance to posters, wall charts have a different educational function. Their main characteristics and uses are:

- they are particularly suited to simple classroom or workshop instruction;
- they are used to provide explanatory support for topics which may be difficult to cover in depth within a limited period;
- they are used to explain by simple diagrams certain complex processes (e.g. the rainfall cycle, or a particular piece of mechanical equipment); and,
- their principal value lies in the fact that they can be left on a wallboard and used by students for revision or verification of material covered previously in class.

There are a number of useful series of wall charts relevant to forestry produced by commercial organisations, some for sale and others available free for public relations or community service functions. Some wallcharts, however, have a tendency to provide a great deal of information within a limited area. They may sometimes be of most value if particular items illustrated on a chart can be enlarged and displayed on their own for study. An episcope can be used for this purpose, subject to the agreement of the copyright holder.

Wallboards or bulletin boards

These should be constructed of materials which make it possible to attach notices with drawing-pins without difficulty. Alternatively they can be constructed of a smooth material which allows notices to be attached with small pieces of plastic adhesive material.

The main functions of wallboards are:

- they can carry posters, wallcharts, bulletins, copies of handouts, notices of extension activities, forestry information and news, in fact anything relevant which can be displayed on a suitably sized board;
- they should be erected at strategic places where people can see and study them conveniently, (preferably covered areas of markets, stores, offices, schools, etc.);
- if used for instructional purposes, they should be selective

and only display material relevant to the current topic for a
limited period for study and review;   or,
- if used for general information purposes, as an aid to
  extension, the material should be attractively arranged and
  regularly replaced and updated.

A neglected wallboard with a random
assortment of often out-of-date notices is
most likely to have a negative effect on the
public. Training establishments or rural
development centres and schools can seldom
have   enough   wallboard   space.   The
manufacture and supply, free of charge, of
wallboards which can be used as required for
forestry   or   general   rural   development
information or wallcharts, would in many
cases be an effective use of a limited
budget for extension work, particularly
where the recipient of the board, e.g. a
rural   headmaster   or   community   leader,
undertakes responsibility for maintaining
the material displayed on it and so becomes
more involved in the extension activity.
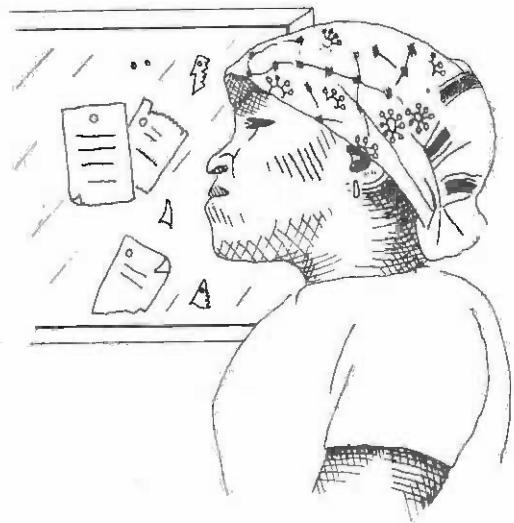
Magnetic Boards

Magnetic boards are particularly useful in certain learning situations
but they are not as widely used as they might be. The main obstacles to
their use are that large sheets of smooth steel, about the size of a small
chalkboard, are not easy to find in rural areas and are not particulary easy
to transport over long distances.   They are heavy and if they become bent
they are particularly difficult to straighten.   They are, therefore, not so
common, or so widely versatile, as chalkboards.   All the display materials
used on them must be prepared in advance.   To be effective they must be used
in a prominent position in a study area and as such they are in direct
competition for space with chalkboards, feltboards, wallboards and projector
screens.

The main characteristics and functions of a magnetic board are:

- the technique is similar to flannelgraph, though the
  illustrative materials are more expensive to construct;
- they consist of a smooth metal sheet, normally attached to a
  wall, to which objects, which have small magnets affixed to
  their back, can be attached;
- they can support heavier objects than a flannelgraph, provided
  magnets of suitable size are used;
- the symbols can be slid over the surface and show movement
  more effectively than flannelgraph where symbols must "jump"
  from place to place.
- they can be used outdoors relatively unaffected by weather or
  wind, but only small sizes of magnetic boards can be
  considered easily transportable;   and,
- some initiative must be shown to devise and prepare new
  material for use on a magnetic board, otherwise there may be a
  tendency to use the same material repeatedly for only one or
  two specific learning situations.

6.9 Extension literature

The use of literature in extension campaigns is discussed in full in Section 9.6. Its role is complementary to the main extension process. The preparation of extension literature is, therefore, a valuable teaching/ learning exercise for all staff involved in forestry extension who will have to communicate ideas or techniques to members of the public.

Leaflets

These are of most value if they are produced in a standard size and format which is convenient to handle and which is easy and cheap to produce. They should also be of a format which can be conveniently stored in bulk for quick issue, and filed for easy reference.

Some of the qualities of a good leaflet are:

- they should have an attractive design and lay-out which makes them easily recognisable for what they are;
- they should have a clear, distinctive, title so that any particular leaflet in a series can be easily located;
- they should provide simple, practical advice on forestry matters for a specific audience (e.g. advice on tree planting practices for farmers of arable land may not be the same as that for cattle rearers);
- they should be printed in the vernacular or in very simple terms in a common language;
- they should make use of illustrations to supplement written instructions but illustrations should not displace words entirely as is happening in instruction sheets for some commercial products marketed worldwide;
- people should be encouraged to discuss the information in the leaflets amongst themselves and with extension staff at meetings;
- any important observations made on these occasions should be taken into account when reprinting the leaflet or in designing others in the series;
- without the reinforcement of the message by personal contacts leaflets in themselves may be of little value in persuading people to change their practices; and,
- they can serve as a valuable reminder of techniques demonstrated at meetings and are very important for verifying what a person may think he was told at such a time.

Handouts

These are simple summaries of what a person has been told or has seen in a talk or a demonstration. As they may be used in large numbers, or may serve the specific needs of one activity only, economy in their production is a vital requirement.

A stock of suitable paper, possibly colour-coded for particular topics and pre-printed with headings, a logo, or some feint background illustration, can be maintained for typing, cyclostyling or otherwise reproducing handouts as required. People taking part in formal courses may wish to file and retain handouts because they may contain a great deal of useful information. This is easier to do if they are in a standard format. For many other people, however, who receive handouts, they may have only a very short useful life and their contents should be brief, clear and easily read. Their cost should be kept as low as is compatible with their function and their

importance in an extension programme.

Their main function may be summarised as:

- they are useful aids to extension work and are often distributed at the end of meetings, demonstrations, field days and tours;
- they are used to summarise, in short simple sentences, the main points of the activity; and,
- they help recall the message conveyed by the extension staff.

Bulletins

The distribution of bulletins is largely restricted to extension staff or particular community leaders to provide them with a full summary of information available on a particular topic. They should also be used to up-date staff on the latest technological developments or achievements in a particular field of work.

If carefully prepared, distributed, and filed, they may form the main source of reference material for field staff preparing talks, planning demonstrations or answering queries on a topic. If they are to serve a useful purpose of this sort they should be printed on good quality paper and stored in clearly identifiable covers. For bulletins which may have to be referred to in the field, laminating the pages between two thin films of plastic increases their useful life and keeps them clean and attractive. This usually has to be done at the point of production. Though laminating machines are not very expensive, there is unlikely to be enough work to justify having them widely distributed throughout an organisation.

Newsletters

These are a more informal source of information. They are more widely distributed and may go out to active participants in extension programmes and be made available to people who are potential participants. They are used to circulate information on achievements or problems within a particular area of work. They provide a forum for a regular exchange of ideas between enthusiastic workers in different locations who may rarely meet. Staff of all grades should be encouraged to contribute and items should be printed in the vernacular if this is the language in which a contributor can most easily express himself or herself.

Newsletters are often launched with a certain degree of enthusiasm and later fade away as staff feel either they have nothing important to contribute or are too busy to get their information or ideas down on paper. Emphasis should be placed, throughout the organisation, on the value of the exchange of ideas and staff should be credited and perhaps rewarded in cash or in their career prospects for useful contributions to the knowledge of extension, made in this way.

7. WORKING WITH PEOPLE

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 organisation, 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 favourable points in it and if necessary combine these with favourable 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.

Organisational ability

The work of the extension staff themselves must be well planned and organised, if the local people and their leaders are to support a programme of extension.
Good organisation 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 recognise and define the essential elements of a problem, and equally, recognise 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.

Judgement

Extension staff should always consider the effect which their actions, general behaviour 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 organisation may be destroyed, and this is difficult to restore.

It is unlikely that a candidate for a post in an extension service will have all these desirable qualities, so some discretion is necessary in the process of selection. The qualities can, however, be developed by training experience and personal effort. The reward structure of the organisation should consider improvements in skill in these fields as important as formal academic qualifications.

7.2 Public speaking

Extension staff must expect to have to speak frequently to members of the public, formally and informally, either as individuals or groups. To carry out this function effectively they must acquire skills in speaking. The following points may assist a person to become a better speaker. A personal list of "things that did not go well", prepared immediately after each talk, is, however, of most value in improving speaking skills.

Ensure that what you have to say is of real interest to that particular audience. Take time to find out in advance the type of audience you have to meet, their knowledge, if any, of the subject, and what more they want and need to know about it.

List a number of particular points you want to cover. Mention these to the audience at the outset so they know at which point in the talk you are as it proceeds, and when the end is due. Constuct this list from the knowledge or ideas you want the audience to carry away with them from the meeting.

Do not apologise in advance for what you may consider to be your shortcomings or limitations as a speaker. If you do have any, it is not necesary to emphasise them by drawing attention to them.

If you consider it necessary, make sure that the person making the introduction is supplied with all the necessary information on the topic and on the background of the speaker.

Talk "to" the audience, but not "at" them. Establish sympathetic eye-contact with a number of them in different parts of the room. Do not direct your attention to the wall, the ceiling, or out of the windows.

Start with the confidence that you can give a good talk, but make the necessary preparations to justify this. Do not be upset by temporary nervousness: even good speakers can suffer from this at times.

Speak naturally in a firm, clear voice, but do not shout at your audience. Do not stand rigid but avoid using unnecessary gestures: they will distract the audience and may even make you look foolish.

Observe the faces of the people in the audience throughout the talk. The facial expressions of the audience are the best guide to the speaker of the success, or otherwise, of the talk as it proceeds. These may indicate interest or lack of it, approval or disapproval or even boredom. Be sensitive to these clues.

Illustrate a talk with personal examples, as appropriate, but do not let it degenerate into gossip. Do not over-emphasise yourself as an example.

Never memorise a speech, or even attempt to read it. It will lose all freshness and impact. There are considerable differences between formal written language and the colloquial language familiar to most audiences at extension activities.

It is useful to have small cards with clear headings and a few key words as reminders of the content of each section. Make use of any visual aids appropriate to the situation. Not only will these add interest to the talk but they will serve as very effective reminders, both to you and the audience, of the important points.

Single sheets of thin paper are not suitable for use as notes. They are difficult to handle unobtrusively and are liable to rustle or blow away and so distract the audience, which adds to the speaker's nervousness.

Rehearse the talk to yourself in private. If possible, record parts of it on video or on audio tape and study these critically. Avoid recording all the material, however, as this may tempt you to try to memorise it.

Try to relax the audience at first. This can be done by an interesting anecdote or a short, relevant, story. These must, however, be well told or they will not have the desired impact and will tend to increase the strain between the audience and speaker.

An alternative is to review briefly what you intend to cover during the talk, by way of an introduction.

Make sure the whole audience can see and hear you adequately. If some persons are standing at the rear, and there are seats available at the front, invite them to occupy them. This usually has a relaxing effect on the audience in general.

Avoid "talking down" to an audience. Do not underestimate the basic intelligence or interest of the members in many rural matters.

Dress suitably for the occasion: do not appear in field dress for a formal occasion in town, or attend a formal meeting or a local council looking as if you had just had a hard day's work in the field.

Never "play down" a member of the audience. You will do yourself more damage than the person you are trying to hurt. This is especially important during question periods. Try to be courteous when someone asks a question you have just finished answering. Try not to get angry or provoked, or if you are, try not to show it. Answer the question as briefly as circumstances allow. It might assist someone who has not fully understood your earlier answer.

Leave time for a careful summing-up at the end of the talk. In it refer only to the major points discussed; do not attempt to give a complete review. A detailed summary lasting 7 to 8 minutes may make the audience wonder why you had to have an hour to make the points in the first place.

If you wish to answer questions at the end of the talk let the audience know about this at the beginning. They can then hold over any questions they want to ask until the end.

It may be embarrassing for a speaker not to get any questions after inviting them. This can sometimes be overcome by using the direct approach, "Now who has the first question?"

At large meetings, or where time does not permit individual questions, suggest that people who would like further information come to you after the meeting and that you will be happy to speak with them.

If a question is difficult to answer, or needs a little thought, throw it open to the whole audience. Address it first to the audience in general. If you address a question to one member of the audience he may be embarrassed and the audience will show

more interest in how he or she deals with it than than with the question itself. Review any suggestions you have received from the audience and formulate your answer as best you can. If necessary, undertake to give a written answer later.

Bring the questions to an end before they run down and become trivial or irrelevant. An effective way to do this is to say, "There is time for just one more question", which allows you to end the discussion after it has been answered.

Try to be as brief as possible in answering questions, without actually leaving out valuable points. It is better to stop while the audience's interest is still high, than to continue until they are bored and restless.

Hand out any printed materials at the end of the talk. It is distracting to have the audience rustling and reading papers they have just received while the talk is going on. If it is necessary to give out materials at any particular point in a talk, stop talking, issue a copy to everyone and study the specific point with them. Ask them to put away the paper and then resume the talk.

Avoid any distracting mannerisms. Do not fidget or fumble with keys, coins or chalk. A few minutes in front of a video recorder, or even a tape recorder, may tell you a lot you did not know about your presentation.

Be genuinely enthusiastic about your topic and as optimistic or cheerful as the circumstances allow and let this enthusiasm spill over to the audience.

Accept politely any comments the chairman may make about you in closing the meeting.

Accept any reasonable invitation to speak; the practice acquired will build up your stock of reference material and increase your confidence and skills.

Always prepare a talk carefully no matter how informal the situation may be

7.3 Working with local leaders

A major objective of any extension programme must be to establish a local organisation which is capable, both of implementing the programme, 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 programme, 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 staff have to work, are both formal and informal. Formal leaders are people who hold positions in society which carry some official status and responsibillity. By their influence, and the respect in which they are held by the people, they can gain support for a programme. Informal leaders are people who, though they do not hold any official positions, are regarded by their neighbours as responsible and prudent people whose judgement 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 organising 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 programme.

7.3.1 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 organisations 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, womens' or youth organisations.

The support of these leaders can spread initially through the organisations 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.

7.3.2 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 judgement 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 neighbours;   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 assitance is most effctive 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.

7.3.3   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 programmes in:

- how to carry out particular techniques;
- how to organise 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 favoured by the organisation or are in any way directly a part of it. Their inmpartiality and leadership may be compromised if they are thought to be representatives of an official organisation.

In spite of this, it is important to recognise 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 organisation.

Some benefits which can accrue to an extension organisation 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. INDIVIDUAL AND GROUP EXTENSION METHODS

It is the task of forestry 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, forestry 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 forestry extension programme.

Appropriate methods which forestry 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.

8.1 Individual 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 co-operation 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 organisations in developing countries. There are usually serious shortages of mature and experienced staff available for extension duties and the organisations 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 staff 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.

8.2 Home visits

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 forestry matters to that family;
- to answer specific requests for help (e.g. requests for information, seeds, plants or other materials), whenever possible;
- to explain in detail, and demonstrate where practicable, recommended forestry practices (e.g. nursery techniques or the establishment of small woodlots);
- to adjust general recommendations on forestry practices given in pamphlets or in radio programmes to suit the person's particular situation or problems;
- to follow up and observe the results of recommended forestry practices which have already been adopted;
- to identify and arouse interest in problems the person may not yet have recognised 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 organise or lead a local forestry development committee.

8.2.1 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;
- 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; and,
- this situation may result in loss of contact with the community as a whole and cause jealousy and resentment amongst some members of it.

8.2.2 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 seed to be left with the client;
- arrange a series of visits within an area to save time and travel and, if possible, include other work in the area (e.g. visits to offices) during periods of the day when people are not normally available; and finally,
- consider carefully in advance the best form of approach to each person.

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 favourably 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;
- make careful notes on what has been discussed or achieved during the visit;
- encourage the family members to join in any suitable group extension activities in the area, if appropriate, (e.g. to take part in establishing a community woodlot);   and,
- keep any information collected about the person seeking help strictly confidential, (do not leave notes or files lying around in the office).

Follow-up

- enter the notes made during the visit on the record card or file kept for that particular person, as soon after the visit as possible;
- supply any forestry or other relevant literature requested by the person visited; (pass on requests to other extension organisations, e.g. agriculture, community development or health services if their help is required);
- call on the assistance of a subject-matter specialist for advice on any problems which cannot be solved by local resources;   and,
- plan and arrange follow-up visits as required; note these in a programme of work diary.

8.3   Office calls and enquiries

Encourage people who are interested in forestry 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).   Train the office staff 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 favours from the public for doing this work.

Some important considerations and suggestions for dealing with office calls and making the best use of the time of the staff are as follows:

- people who call on their own initiative at a forestry extension agent's office or home show that they are interested in his work and in any information he may have to offer;
- the more confidence the people have in an extension agent, the more likely they are to call on him for assistance and follow any advice or suggestions he might offer;
- this may reduce the number of home visits necessary and save both time and travel costs of staff;
- circulars, brochures and handouts on relevant matters should be readily available to such callers (even if they do not need to discuss any particular points with the person in charge);
- a definite period of time, or day suited to local custom, should be set aside for receiving such callers, who should receive priority attention by the staff at that time;

- calls and enquiries dealt with in this way are less expensive and time consuming than home visits; and,
- a careful record of office calls should be kept; this may serve as a basis for follow-up activity or as an index of public interest or participation in an extension activity.

8.4 Personal letters

Personal letters may be of limited importance in extension activities in some 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 organisation and with other public organisations. All extension staff should try to acquire some skill in letter writing.

Some points which should be taken into account in this respect are:

- some people may have to write for information because it is not possible for them to make a personal call;
- all such letters should be answered promptly and courteously;
- a well constructed reply can create a favourable impression and help build up public confidence in an extension organisation;
- a poorly written, or very formal reply, can discourage a person from writing again, and damage any developing confidence;
- information given in a reply should be as full as required for the purpose but should not contain any unnecessary details or irrelevant facts;
- if a complete reply cannot be given immediately, a short, friendly, acknowledgement should be sent, and a full reply should be promised and sent as soon as the information is available; and finally,
- letters should be concise, clear and well laid out; if they are too long they are likely to confuse the reader.

8.4.1 Some features of letters

Letters are:

- useful in answering requests for information where a personal call on the enquirer is not considered necessary in the circumstances, or cannot be made promptly;
- useful for following-up visits or office calls and confirming or reinforcing any advice given orally; and,
- useful in maintaining contact with, and encouraging, local voluntary leaders in their activities.

They are:

- not in themselves considered to be a major source of information to rural people, or if used on their own, of much value in changing work practices;
- not of very great value as extension aids in countries without a reliable postal service, or where rural people are mainly illiterate;
- they may, however, be an important means, and in some cases the only effective means of communication between scattered

members of an extension service; and,

- though they are an expensive and not very effective means of maintaining contact with large numbers of people, if used properly they can be useful in establishing confidence and creating a good impression of an extension service in general.

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.

8.5   Telephone calls

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. Staff should be trained to make and to receive telephone calls effectively. It should, however, be emphasised in training that there is no permanent record of what was said during a telephone call and great care must be taken to ensure that all detailed instructions given during one are fully understood. Where important instructions or decisions are given during a telephone call, they should be followed by written confirmation as soon as practicable. Some people are not good at "thinking on their feet" and there is always the possibility that a decision may be made, or some advice given on the spur of the moment, during a telephone call, which may seem later to be unwise. If there is any doubt on either of these points, it is better to avoid making any important decisions and arrange to call back, after giving the matter some further consideration, or to send a letter if the instructions are too lengthy or detailed to send by telephone.

While telephone conversations should always be conducted in a polite and friendly manner, staff should be discouraged from prefacing these with lengthy customary greetings. These should be limited to the minimum acceptable to the other party without causing offence. Telephone calls, at certain times of the day, are expensive and lengthy enquiries after the welfare of distant relatives are costly and may prevent an urgent call being made by another person.

8.5.1   Some features of telephone calls

The main purposes and advantages of telephone calls are:

- they serve a similar purpose to office calls, while avoiding time spent on travel;
- they are useful in requesting and receiving specific information quickly, provided it is possible to convey the information accurately by word of mouth alone;
- they provide a quick means of following-up and evaluating the effectiveness of radio and T.V. programmes, where these are widely used in extension activities; and,
- they are useful for "sounding out" a person on a suggestion, before committing the proposal to a letter;

Some of the disadvantages which are always present and should be

compensated for, as far as possible, are:

- face-to-face contact is not possible, though variations in the
  tone of voice, or in the way of speaking may add meaning to
  the message, if both the sender and receiver are sufficiently
  familiar with the language and idiom being used;
- many rural areas lack an efficient telephone service and in
  some areas, few people have access to a service;
- calls may take some time to connect and the caller may be tied
  to his desk while waiting for a connection;
- poor reception may lead to misunderstandings or frustration;
- it is a relatively expensive means of communication; and,
- some members of the public may lack confidence in its use.

8.6 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 forestry
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.
They are of most value in circumstances
where people do not live rigidly by the
clock and appreciate the opportunity to talk
informally with others they meet by chance.
If not used with care, however, they can
seriously upset a programme of work for a
particular day. Staff should be encourged
to use them with discretion, so that other
members of the public will not get the
impression that they are "never out of the
coffee shop".

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 forestry but also
  their wants, needs and aspirations over a whole range of
  topics;
- 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;
- they may assist in establishing good relations and confidence
  in the extension staff which will encourage the public to
  make fuller use of their services in future; and,
- they can be used to "float" suggestions or ideas which the
  public, after further discussion, may decide to adopt later.

8.7 Group 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.
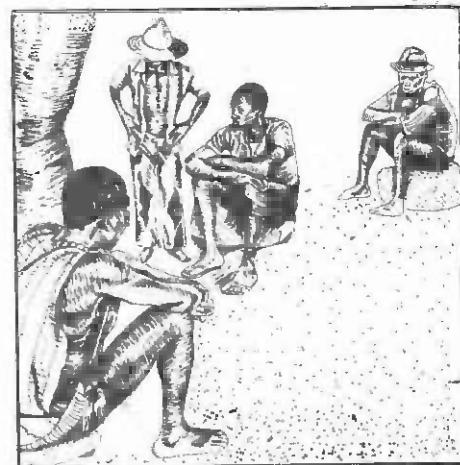
Groups exclude as well as include certain people

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

- to give or receive information about a proposed extension programme;
- to help create a favourable attitude towards a programme;
- to focus attention on problems jointly affecting members of the group and possible forestry solutions to them;
- to create awareness and interest in a particular forestry 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 forestry skills at a convenient location.

8.7.1 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 forestry 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 programmes. 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.

8.8   Group meetings

These are one of the oldest and most popular methods of contacting and communicating with people largely because they have been, for a long time, 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.

8.8.1   Purposes of group meetings

The main purposes of group meetings are:

- to introduce and discuss new ideas or practices, such as the concepts of agroforestry or community woodlots;
- to create a favourable attitude towards forestry 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 forestry extension programmes.

8.8.2   Types of group meetings

Common types of group meetings are:

- community meetings open to all persons willing to take part and usually aimed at a general description and discussion of a situation affecting the people;
- special interest meetings to serve the needs of a group with a particular interest in a topic, or some special need for assistance;
- meetings limited to selected individuals who have accepted responsibility as leaders and need assistance in carrying out their tasks;
- training meetings to encourage, advise and train community leaders on some specific topic; and,
- organisation meetings, and planning meetings, to establish the framework and procedures for carrying out decisions.

8.8.3   Checklist and guidelines for improving the effectiveness of meetings

Meetings, if they are to be effective, must be systematically organised and conducted. For this a basic checklist of tasks, which can soon be modified on the basis of experience to suit local conditions, is necessary.

Some of the factors which should be taken into account are as follows.

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, formal or informal procedure;
- 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, if required, and arrange parking facilities for any vehicles which may bring people to the meeting;
- arrange adequate seating, according to local custom or requirements. e.g. special seats may be expected by visitors from urban areas; the audience must be able to hear and see clearly; they must be reasonably comfortable by local standards and, in some areas, 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 organisers of the meeting and properly introduced to the audience.

Group meetings should be held in a way and at a place appropriate to the topic and the customs of the people

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.

Administration:

- arrange funds to cover the cost of hiring a meeting place and any equipment needed, advance publicity, handouts, refreshments, etc.;
- arrange transport facilities and refreshments for the guests and staff required and in some cases for the audience;
- decide on an agenda or programme for the meeting; and,
- rehearse the arrangements and verify that they are adequate; for subsequent meetings it should be possible to rely, to some extent, on the experience of previous meetings, suitably modified.

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 programme as promptly as circumstances permit;
- at suitable points during the meeting, encourage questions and discussion of the topics;
- summarise the important points learned or discussed;
- note and emphasise 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.

Follow-up

The following points should receive attention as soon as possible after the meeting:

- arrange for the meeting place to be cleaned and for any chairs or other items borrowed to be returned;
- send letters of thanks to the host, the chairman and the guest speakers;
- record any decisions taken and assistance promised and take prompt action on these matters; and,
- arrange publicity in the local press and radio for the meeting, the principal views expressed, and any decisions taken.

Ensure everything is left clean and tidy after the meeting

The use of visual aids, charts, diagrams or slides will greatly increase the understanding of most topics and these should be used during the meeting, or displayed at the meeting place, as far as circumstances allow.

8.9   Training and Visit system

The Training and Visit system (T&V) is now much used in certain areas in agricultural extension and has been well covered in literature. Whether it can be adapted to forestry extension depends on local circumstances such as the number of people willing to participate in an area, the nature of the work they wish to undertake, and the need or justification for regular visits at short intervals throughout the year. Where the T&V system is being used for agriculture or other rural extension in an area a forestry component might well be built into it. Use could then be made of existing extension staff who have already established good working relations with the local people to spread information on forestry practices or to assist people to implement tasks already commenced.

8.9.1   Organisation of the T&V system

Under this system an extension assistant arranges to meet a number of participating farmers (perhaps 8 to 12) at regular intervals, usually for one day every two weeks. The meeting time is devoted to discussion of progress in their normal farming practices, problems that have arisen or can be foreseen and possible solutions to them, work requiring to be done in the

immediate future and any possible improvements in techniques suggested by research or by the study of practices in other areas, as appropriate. The meetings give the extension assistant an opportunity to demonstrate new techniques or tools on the land of one of the participating farmers and to allow the group to practise if they so wish. The procedure promotes co-operation between numbers of progressive farmers in an area who can in turn demonstrate improved procedures to other farmers in their locality who are not members of the formal T&V group.

The extension assistant, on the other hand, joins other assistants working with similar groups in the area for one day every two weeks on a training session provided by subject matter officers or specialists from the local district or regional agricultural organisation. The attention of this training group is directed to appropriate activities for the participating farmers in the area at that season and to information, advice or skills they can offer to improve performance on the farms. If a member of the forestry staff with appropriate skills and experience can be attached to the specialist staff group providing this training at appropriate times of the year it may be possible to integrate valuable forestry practices into the normal pattern of agricultural activities in the area. Where interest justifies it, a forestry extension assistant could join an agricultural extension assistant on his field contacts with the farmers.

It is unlikely, however, that the opportunities or demand for assistance in forestry matters would ever be sufficiently great to justify establishing such a large team of forestry extension staff in an area as agricultural extension might require. Some local procedure for co-ordinating forestry and agricultural activities should be found. To try to establish a forestry T&V system running parellel to an existing agricultural system would be expensive in staff and resources and would lead to the possibility of conflicting advice being offered to farmers by enthusiastic field staff, though this would not be the intention of their central orgnisations.

8.10 Demonstrations

Demonstrations normally fall into two categories:

- result demonstrations,   and
- method demonstrations.

8.10.1   Result demonstrations

A result demonstration shows what can be expected after a particular forestry 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 forestry involve a much longer time span than in agriculture and it may only be possible to show some stages in the whole process.

Some of the main purposes of result demonstrations are:

- they provide evidence of the benefits of adopting a recomm-
  ended forestry 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 sceptical members of a group;
- they provide a good source of information for discussion at further meetings, for news stories, pictures, radio talks or interviews;
- they can provide cost data and other basic information on the proposed methods;
- 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;
- helping to organise the demonstration gives some of the group members the opportunity to develop skills in community leadership;
- 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 organise, particularly if travel to the site is involved at the extension organisation's expense; and,
- they take time to plan and carry out, especially for forestry activities.

Guidelines for result demonstrations

It is very important to build up locally a series of guidelines for organising demonstrations, to review these carefully after each demonstration and to incorporate improvements based on the experience gained. If this is done the standard of organising 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 species 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 administative 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. seeds, plants, 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 conven- ient 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 practise sufficiently to achieve the smooth performance required for a convincing demonstration.)

Publicise 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.

Supervise the demonstration:

- record details of what took place, anything that went wrong, comments by the audience or other relevant observations, carefully, and use these as a means of improving future demonstrations;
- prepare press and radio releases where appropriate;
- visit the demonstration area as often as necessary afterwards to maintain the demonstrators' interest in the procedure;
- check on the progress of the demonstration area and ensure that any subsequent treatments are properly carried out;
- take photographs both during the demonstration and at intervals afterwards to record the development of the area; and,
- erect a sign to ensure continued public interest in the demonstration area.

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

- call a meeting of leaders and people to examine the results achieved;
- summarise 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.

Follow-up:

- report to the relevant authorities the results and the impact of the demonstration on the community;
- publicise the results, through the local press and radio, at local meetings and during extension visits;
- ask influential persons and the demonstrators themselves to speak about the results at any meetings they may attend; and,
- use photographs and other visual aids to present the evidence to other interested parties.

Other points to consider in result demonstrations:

- carry out the demonstration on private or community land rather than on government land, if this is possible;
- local demonstrators should carry out as many of the operations as possible, with the help or guidance of the extension staff;
- complex demonstrations should not be attempted until the demonstrators have acquired considerable skill, and the confidence and understanding of the community have been gained by a series of simpler demonstrations;
- photographs, transparencies and films may be used to condense a result demonstration extending over many months, or even years, for showing to an audience at meetings or on other suitable occasions;
- radio items, newspaper articles, pamphlets, circular letters and talks supported by visual aids can be used to inform people of the results of demonstrations and of the successes of local persons, thus making the results more widely known;
- result demonstrations should be carefully planned in view of their importance in getting an extension programme going successfully, their value in building confidence in the

extension staff and of the time and effort needed to organise them.

8.10.2 Method demonstrations

Method demonstrations are the oldest form of teaching. They are the basis of the apprentice system which has trained skilled craft-workers for many hundreds of years. In forestry extension, they can be used to show a person how to do a job, such as potting seedlings or planting trees, step by step until they have acquired sufficient proficiency in the task.

The purposes of method demonstrations are:

- to teach basic forestry 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 forestry skills at one 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 practise the skill demonstrated adequately due to shortage of time or facilities.

It is important to draw a clear distinction between method demonstrations and training courses. Because of the numbers present and the time available at method demonstrations, people may gain only a superficial knowledge of the procedure and may, therefore, be unable to apply it on their own successfully, without additional training.

There are limits to what a
person can learn at a
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, (e.g. nursery establishment, seed sowing, tree planting). 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 of plants 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?

This matter of discussion with the local leaders is important because:

- it helps to establish liaison with them;
- it helps to secure their endorsement of the project;
- it encourages them to provide land or other necessary facilities for the demonstration where these are needed;
- it provides staff with a valuable opportunity of demonstrating the skills to these important people in a discreet way;   and,
- it involves more people in the demonstration and encourages widespread discussion of the project.

Preparing and presenting the demonstration:

- gather all the necessary materials required (such as soil, seed, seedlings, potting bags, fertiliser, etc.) 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 time 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;
- summarise the importance of the operation, the steps involved and the materials required;   and,
- distribute literature showing the procedure step by step.

Some other points for consideration in planning method demonstrations are:

- arrange a series of demonstrations at convenient sites if too many people are likely to attend one central demonstration;
- encourage local leaders to supplement these with more local demonstrations;
- demonstrations often result in requests for follow-up visits to an individual person's land; ensure local resources are adequate to meet this demand;
- poor demonstrations may destroy people's confidence in the staff carrying them out;
- demonstrations should be limited to the number which can be properly planned and carried out with the resources available;
- in evaluating demonstrations, follow-up visits should be made to check whether the people have in fact learned the skills demonstrated and have put them to good use;
- a report should be prepared containing information on the locations of demonstrations conducted, the attendances, the subjects of the demonstrations and the results obtained;
- actual materials, equipment and people are the best visual aids to use.

8.11 Field days

Field days are best held on land belonging to local persons who have successfully adopted improved forestry practices, or if this is not possible, on experimental stations or government demonstration centres.

8.11.1 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.

8.11.2 Some considerations in planning field days

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

- they are usually organised 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 programme;
- the programme 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 favourably 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 summarise the main points of the discussion; and,
- distribute reading materials related to any subjects raised during the discussion, if available.

The use that can be made of field days is limited as frequent visits may cause an unacceptable inconvenience to the hosts or to the experimental stations and may interfere with their main function of research.

8.12 Field trips and tours

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. Activities which may be visited range from small demonstration or test plots to established forestry plantations or industries as appropriate.

8.12.1 Purposes of field trips and tours

Field trips:

- offer people the opportunity to see for themselves valid evidence of improved forestry 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 forestry extension programme.

8.12.2 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.

8.12.3 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 the number and nature of the party; and,
- rehearse the tour to check the adequacy of the time allowed for visits and the arrangements for travel and accommodation.

8.12.4   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;
- the extension staff should be prepared to provide technical, background and interpretive information on activities visited.
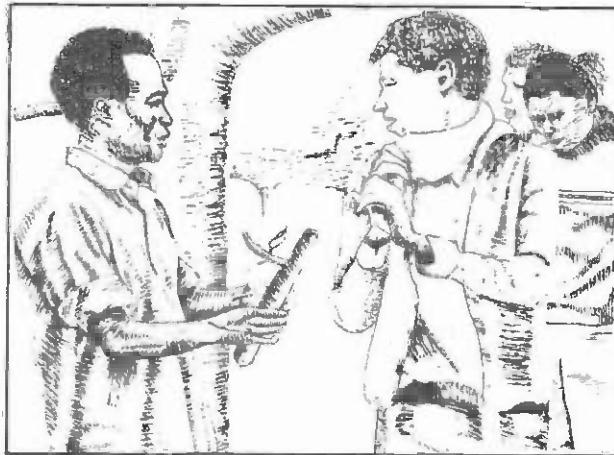
Limit the members on a field trip to a number the leader can manage

8.13   Panel discussions

This is a process by which a number of persons pool their knowledge and experiences or feelings, and through discussion and general agreement, clarify the issues under consideration. The leader of the discussion group should serve as a moderator rather than as a resource person. He should ensure that every member gets a reasonable chance to be heard. His function is to keep the discussion moving in an orderly manner. He should discourage anyone, including himself, from trying to dominate the discussion. Such a meeting could be used when a group of people have already acquired some knowledge about the possibilities of undertaking an extension programme in an area and are considering in more detail what they might do about it.

Another type of panel discussion much favoured at present is one in which a group of persons knowledgeable in a subject are assembled and questions are posed by members of the audience. The members of the panel express their opinions and give such information as they can on the topic. This is somewhat similar to a symposium discussion. The panel method consists, however, of a rather informal discussion by several experts on a number of more or less related topics, while a symposium has several speakers, each of whom gives a rather detailed and carefully prepared presentation of his views. In using any of these methods the organisers must exercise great care in selecting members of the panel who can speak to the local audience in a level of language they can understand. The object is to assist the audience to have a better understanding of a problem, not to baffle them with the erudition of the panel members.

8.14 Extension schools

Extension schools are characterised by the following features:

- they are designed to give participants knowledge and skill in some specific field of work;
- they normally involve intensive training over a period of time (1 to 4 days is common);
- they can be located in any suitable rural training facility;
- they normally involve pre-enrolment procedures and an obligation to attend all the sessions;
- they offer an opportunity for the presentation of much information and practice to a selected group of people with a special interest in the topic;
- demonstrations, discussions and the use of visual aids, add much to their effectiveness; and,
- periodic and terminal evaluations help to keep the programme realistic and provide guidance in conducting future courses.

8.15 Farmers' training centres

Farmers' training centres were, at one time, a major feature of rural extension programmes in some countries but they have recently fallen in popularity as it is often difficult for rural people to be absent from their homes for a lengthy period. Where they exist, however, they can be used to train people in the ideas and practices of forestry, either as specific courses or as components of a wider agricultural course.

A farmers' training centre should provide the following facilities:

- accommodation for 20 or more people with residential and dining facilities;
- training areas complete with the necessary facilities and equipment, such as nurseries and plantations;
- courses in appropriate topics devised to last from 2 days to about 4 weeks;
- clear objectives for each training programme, such as to show that farming and forestry can be carried out together;
- an aim to create in the participants' minds the desire to apply the information acquired on their own lands;
- the facilities to teach them some of the joint skills required in forestry and agriculture (e.g. tree farming integrated with grazing or growing cash crops);
- the facilities to provide both the necessary theoretical and practical training to achieve these objectives; and,
- skill to provide leadership training in conjunction with these other activities.

To fulfil this role, farmers' training centres must be integrated with current extension programmes to the extent that:

- subjects covered in the training contribute to the educational objectives included in extension programmes;
- participants are selected on the basis of their leadership potential and through recognised leader recruitment processes; and,
- participants, on completion of the training, are utilised in planning and implementing forestry extension programmes.

Where such centres exist and are having difficulty in attracting sufficient candidates they may convert to training and motivating young men and women who do not yet have the same work or family ties as older persons and can devote the time to undertaking short training programmes.

9.   MASS EXTENSION METHODS

As neither individual nor group methods can reach everyone who may want or need information on forestry 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, generalised but it can play an important role in certain phases of an extension campaign.

9.1   Functions of mass methods

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

- they help carry forestry 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 forestry activity;
- they help form favourable attitudes amongst the general public towards forestry extension programmes;   and,
- they provide helpful repetition and reinforcement of extension messages to those already contacted personally through individual or group methods;

9.1.1   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 favourable 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.

9.2   Circular letters

Some suggestions on writing official letters are given in Section 8.4.1 and are generally relevant here, though circular letters for mass use should generally be written in a less formal way.

Some of the purposes for which circular letters may be used are:

- to give advance warning to local authorities and community leaders of anticipated forestry problems, such as shortages of fuelwood, or the danger of forest fires;
- to publicise an extension activity, such as a demonstration or meeting;
- to serve as a reminder to the audience of information or advice given at meetings or demonstrations;
- to summarise the outcome of a result demonstration and to carry news of the success of the demonstration to a much wider public;
- to inform people about a new forestry practice which extension staff believe would be of benefit to people in the area;
- to create awareness and interest in a new practice by reporting the results achieved locally; and,
- to reinforce the effects of personal contact methods, such as meetings or demonstrations or of other mass media campaigns.

9.2.1 Features of circular letters

Some of the benefits of using circular letters are:

- they are simple and relatively cheap to produce in large numbers, though postage charges may add to the cost considerably; and,
- they can be kept by the receiver and studied repeatedly, if necessary, in his own time.

Some disadvantages of using circular letters which are worth considering are:

- they are of value only to those who can read reasonably well and who can understand the contents without further explanation;
- there are limits to how much information can be effectively conveyed in a letter; and,
- satisfactory duplicating facilities and adequate supplies of paper and envelopes are not always readily available to staff in rural areas.

9.2.2 Checklist and guidelines for using circular letters

A simple checklist and guidelines for preparing and using circular letters are:

- appeal immediately to the reader's personal interest by using a strong statement in the first paragraph;
- if possible, use a small illustration or a logo, somewhere in the letter, to reinforce the message;
- quote relevant facts to support the message being conveyed, e.g. each household needs about 4 tons of fuelwood each year;
- suggest something positive the reader can do about it;
- be informal; use simple language and style and make it sound as if the writer were talking to the receiver in a friendly, helpful way; and,
- cover only one subject in each letter.

9.3 Newspaper stories

Some of the functions of newspaper stories in forestry extension are:

- to create awareness of and interest in a new forestry topic of general interest
- to give advance warning or advice on important forestry problems, such as shortages of building materials;
- to increase people's knowledge and understanding of new forestry techniques, e.g. controlled or rotational grazing in forest areas;
- to create more favourable attitudes towards extension programmes and new forestry techniques;
- to publicise extension meetings and demonstrations; and,
- to inform people of ways to save labour, time or money by adopting new and better forestry methods.

9.3.1 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 stories 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 and TV programmes or demonstrations.

Rural people tend to place great reliance on what they read in newspapers

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.

9.3.2 Planning newspaper stories

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

- determine the purpose of 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;
- learn what the editor wants and try to meet his or her needs; and,
- adopt the style normally used by that particular paper, so the editor will be encouraged to print it with few, if any, cuts.

9.3.3 Principles of writing for newspapers

Some important principles to follow in writing for newspapers are:

- check that the information is accurate and in line with official policy;
- consider if the story, as written, sounds entirely convincing;
- consider if the target audience will understand it in the way it is presented;
- give the important facts first, so that if the editor decides to cut the story due to lack of space, at least the most important parts of the message will appear;
- the leading statements or opening paragraphs should cover the important factors, who, what, where, why, when and how;
- use personal words and make clear references to people concerned; the public are generally more interested in other people than in things;
- be brief, clear and accurate in writing;
- as far as practicable, use simple words, short sentences and short paragraphs;
- give facts in preference to opinions;
- make the words sound convincing by using a direct and personalised style;
- point out the advantages that persons will obtain by adopting particular practices, quoting quantities and values if possible; and,
- limit each paragraph to a single idea or topic.

9.3.4 Follow-up

Some necessary steps to follow-up a newspaper story are:

- keep copies of the article on a file and show them to people concerned whenever possible;

- consider if the initial story justifies a follow-up story, after some time, describing any action taken or results achieved; and,
- mention the news story and public reaction to it in routine reports to senior staff.

9.4 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 enamelled metal which is more durable but much more expensive.

9.4.1 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.

9.4.2 Design of posters

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

- a brief glance is usually all that people give to a poster, just long enough to identify it;
- 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

9.4.3 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;

- visualise, 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 colours to attract attention and for contrast, but not so
  that they cause confusion; and,
- do not crowd the letters, words or illustrations.

Posters can be produced in quantity by letterpress, by silk-screen, by
some more expensive duplicating machines, or by hand-work if only a few are
required.

9.4.4   Some considerations on the use of posters

Some other factors that should be taken into account in using posters
are:

- posters should supplement but should not aim to replace other
  extension methods;
- they are useful to introduce or launch a campaign;
- they can be used to reinforce a campaign after it has been
  sucessfully launched;
- in general, the greater the number of posters used in an
  area, the greater the impact;
- over-use of posters, however, defeats their purpose and may
  turn people against the idea they are trying to promote;
- common sense and good taste should dictate both where they
  should be used and the number that should appear in any one
  place;
- posters can be put up on notice boards, walls of buildings,
  fences, trees or in other suitable places, provided they do
  not cause offence to the owner of the property; (seek
  permission from the occupier, if in doubt); and,
- posters should be removed when they have served their purpose
  and before they become untidy, or they may cause offence to
  passers-by.

Competitions to design posters, open to members of the public or to
students, are an excellent way of generating interest in a topic and in
gaining an insight into how the people in a particular area view and wish to
represent an idea. Moderate cash prizes may attract very large numbers of
entries. Such a competition some years ago in East Africa featured loss of
potential wealth as far more important in the view of local people than loss
of soil or wildlife in forest fires.

9.5   Wall newspapers

These are generally similar in size and appearance to posters but they
can be prepared in various forms. Their value depends to some extent on the
level of literacy in the area in which they are used and whether they can be
exhibited in places protected from the weather where they can remain on view
for a reasonable period. They may be prepared in a combined form with a
portion used as a bulletin board and a portion for photographs or newspaper
clippings of interest to the public.

9.5.1   Some considerations on the use of wall newspapers

- they usually attempt to communicate a number of ideas at one
  time;

- they contain more illustrations and written material than posters;
- they are best displayed in places where people can pause to read them for a few minutes without interrupting the flow of passers-by;
- they are often mainly pictorial with sketches or photographs as their main feature;
- the text is normally as brief and vivid as possible and set-out for easy reading; and,
- they can sometimes be used to report the results of research and to recommend new forestry practices, provided these are easily understandable and can be presented in an attractive form.

A typical wall newspaper for extension purposes may contain material such as:

- reports and pictures of meetings, demonstrations, tours or other current extension activities;
- an announcement of the appointment of a new member of the extension staff in the district;
- a progress report with pictures on community plantations in the district;
- an illustrated feature on the success of a local person in some forestry extension activity; or,
- an article urging the community to prevent forest fires.

Printed matter and pictures displayed in wall newspapers may be subject to copyright and prior arrangements may have to be made with the publishers for their use. This can usually be obtained but it may involve a delay before the material can be displayed and will almost certainly require full acknowledgement of the source from which it was taken.

9.6   Pamphlets and leaflets

These materials can often be produced locally, quickly and cheaply and can be used in many ways in forestry extension programmes.

9.6.1   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 tree planting techniques;
- they may be used in a series covering broader topics such as woodlot establishment, with separate leaflets on nursery establishment, seedling production, planting and maintenance of woodlots and felling and sales;
- 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 programmes to supplement the information given in the programme.

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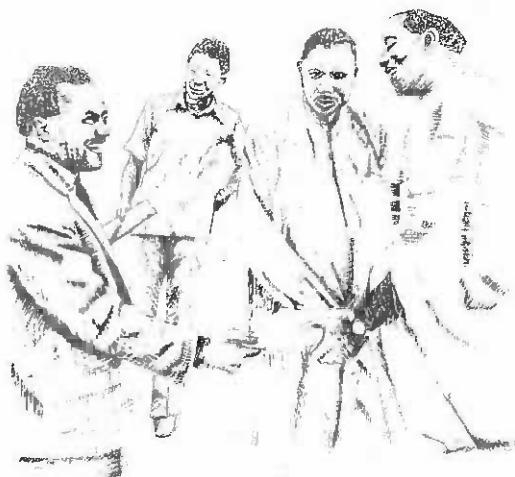
Leaflets can be handed out after
meetings or demonstrations

9.6.2   Advantages of using pamphlets and leaflets

Some advantages of the use of pamphlets and leaflets are:

- their production cost can be low, (simple ones may be mimeographed);
- 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 non-essential 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.

9.6.3   Guidelines for producing pamphlets and leaflets

In preparing pamphlets and leaflets, a writer should:

- keep the particular public for whom they are intended constantly in mind;
- 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 plants 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 colourful cover which should impel the reader to look inside.

9.7 Fact sheets

Fact sheets are a condensed treatment of any items of subject matter of general interest. They usually cover a single topic and are often limited to a single page. A fact sheet on tree planting will give, briefly, the most important information on the practice. Most sheets are illustrated with drawings or photographs, sometimes in pale outline and overprinted with text.

Fact sheets are mainly used to provide information on current subject matter to field workers or community leaders. Essential facts from technical bulletins can be given, combined with drawings and/or photographs to make an effective, easily read and understandable summary, which can be reproduced quickly and inexpensively.

Extension administrators concerned with the problems of improving the communication of information within an organisation should consider carefully the advantages of using fact sheets which can be colour-coded for topics, filed and, in time, built up into a comprehensive volume of information on current techniques.

9.8 Exhibits and displays

The materials in exhibitions and displays have some of the same characteristics as posters (Section 9.4). The difference is, however, that the exhibits are three-dimensional, usually larger and more detailed, and may contain real objects or models where appropriate.

9.8.1 Functions of exhibits and displays

Some of the major functions of exhibits and displays are:

- to catch the attention of passers-by, or visitors to offices or shows;
- to impress one central idea or fact on them;
- to stimulate their interest in the subject matter presented;
- to urge them to take some sort of action; and,
- to establish good relations between members of the extension staff and the public they meet in connection with these activities.

Exhibits and displays often use real objects or models and are able to give much detailed information to the public. They attract and hold the attention for longer periods than posters because they are usually placed in areas where people move about more slowly. Forestry extension exhibits and displays can be used very effectively in the entrance halls of offices, at local fairs, agricultural shows, exhibitions marking important national events, or at forestry activities such as Arbor Days.

9.8.2 Guidelines in preparing and using exhibits and displays

Some simple initial guidelines in preparing and using exhibits and displays, which can be modified by local experience, are:

- decide who the audience will be, and what it is hoped they will do;
- decide on the message;
- the most effective exhibits are built round a single idea with the minimum of supporting information;
- the central idea should stand out clearly;
- a combination of real objects, models and diagrams, with

suitable labels, plus a bold sign or slogan, usually gets the message across;

- something should be included which relates the subject to the viewers' own interests, experiences or needs;
- the exhibit should cover such points as what the problem is, what can be done about it, and what the benefits will be;
- the supportive information should be presented in the form of "why" and "how" to do something;
- "before" and "after" photographs, with captions, can convey useful information;
- the use of actual objects e.g. old and new tools, models, drawings, specimens or actual demonstrations, helps greatly to convey the message;   and,
- projected visual aids (e.g. back projection of transparencies) can be used in conjunction with the exhibit when appropriate.

9.8.3   Some other suggestions on exhibits and displays

Some other considerations and suggestions which should be taken into account in planning exhibits and displays are:

- clutter is the worst enemy of an exhibit or display;   the fewer elements in it, within reason, the better it is;
- keep written material to a minimum; use only enough captions or signs to tell the story; (at fairs etc. attendants can offer additional explanations, if necessary);
- vary the size, style, and colour of lettering to create interest and to direct attention to the centre of interest;
- use a colour scheme of 2 or 3 colours with neutral shades for the background and areas of intense colour for points of interest; select colours to be used to make the best use of "auspicious" colours and avoid "taboo" colours;
- locate the centre of interest near eye level (about 1.60m high);
- items above 2m or below 1m high will not be seen as well as those closer to eye level;
- by securing the co-operation of people in producing a few basic items for exhibits, to be kept permanently in a locality, or at a rural training centre, extension staff can be spared the difficult task of carrying heavy display material from place to place;
- time spent on preparing exhibits is more effectively used if the exhibit can be used at more than one place;
- design and construct exhibits and displays in such a way that they can easily be dismantled and transported for re-use at other places;
- when displayed at a major event such as a field day or a national exhibition, many people can benefit from it.

9.8.4   Organising and presenting the exhibit or display

Some practical points in presenting an exhibit or display which can be further developed as local experience is gained, are:

- select a type of exhibit appropriate to the activity and the situation;
- make a written plan, diagram or model of the exhibit;
- for large exhibits draw a plan on an open floor to verify that visitors will be able to circulate freely;
- locate and arrange the materials required;

- outline their positions on the backing material in crayon or paint so they can be removed and replaced quickly and precisely as required;
- fix all valuable portable materials securely to a base; (strong copper wire is very suitable for this purpose and is generally unobtrusive);
- where appropriate, have someone to present and explain the exhibit and answer questions;
- have reading materials available for distribution (or even seedlings for distribution) if appropriate;
- keep a book to record requests for further information and follow up any contacts by letter, personal visit or invitations to meetings; and,
- evaluate and report on the effectiveness of the exhibit and the interest it aroused, and any successful follow-up with interested persons.

9.9   Radio

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 forestry amongst the people.

9.9.1   Purposes of radio programmes

The main purposes of radio programmes are:

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

9.9.2   Features of radio programmes

Some of the advantages of radio programmes 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;
- a forestry radio programme 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 of communicating with people who are not fully literate; and,
- listeners come to like the personalities who are often heard on radio programmes and the organisation can capitalise on this by arranging for them to make personal appearances at other forestry extension activities.

Radio is an effective method of communicating with people who are not fully literate

Some of the disadvantages of radio programmes 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.

9.9.3   Guidelines and checklist for recording a radio broadcast

Radio broadcasts are commonly recorded in advance on tape, which enables them to be edited and adjusted for timing before being broadcast. The procedure for doing this can be used for any taped message which may then be used in conjunction with extension meetings and activities or by mobile units. (Section 6.7).

The diaries and field notes of extension staff should suggest many useful items for programmes. Where possible, interviews and discussions with local persons or groups should be arranged. These enable the speakers to relate their experiences in their own words, which can be very convincing to listeners.

Some simple guidelines and a checklist for making a tape recording are:

- prepare a folder of forestry information and ideas suitable for broadcasting and keep it up-to-date with regular additions;
- decide on the purpose of any broadcast before attempting to plan it in detail;
- discuss the outline of any interview with the speaker before recording it; explain the reason for the broadcast; find out what he or she did and what success was achieved;
- make sure that the names and titles of speakers used in the broadcast are accurate, that the person concerned does not object to being named, and that no criticism of the person is made during the interview;
- try out some questions before recording and if the speaker is nervous or flustered rehearse them to give him confidence;

- keep questions short and frame them to start with, "how", "what", "where" and "when", to avoid getting a series of "yes" or "no" answers which require another question to get the interview going again;
- avoid using questions beginning "how many" as the answer may simply be a number, without any further explanation;
- make the interview personal by stressing the terms "you" and "yours" in the interview;
- avoid discussing the speaker's private affairs, especially his cash income;
- make an effort to show the speaker you are interested in him; listen carefully to what he has to say;
- try to give the impression of having an informal chat;
- keep the speaker on familiar ground and do not surprise him with awkward questions;
- encourage the speaker to do most of the talking;
- make the questions real questions, not long statements of the interviewer's opinions for the speaker to confirm or deny;
- do not put words into the speaker's mouth;
- straight subject-matter talks by a knowledgeable and respected person are of value in introducing a new idea, provided they are brief, well-planned, interesting, and in a level of language the listeners can understand;
- reports of forest visits, demonstrations or field days and answers to requests for information are useful in news and magazine-type programmes.

9.9.4 Some technical points

Some technical points which should be noted in making recordings, are as follows:

- conduct interviews and recordings in the person's own area, if possible; this overcomes the difficulty of getting the person to a studio where discussion may be inhibited by the unfamiliar surroundings and the gadgetry; it may also be possible to record some realistic background noises to incorporate in the programme;
- ensure the person making the recording knows how to operate the tape recorder;
- check that the recorder is operating correctly before starting the interview; and,
- if background noises are likely to interfere with the interview, (e.g. children playing), make the recording indoors, e.g. in a barn or a hut.

If the basic interview material is provided, the producer of the programme at the radio station will normally arrange all the introduction, continuity announcements and music necessary to produce a well-balanced programme in the normal format of the station. It should not be necessary for extension staff to tackle this stage of the work themselves.

Provide the basic material for professional producers to work on

9.9.5 Some considerations and suggestions

Some considerations and suggestions in preparing radio programmes are:

- research has shown that people tend to believe what they hear on the radio;
- the mass media, which includes radio, rank as the most effective media in the awareness and interest stages of learning;
- hearing friends and neighbours speak on the radio increases an extension programme's influence in the evaluation, trial and adoption stages of learning;
- if there is a choice, the early adopters, or informal leaders, should be interviewed rather than the innovators, who may be regarded as too progressive by some of their neighbours;
- good interviews require careful thought and planning but can be re-used several times at meetings;
- extension staff can provide a radio station with recorded spot announcements or radio plugs to be repeated at frequent intervals during the day;
- consider the listening habits of the people, (determined by surveys), when planning an extension programme by means of radio and select broadcasting times appropriate to these;
- relate the scripts to the experiences and needs of the local people;
- advertise the next similar radio programme by announcing the subject and who will be interviewed before closing each programme; and,
- be selective and take advice from professionals; not all extension information is necessarily good radio material.

9.10 Television

Television adds both vision and movement to broadcasting and in many areas it can now also add colour. These qualities greatly increase its value as a forestry 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.

9.10.1 Uses of TV in extension

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

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 localised material for training. Using simple video recorders of various types, which are discussed in Section 6.2.4, it enables extension staff to monitor their own performance as extensionists, in a wide variety of situations. It can also enable the person to study critically, and at leisure, the reactions of the audience to his performance, based on facial expressions, body movements or reactions to statements and

questions raised during the meeting. Even simple recordings, which are not intended for wider showing, can be of great assistance both in improving the performance of the instructor and in assessing the interest and value of the material being covered.

More professionally produced material can be used as short programmes for either instructional staff or their clients during short sessions, either in the morning or evening, so providing a properly structured course of study over a relatively short period, without the loss of working time involved in a residential course. Recordings can be made of result or method demonstrations, compressing a lengthy period of time into an hour or so, or demonstrating a technique skilfully and with all the necessary resources. These can be shown as short programmes of roughly twenty minutes each followed by discussion and a review or further demonstration if required.

9.10.2   Guidelines for preparing TV material

Initially, arrangements for preparing a TV programme either for showing to a national audience or for use as a video cassette in training smaller groups are best handled by the national TV organisation, or by a commercial company. They will have all the necessary equipment and expertise to do the work successfully. The equipment and skills required to edit and copy tapes are expensive and cannot be justified by a forestry extension organisation unless there is a national commitment to use TV or video recordings in forestry extension on a very wide scale. By providing expertise, facilities and field services during the making of a programme, however, forestry extension staff can gain an insight into the complexities of the task and will be made to think more deeply about their techniques and normal method of presentation.

If a simple video camera and recorder become available to forestry extension staff, initial attempts at recording should be on a modest scale and limited to programmes of a few minutes. The guidelines for radio recording can be modified initially but the elements of vision and movement add important new factors. The fact that a sequence taken by a video camera can be reviewed on the monitor of the camera immediately it is recorded enables faults to be corrected and the general level of presentation to be improved very rapidly. Recordings made on simple video equipment cannot normally be edited to the standard required for wide-scale use but the experience that can be gained in producing these is a valuable contribution to more effective presentation of forestry extension material.

10. EXTENSION CAMPAIGNS

The function of an extension campaign is to focus the attention of the public on a particular, widespread, problem which has been clearly identified in an area (e.g. a possible shortage of fuelwood). The ultimate objective is to stimulate the people to take action to overcome the problem by personal or community efforts.

An extension campaign involves:

- a co-ordinated plan using a range of communication and educational skills to achieve widespread recognition of a problem and the adoption of appropriate solutions to overcome it;
- the co-ordinated use of a variety of extension methods in a carefully planned sequence and degree to achieve the necessary recognition and action; and,
- a planned effort to achieve the objective over a particular period of time, related to the purpose of the campaign, and co-ordinated at national, regional or district level as appropriate to the objective.

10.1 Reasons for using the campaign approach

There are many sound reasons for using the campaign approach in major extension activities, such as:

- a co-ordinated approach to a large-scale, complex, extension effort can be more effective than the individual efforts of a number of staff working in isolation, on their own initiative;
- it permits the integration of a variety of methods to present a unified message to a high proportion of the target audience over the required area;
- it allows detailed planning to make the best use of the staff, time, and resources available over the whole area;
- it enables activities to be scheduled and repeated at times most favourable for particular sub-divisions of the area; and,
- the high profile of the effort helps to generate public enthusiasm and support for the objectives of the campaign.

10.2 Principles of extension campaigns

Extension campaigns are based on the principle that the more people are exposed to an idea, the more likely they are to accept or adopt it. They must be conducted, however, as proper communication systems in which the needs, views and constraints of the people are not only fully respected but incorporated both into the information and the activity components of the campaign.

Campaigns are normally limited to a definite period of time dictated by the specific objectives of the campaign, (e.g. fire protection in community forests). Some campaigns may have no seasonal constraints, but they should neverthless have a time limit. A campaign will lose its impact if it continues too long without any measurable result. A finite period, after which it can be evaluated, is important both to assess its effects and to plan any subsequent phases to achieve an increased effect.

10.3 Guidelines for planning extension campaigns

Some simple steps in the process of planning extension campaigns are as follows.

10.3.1 Analysis of the current situation

Important questions to be asked and answered at the initial stage, by questionaires or surveys, by discussion with informed persons, or by study of official records, are as follows.

Topic:

- how familiar are the target audience with the matter;
- can the problem be seen by them or demonstrated to them easily;
- is enough known about the problem to determine its causes precisely and to offer realistic solutions;
- to what extent is the problem the result of firmly held views or the operation of traditional practices by the public;
- what benefits will the people derive from a solution to the problem;
- can it be solved mainly by their own resources or will significant assistance be required;
- have they the necessary understanding or skills to solve it; and,
- can it be solved in one stage or only by a series of steps?

Situation:

- how serious is the problem or how great the opportunity;
- how has it arisen;
- have any previous attempts been made to solve it; if so,
- what was the result of these?

Population:

- how many people are affected by the problem;
- how are they distributed geographically;
- what is their composition by age, sex, level of education, occupation, resources, facilities, etc.;
- what do they know about the topic;
- have they shown any previous interest in it;
- do they consider it important in their lives;
- has their way of life contributed, or given rise, to the problem;
- do they have the necessary knowledge or skill to solve it;
- have they any wish to solve it;
- have the views of their families and friends any influence on what they might be willing to do to solve the problem;
- have their customs or habits any effect on solutions which might be proposed;
- from whom do they normally seek advice on such matters;
- are their any groups or organisations which influence them in such matters;
- what is their main source of information on such matters;
- do they view the extension organisation as a reliable source of information;
- how do they normally take decisions on such matters; and,
- is the infrastructure of roads, transport, etc. appropriate

to the suggested solution?

Organiser

- why is there official concern about the matter;
- is it considered to be a matter of great urgency;
- does it require priority in extension activities;
- what resources in staff, materials and funds are avilable to apply to the campaign; and,
- will any external assistance be required and, if so, can it be assured from an appropriate development programme?

Such information as can be obtained on these points will assist in reaching a decision on whether or not a campaign approach would be appropriate, at whom it should be directed, by what means it should be carried out, how long it might last and whether it should be limited to a particular season of the year. A campaign aimed at action is unlikely to be successful if people are not aware of a problem, are not interested in it, or are likely to resist attempts to remedy it because these appear to conflict with strongly held views or customs. In such a case, a campaign aimed at general education on the topic would be the most suitable initial step.

10.3.2   Determining objectives

Consult widely with representatives of community groups, local leaders who have some knowledge or interest in the situation, local extension staff, subject-matter specialists and administrators, to determine the possible broad objectives of a campaign and then to define certain more specific objectives.

Community groups and local staff
must be closely involved in
determining campaign objectives

A broad statement of objectives should cover these main aspects:

- the type and amount of change required;
- who should make the change;
- how they should make it; and,
- over what period of time should it be made?

The type of change required might be in one or more of the following areas of knowledge or skill:

- awareness or understanding of the problem by the people;
- their technical knowledge or skills to tackle the problem;
- their attitudes, interests or values in the matter;
- what, if anything, the people think should be done about it;
- what they are willing to do about it; and,
- what they realistically can be expected do about it.

A campaign should first define what type of change is desired and then try to quantify what degree of change should be aimed for, e.g. what

percentage of the people should make a change or what area of land should be subject to change. Throughout all this discussion, however, it must be kept in mind that no matter how desirable the planners think the change to be, it is the people themselves who will, or will not, make it, and then only if they are satisfied that it will be to their benefit, and not materially offend their customs or beliefs. Rigid targets formulated before the public have been sufficiently involved have been the downfall of many attempts in the past to spread desirable ideas.

10.3.3   Planning phase

At this stage the campaign organisers must, in relation to the objectives they have selected:

- establish a formal committee or group with strong local representation to guide the preparation and execution of the campaign;
- define the message to be communicated;
- identify the target audience more precisely in terms of geographical area, age, sex, occupation, as relevant;
- select the most appropriate methods of communication, in relation to their availability, staff resources and cost;
- decide on the type and amount of material to be used;
- fix a time schedule for the various phases of the campaign;
- plan the type of feedback expected, and how it is to be used;
- prepare a budget for the campaign, identify the source of funds and evaluate the benefits in relation to the expected costs.

Any committee entrusted with the task of organising an extension campaign must either have very strong representation of the target population or some means of ensuring that their views are available and properly presented at all stages of decision making.

The message to be communicated is now frequently associated with a campaign slogan and a logo, with which the target group can identify. Though it is unrealistic to assume that a message of any great importance can be satisfactorily condensed into a few words, the use of the slogan and logo should be adopted to attract people to look, read or listen more, to explore the objectives of the campaign and what opportunities it offers to them.

The target audience must be identified clearly as their composition and geographical distribution will greatly affect the means of communication selected. The timing of the campaign will be affected both by the nature of the message and the target audience.

The type and amount of material to be used must inevitably be a compromise between what could be used, and what is affordable in the circumstances. In many cases the ultimate benefits of a successful extension campaign could be so great that a considerable investment would be justified, but in practice the current availability of resources often falls short of what is desired and great care must be exercised in planning their use.

It is essential to build into a campaign programme a method of monitoring its effect on the target population, and even on others not directly concerned but who, as taxpayers, may have strong views on its form and use. Those closely associated with the campaign are likely to have a favourable view of its progress and a more objective assessment by independent surveys or questionnaires should be sought. The monitoring activity should not be an end in itself but should lead to a critical review

of the activities as each phase is implemented to correct any defects and strengthen any favourable responses. This topic is dealt with further in Section 11.

At this stage it is appropriate to prepare a campaign guide covering all the proposed steps in the campaign, to be supplied, as required, to all involved in implementing the campaign.

10.3.4 Timing the campaign

The programme for implementing the campaign must be related to the way in which the target audience makes decisions and carries out activities related to the campaign topic. If the campaign is intended to perform the combined roles of creating awareness, followed by some positive action to overcome the problem highlighted, the awareness stage must be scheduled sufficiently early for the public to absorb the idea and discuss it amongst themselves before the effort switches to promoting the detailed steps they should take to overcome it. This is turn must allow people to make the necessary decisions and prepare to take action at the most appropriate season.

10.3.5 Preparing the material

The choice of media and the preparation of the material to be used should be undertaken sufficiently well in advance of launching the campaign to enable material to be pre-tested on groups similar to the main target group. The choice of media to be used will depend primarily on the type of message, but also on the resources, particularly the personnel, available to implement it. A general awareness and information campaign requiring the extensive use of mass media, the preparation of radio and TV broadcasts, press releases and feature articles, posters and pamphlets, it is likely to involve mainly the central organisation, in collaboration with appropriate media experts.

Material to be used in extension campaigns should be pre-tested on suitable persons or groups

If the objective is to translate ideas into action, local extension staff must be used to promote meetings, discussions, and demonstrations to involve the people and prepare them to make decisions. Staff numbers and available resources must be matched to the task required of them. This may require the preparation of training pamphlets, films or videos, and demonstration techniques to convey the methods in a suitably standardised manner. During the adoption stage, training may be required to enable local leaders to pass on the necessary skills to their communities. During this phase, more attention may have to be paid to localised publicity to motivate specific groups of people to adopt the recommended practices.

At all stages in the decision-making process the organising group must take fully into account the views of local staff and the community leaders who will ultimately have to implement the decisions in the field.

10.3.6   Training phase

To ensure the proper implementation of the campaign all staff who may be involved, even remotely with it, should be thoroughly briefed on the objectives, methods and scheduling of the effort. For those directly involved, proper training programmes must be devised and implemented to ensure that they have the necessary knowledge and operational skills to carry it out fully. Training should be continued throughout the campaign, as required, both to keep staff up-to-date with any changes in emphasis or detail and to maintain their interest and enthusiasm for the task.

Problems that may arise during training, particularly the training of volunteers, may suggest points at which methods should be modified before wide-scale use.

10.3.7   Production phase

During this phase:

- list all the items and services needed and the financial requirements of each; confirm that this falls within the agreed budget;
- prepare a schedule for obtaining and distributing any factual information required;
- confirm that any external assistance will be available on schedule, particularly personnel required;
- assign responsibilities to individuals; prepare an action plan indicating what activities are to be carried out within what time limits and nominate the person responsible;
- prepare a calendar and work-chart to monitor the progress of the activities;
- fix dates for checking and co-ordinating materials; and,
- define who is responsible for making technical and financial decisions and giving approval for acquiring materials and include this information in the action plan.

10.3.8   Implementation phase

This covers, in practice, four main stages: launch, build-up, climax and follow-through. Correct timing and duration is crucial to each of these stages and should be planned in advance. The performance should be carefully monitored and adjustments made by the organising group, if these appear to be necessary for success.

Launch

Steps required at this stage are:

- information and other materials to be distributed throughout the target area as necessary;
- communication outlets, i.e. press, radio and TV to be alerted and supplied with advance information;
- staff to be in post to carry out the initial tasks; and,
- a rally or major public function should be organised to launch the campaign with the maximum possible impact.

Build-up

Appropriate activities at this stage are:

- ensure that all communication channels operate smoothly to spread the campaign message to the target audience;
- try to obtain the maximum coverage of all speeches and central activities during the launching ceremonies;
- arrange launch activities by local leaders within the target area;
- introduce the local staff to the community;
- organise local meetings or demonstrations as appropriate and secure the widest possible distribution of any campaign literature or publicity materials;   and,
- arrange a steady flow of information to press, radio and TV to sustain interest in the campaign.

Climax

This phase should be scheduled to precede the period at which it is hoped people will take action to carry out the activities promoted by the campaign.

- direct attention and publicity to urging the people to take the action suggested by the campaign;
- aim for the maximum public participation in reaching decisions to adopt the recommended practice;
- make facilities available for people to see and, if necessary, practice the suggested activities;   and,
- obtain the maximum coverage for all positive suggestions and contributions.

Follow-through

Sustain the initial impetus by scheduling the following activities:

- arrange follow-up visits or meetings with groups who have adopted the recommended practice;
- provide any technical or material assistance promised;
- give maximum publicity to their successes;
- sustain the campaign activities on a limited scale in areas where people may adopt the practice the following season; and,
- continue any necessary support and encouragement to people or groups who have adopted the recommended practices.

10.4   Monitoring and evaluation

Monitoring and evaluation procedures for extension campaigns are discussed at length in Section 11. A major extension campaign will almost certainly warrant a formal continuous or periodic surveillance of its implementation to ensure that the activities are proceeding according to plan. This will lead to a better evaluation of the campaign to improve its effectiveness, relevance and impact. It will also help to design future campaigns to be more effective. People not directly responsible for the planning and implementation of the campaign will normally be involved in this process. A basis for their work can be the action plan for the campaign. At each stage the achievements or performance of each unit or person can be compared with the target set out in the plan. The adequacy of resources, personnel, finance and the suitability of the campaign message, slogan or logo can be assessed. Surveys can be used to assess the reaction of the

target group to the message. While it would be wrong to suggest that the organising committee should change course at every minor criticism, they should be alert to any significant trends in opinion and be ready to take action to modify the message or the targets if this is clearly necessary.

Extension goals

Objectives

Selection and development of
extension programme/campaign content

Selection of extension methods

Feedback

Development/selection of
extension materials

Implementation of
extension programms/campaign

Monitoring and evaluation
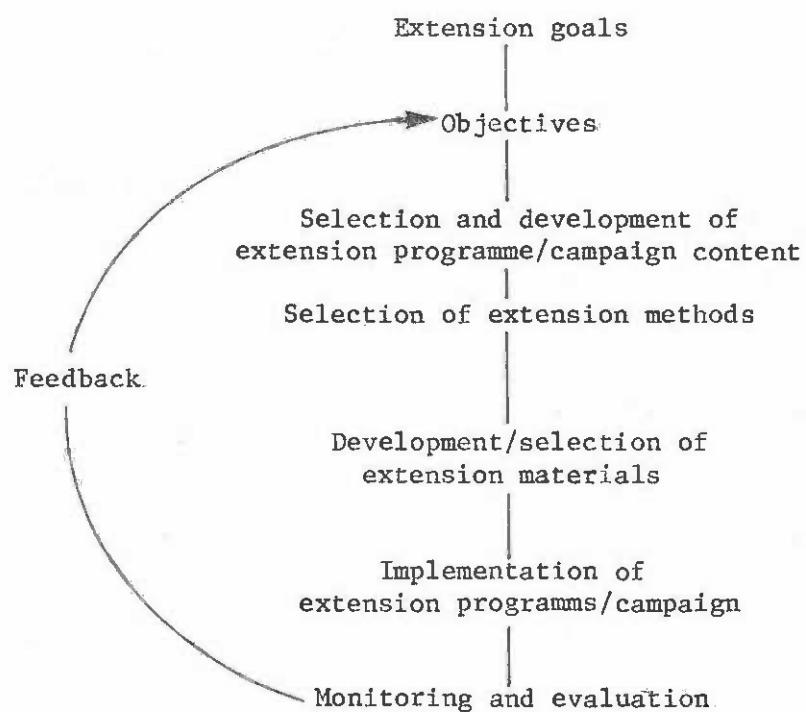
Figure 10.1   Stages in the development of extension campaigns.

11.   EXTENSION PROGRAMME MONITORING, EVALUATION AND FEEDBACK

11.1 General principles

Three essential features of a forestry extension programme are monitoring, evaluation and feedback.

Monitoring has been defined as a continuous or periodic surveillance over the implementation of a project to ensure that input deliveries, work schedules, targeted outputs and other required actions are proceeding according to plan. (1)

Evaluation is a systematic approach to assessing as objectively as possible the relevance, effectiveness and impact of a project in the context of the project activities and the needs of the people. Evaluation essentially analyses the rational and logic of the project (objective or design), reviews the implementation process (inputs, activities, outputs and implementation management) and the emerging results (output, effect, impact). It assesses, in the light of the foregoing, the validity and relevance of project objectives and design, and the project effectiveness and efficiency in achieving the intended results. (2)

Feedback can be defined as applying promptly and effectively information gathered by the monitoring or evaluation processes to promote the achievement of the project objectives, or to rectify factors impeding its achievement. It may also alter the emphasis or direction of the project activities where these are found to be out of line with the requirements of the situation or the wishes and needs of the people.

The principal functions of monitoring and evaluation are to enable the people and the staff involved in extension programmes to learn from the achievements and problems of each programme, in order to devise methods of planning and implementing subsequent programmes more effectively. The wider definition of evaluation given above, to a certain extent merges the activities of monitoring and evaluation into five major elements: operation, performance, effect, impact and context. These are dealt with comprehensively, mainly with reference to major extension and community forestry projects, in the FAO publication cited below (2). This section aims to deal with the problem at the level of minor project activities where the evaluation is essentially participatory, as it is presumed that the local community will already have been closely involved in both the preparation and implementation of the project.

Monitoring and evaluation are based on information gathered from the participants and intended benificaries of a project, at all levels. There is a need, therefore, to co-ordinate information gathering for these two functions to avoid overlap and waste of time of both staff and clients in answering repeated enquiries. There is a limit to the time, effort (and patience) they can devote to answering questions.

Monitoring should continue throughout the duration of a project and form an essential management process to measure and adjust performance against planned activity. The particular items to be monitored will differ

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(1) IFAD (1984). Guiding principles for the design and use of monitoring and evaluation in rural development projects/programmes. A panel on monitoring and evaluation for rural development. ACC Task Force on Rural Development. Rome.
(2) Monitoring and evaluation of participatory forestry projects. Forestry Paper No. 60. FAO, Rome, 1985.

in each project but these can be defined initially from the project document and subsequently from the annual or semi-annual plans of operations. Monitoring, if it is to be effective, should give attention both to sucesses and shortcomings. It is equally important to look critically at areas which have been successful, or even over-run targets, to identify factors which contributed to this, so that their importance in developing future programmes can be properly recognised. In the case of shortfalls in performance, it is necessary to follow these back to determine their underlying causes. Some of the specific questions which may have to be asked to elicit this information are dealt with in the following sections on evaluation procedures.

Evaluation procedures have recently focused much attention on the relevance of a project during, or even after, its implementation. This would suggest that insufficient attention may have been paid to evaluation of the project concept during the formulation and planning stages. In major projects, formal baseline surveys to determine the precise status of supply and demand in an area, as distinct from informal estimates, are necessary, followed by subsequent surveys to measure to what extent these needs have been met. For minor projects, the process of discussion implicit in the "bottom up" process of project development advocated by Compton should lead to a set of proposals much more closely aligned to the needs of the people. Though this will not eliminate the need for evaluation, either during or after the programme, if only to measure the value gained in relation to the effort expended, it should reduce the need for considerable changes in objectives during the life of a project unless external conditions on which decisions were made have altered considerably.

Evaluation should be an ongoing activity throughout all programmes, and should involve everyone concerned with the programme. It should look beyond the limited question of the extent to which a series of planned activities has been carried out, to examine the real relevance of the programme to the people and the area, its origins and development, its beneficiaries and how useful it has been to them. It should encourage a process of personal evaluation where both the people and staff consider at frequent intervals "what I hoped to do" against "what I did", and determine objectively why any targets or expectations were not fully achieved.

Evaluation must be applied to a whole programme, and not as has often happened in the past, to the performance of the field or operational staff. In particular, it should not be regarded as a form of staff assessment, a task which should be tackled in an entirely different way. Evaluation has in the past often provoked a negative reaction amongst programme administrators and field staff, as it has tended to concentrate on "what went wrong", rather than on balancing the achievements of the programme with any noted shortcomings. Determination of all the external circumstances or factors which may have prevented the full achievement of the objectives are an essential feature of evaluation.

The question of who should carry out evaluation is discussed in Forestry Paper 60, which notes the importance of collaboration of project staff and a specialised monitoring unit in this activity. More emphasis needs, perhaps, to be given to involving in this task local people who are both the main executors and intended beneficiaries of forestry extension projects. The suggestions on evaluation given below aim to involve the people and staff at both field and headquarters level in expressing their views on the performance and value of any project. Such a task may be "administered" by an independent monitoring and evaluation unit within a forestry organisation but the "evaluation" as such is what those concerned, particularly the people, think of it. The extent of the evaluation must depend on the scale of the project. Since the emphasis in this publication

has been on the process of working up from minor projects identified by people as of importance to them locally, the suggestions on monitoring and evaluation may appear to be much too exhaustive. They represent, however, a series of questions which, from experience, have been found to be important in the effective execution of projects, but which have not necessarily been extensively probed in evaluations in the past. The group carrying out the evaluation task can select, judiciously, a range of questions appropriate to the particular situation, which ensures that the persons concerned get a proper opportunity to express there views while not being harassed by irrelevant questions.

The process can be carried out in a number of ways but, for simplicity where minor projects are concerned, it can be considered in three phases:

- programme formulation and planning;
- programme implementation; and,
- post-programme evaluation.

11.2 Evaluation of programme formulation and planning

Some questions which should be asked during the formulation and planning phase of a programme, and particularly before it is approved for implementation, are suggested below.

Conception

- how did the proposal arise;
- who first suggested the activity;
- how did it develop before it was formally put forward as a programme;
- how closely were the local people involved;
- how did they make their views known;
- did it arise initially from felt needs or suggestions by the people, or in order to meet official work or expenditure targets?

Relevance

- is the programme relevant to local needs; what are the needs; how were these needs determined;
- how do they affect the present living conditions, markets, transport systems, etc. of the area;
- will the programme have any impact on related activities such as agriculture, animal husbandry, health or community development;
- are the proposals in keeping with local culture or social organisation;
- how do they fit into overall government planning, i.e. are they likely to gain and retain the support of the government;
- to what extent was the programme the outcome of a desire to utilise a grant or loan opportunity, to balance the work load over an area, or to develop a programme that would attract external support?

Feasibility

- what are the people's prior attitudes, knowledge, skills, and resources of energy, time, and land available for the programme;
- is there adequate provision in the programme for motivating

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and training local leaders and participants;
- are the resources of staff, funds and equipment of the assist-
  ing organisation adequate for the programme;
- have the edaphic and biotic requirements of the proposed act-
  ivity been matched to the local conditions;
- do the proposals comply with guidelines set up by any agencies
  which might offer material support?

Acceptance

- have the people, in prior discussion, indicated a willingness
  to participate actively and develop an organisation to take
  over full implementation of the activities at an appropriate
  time;
- has the programme been adequately discussed with, and accepted
  by, the local administration and other public or voluntary
  organisations which may be affected by it.

These questions are, in no way, intended to discourage initiative in
bringing forward proposals for forestry extension programmes. They should,
however, help to ensure that proposals are based on sound justifications
which have been closely examined.

11.3 Evaluation of programme implementation

It is suggested that the evaluation process should be based on
information drawn from three main sources, the participating public, the
field staff up to the district level and the central organisation, which may
include public or voluntary organisations concerned with, but not directly
involved in, implementation.

Some questions, which could usefully be asked of such groups at regular
intervals during the programme, are suggested below.

The public

- how much do they know about the programme overall;
- does it affect only those directly participating, or can
  others expect to benefit in some ways;
- how much is known about the achievements to date;
- how much is known about current work or plans for the immed-
  iate future;
- how much effort by the people has the programme involved;
- how much have they contributed in cash or resources;
- do the results to date justify this;
- have they received all the necessary training, information,
  or material support promised;
- can the participants see how this will help them in future;
- has a local planning or co-operation group been established;
- has the group had any effect on the implementation of the
  programme;
- have any official or voluntary aid funds been well used;
- how would they like to see the programme develop;
- how do other organisations e.g. agriculture, animal husbandry,
  water supplies, public health and community development view
  the project?

Field staff

- physical targets: plants produced, established, areas covered, other works undertaken, success rates after 6 months, 12 months, 2 years; state of general maintenance; do results indicate any need for change in techniques or policy?

- financial targets: actual costs of each phase of the operation in relation to planned costs; reasons for variations, local performance or external factors, e.g. increased cost of fuel etc.; can positive features be further developed or applied elsewhere; can negative features be rectified by local action?

- communication support: has a satisfactory flow of communications, vertically and horizontally, been established; is this relevant to other activities; do reports or requests from all levels receive prompt attention; are publicity materials readily available; have any been produced specifically for this programme or target group; is the help of mobile units available when necessary; are communication systems, e.g. postal services, telephones, radios, effective; have any useful improvisations been devised to overcome problems?

- staff: have both local or aid staff been made available as planned; are they of the right mix of age, sex, experience, and qualifications; were they properly trained or briefed in their responsibilities before arrival; has any programme slippage resulted from late availability of staff; can it be measured and directly related to this factor; have any extraneous activities, e.g. participation in political campaigns or election arrangements, reduced staff availability; are salary scales and allowances appropriate to their tasks; are housing, transport and domestic arrangments satisfactory; have staff a proper understanding of the culture and values of the participants; have they had adequate support from the public and the central level of the organisation to carry out their task?

- equipment and supplies: what items are currently available; have the types selected proved satisfactory; have they been made available as planned; are spares and replacements available; were field staff involved in the selection and procurement procedures; can any modifications of procedures be suggested; were delivery procedures and dates notified to field staff in advance and suitably monitored; were clearance and distribution procedures satisfactory; can local products be substituted in future?

- transport: what items are currently available; were the needs realistically assessed; are the means of transport available suitable to the task; are any vehicles provided of the correct type and capacity; has suitable provision been made for the costs of operation and maintenance; are adequate records being maintained of their operation; are these being used effectively to plan improvements in staff mobility and economy?

- construction: has any construction been carried out specifically for the programme; have the local people been

involved in any way; do the local staff and the people consider it adequate; have the long-term use and maintenance of the facilities been considered; were the needs realistically assessed; was adequate financial provision made; have the users had any influence on design or location of the buildings; was construction efficient and within cost estimates; were sufficient funds provided for furnishing, equipment and maintenance; could any slippage in programme performance be attributed to delays in the provision of buildings; could their designs be recommended, or modified, for use in other areas?

- general factors: did the weather follow the normal pattern; was the local financial and political situation stable and conducive to good progress; were there any unexpected shortages, such as fuel; did the staff enjoy good relations and co-operation with that of other public and voluntary organisations in the area?

Central level

- physical targets: is there a full understanding of what has been planned; a knowledge of the results to date; has the success rate after 6 or 12 months been considered; are the results considered satisfactory in relation to the resources committed; have any differences in performance, positive or negative, been sufficiently explained; has anything been learned from this; should the targets be revised upwards or downwards; what would be the implications in staff, resources or morale of such a change?

- financial targets: how much is known about the cost of each stage of the operation; does this agree with the field staff's assessment of the costs; have adequate explanations of cost over- or under-runs been obtained; have these been related to availability of staff, equipment or transport; is this information applicable to other programmes; are any changes of financial targets desirable; can this be done by internal adjustments, or do they need reference to central sources of funds or donors?

- communication support: are all involved at the central level fully aware of the philosophy of extension practices; have they fully utilised the resources available in the media, or the central information services, to support the programme; has any information material been produced, or planned, specifically for the programme; have they been fully supplied with information by the participants and field staff; have they identified and publicised the positive features; have they offered suggestions, or taken any necessary action, to overcome negative aspects; have they tried to utilise communication channels to the best advantage?

- staff: how many staff are engaged, full or part time, on the programme; are staff at the central level fully aware of the field staff levels vs. the planned staffing at this time; if there is any under-staffing, can they offer any explanation; are the problems being tackled; have they assessed the implications of this on the physical performance or cost of the programme; is there a plan to meet future staff

requirements; is the training programme adequate to the need; have they asked for, or received, any comments or suggestions from field staff on their working or living conditions; can they, or do they think it necessary to, insulate field staff against other calls on their time, e.g. political activities or assisting with elections; are staff matters the responsibility of one person, or a group?

- equipment and supplies: are equipment requests processed as normal activities or given special treatment; who has the main influence on specifications, field staff, central staff, or an external agency; who makes the final decisions; how long does processing a request take; are the field staff fully aware of this time scale; are local availability of spares, training and technical back-up taken into account, as well as price, in procurement decisions; are procurement procedures formalised and individually monitored; are field staff kept informed of progress, particularly of any possible delay in delivery; is there a procedure for collecting users' opinions on the suitability of equipment supplied; has this influenced further orders; has any assessment been made of the effects of delays in delivery on overall performance of the programme?

- transport: what means of transport have been provided to date; have all requests been in accordance with the programme and at the correct time; were field staff informed of the reasons for any delays in approval or delivery; how were decisions on types and models made; by individuals, according to an overall purchasing programme, or in accordance with donor wishes; have any comments been asked for, and received, on suitability and performance, servicing or spares; have operating and maintenance programmes been adhered to and been kept within the budget; has an assessment of the effect of transport availability on overall performance of the programme been made?

- administrative support: do the programme activities have a significant effect on the work-load at central level; are the staff able to meet all reasonable requests promptly; are they making use of all available resources?

- construction: what construction has been undertaken to date; how can any constuction carried out under the programme facilitate further extension work in the area; has there been any local invlovement in the provision of accommodation; have any problems arisen due to unforseen requirements or insufficient financial provision; if so, how did this situation arise; has it affected programme implementation; can any slippage be overcome; are any additional resources needed to overcome this; can they be provided by reallocation of existing resources or by additional resources?

- general factors: have any general factors e.g. the weather had an effect on implementation; are they sufficiently important to affect the achievement of physical or financial targets; have any adjustments been made or are planned because of these; have they appeared in the reports from the central level to government or other donor organisations?.

- local organisation: what steps have been taken to establish a local organisation to continue the programme activities; is it an elected or an "ad hoc" body; is it the most suitable form of organisation for the purpose; is it receiving support and co-operation from the field staff; is any training of its members in administration or forest technology required; can this be provided under the programme; if not, how can it be arranged?

- relations with other organisations: how do other development organisations view the programme; have they been kept informed of its progress; have they noted any opportunities for co-operation; have any such suggestions been followed up?

The above lists involve asking somewhat similar questions at different levels in the organisation. Where this is done, the responses may indicate diifferent perceptions of the same situation or event at different levels of staff. This may indicate the need for better communications to explain certain situations to those concerned. An evaluation report based on this procedure must balance the views of the groups and individuals who contributed to it.

11.4 Post-programme evaluation

The function of post-programme evaluation is primarily to get an overall view of the achievements of the programme and the benefits it has generated in relation to the total resources employed. This, in a modest way, incorporates the impact and context evaluations desirable in major projects. An important objective is to identify positive factors which are seen to be of benefit to the people and which can contribute to the success of other programmes. In the nature of things some activities may have failed to achieve their targets. It should not be necessary, however, in a post-programme evaluation to detail, step by step, all the problems identified and corrected during the planning and implementation stages. It may be relevant, however, to comment on how successful this process of self-evaluation has been, and the extent to which sources other than those immediately involved in the programme activities have contributed to the evaluation.

The organisation and composition of evaluation groups are discussed in Section 11.5 below. The process of evaluation must, however, draw on the experience of those who have been involved in the project, in a constructive way, and identify any features or procedures which could enhance programme performances and avoid unnecessary expense. Some questions on which a post-programme evaluation may be based are suggested below.

The public

- what has been achieved in material terms, e.g. in trees or areas planted, water supplies or grazing areas improved, etc.;
- have any measurable benefits come from it so far, e.g. a supply of poles or fuelwood, fruits, improved grass, etc.;
- do the benefits now, or expected in future, meet the needs of the people;
- was the effort required justified by the benefits available;
- have the people acquired sufficient skills to continue a similar programme on their own;
- do they feel their views or suggestions were fully considered by the extension organisation, particularly during earlier evaluations;

- do they feel they were able to participate fully in decision-making;
- has the programme affected their traditional way of life or working practices;
- is the degree of change acceptable;
- is the co-operating group willing to continue similar extension work;
- are they willing to introduce others to improved practices;
- can they generate enough resources from their present programme to implement additional work;
- can they now mobilise any additional resources for development;
- if additional support is required, can they now secure this from voluntary agencies or direct from government without the intervention of the extension organisation;
- have any buildings, equipment or transport used during the programme been transferred to their control;
- if not, can they continue to operate successfully without this support;
- have they the necessary organisation, skills and funds to maintain and operate all the items transferred to them;
- have they any proposals to replace these items as they become unserviceable;
- did they feel the funds supplied by government or other sources, well used;
- did they form good working relations with the extension staff;
- would they welcome their advice or assistance in future?

Field staff

- physical targets: were the targets selected for the programme relevant to the needs of the people; how are they benefitting from their achievements; will the benefits increase or decrease in future; how long can they be expected to last; are they sufficient to alleviate the needs on which the targets were based; will they generate resources or income to support further programmes; are there any additional resources they could devote to extension programmes in future?

- financial targets: was the target achieved within the estimated cost; were any factors identified which could increase the local contribution to the cost or reduce support expenditure in future; did any unforeseen circumstances arise which affected costs favourably or unfavourably; did both the public and the field staff receive sufficient information on financial matters throughout the programme; did they respond to this information; were the financial achievements sufficiently well publicised?

- communication support: has a good communication system been established between the central level, field level and the people; will it continue to function after the programme ends; can it be used for any other purpose or programme; did the programme lead to better communication systems with similar government or voluntary organisations; is there now a better understanding of each other's contribution to development; can any of the communication skills or materials be used for other purposes; are the local leaders and people more able to communicate effectively; were the communication systems or equipment used suitable and adequate for the particular

situation?

- staff: how have the staff increased their skills in extension
  work during the programme; have they gained a better insight
  into the needs or ways of thinking of the people; have they
  communicated this knowledge to others; did they feel they
  received all the training or advice they needed; would they be
  willing to continue working with this group; if they started a
  similar programme with a different group, what would they like
  to do better; did they feel fairly treated in respect of hours
  and conditions of work, housing, transport etc.; which one
  aspect, if changed, would increase their efficiency or job-
  satisfaction, at least cost; how many staff members served
  during the programme; what percentage turn-over was there; why
  did staff leave or were replaced; is service with the
  programme considered to have improved or harmed their career
  prospects?

- equipment and supplies: did the quantities, suitability and
  arrival times agree with the programme planning; was it the
  right material at the right time; have any favourable or
  unfavourable observations been publicised on the equipment or
  its use; could any economies have been made in any of the
  items; did the people learn to value and care for equipment
  made available to them; could the programme have been
  accomplished without the equipment; what effect would it have
  had on staff efficiency, local co-operation and overall
  performance.

- transport: have local transport facilities improved during the
  programme period, e.g. better roads, more buses, more vehicles
  available for hire; will this affect future planning; what was
  the transport mainly used for, movement of materials or
  personnel; can any alternative method of moving materials now
  be employed; to what extent did transport (or the lack of it)
  affect work out-put of field staff; how would any increased
  out-put relate to the cost of providing additional transport;
  were the means of transport provided suitable for the task;
  were they sufficiently robust for field work; did their use
  cause any comment (or envy) amongst the local people or staff
  in other organisations; were they transferred to other
  programmes, or to the organising group, in good condition?

- construction: were the buildings available, or supplied,
  suitable in construction, facilities, and location for their
  purpose; could the local people construct similar, or
  adequate, replacement buildings if necessary; were they well
  maintained throughout; did they present a favourable image of
  the programme; could they be adapted to other uses when no
  longer required, (e.g. an office become a clinic); did the
  local people regard them as essential to the programme or as a
  luxury?

- general factors: were problems of weather, distance,
  communications, health and educational facilities for families
  taken into account sufficiently in planning and allocating
  staff for the programme?

Central level

- <u>physical targets</u>: what was accomplished during the programme in terms of trees or areas planted, grazing areas improved, etc.; how does the cost compare with similar work done by direct labour; what additional benefits did the people get in training, new skills and technology, organisation and accounting, decision-making, confidence; are the direct or indirect benefits of most value at this stage; can the group be expected to continue or expand their activities with minimal help?

- <u>financial targets</u>: were estimates of costs realistic; have any improved methods of cost estimating or control emerged from this programme; is the system suitable for adoption by other local groups; are the participants sufficiently conscious of the importance of cost factors in decision-making; has any build-up of financial resources, by the people, occurred?

- <u>communication support</u>: are staff at central level now more aware of local aspirations and work practices; has the local culture and technology been an aid or a barrier to implementation; can anything be learned from this in formulating and implementing new programmes; were the local people regularly informed why certain decisions had to be made; were their views considered to be helpful to planning or decision-making at central level; was the programme considered to be fully in keeping with government policy; did the achievements receive appropriate recognition from high officials; were there any spill-over benefits to other organisations; will the communication systems or equipment established be of permanent value to extension activities; have any useful links been established with other government or voluntary organisations, research or educational facilities; have the people now a better understanding of government procedures and requirements in formulating extension programmes?

- <u>staff</u>: has the overall staff position been strengthened in either numbers or skills as a result of the programme; have useful linkages been established with educational institutes; have any improved procedures of staff management emerged from the programme; has any degree of specialisation been seen to be required; can this be incorporated into the staff structure; can the work-load at central level be quantified to determine staff requirements for similar new programmes; can any field supervision tasks be handed over to local people on a part-time or honorarium basis?

- <u>equipment and supplies</u>: are any items of equipment acquired for the programme of long-term benefit to the extension organisation, or to the co-operating group; can they be re-deployed to other programmes; did the procurement, clearance, receipt and issuing procedures meet the requirements of the programme; have any useful new materials or sources of supply been identified; have staff skills in handling procurements and issues been improved; has property control and usage been satisfactory; has any useful information been gathered on the service life, spares and servicing requirements or operating costs of equipment; has

this been made available to all users?

- construction: what construction was carried out under the programme; could the requirements have been met in any other way e.g. by temporary or portable accommodation; have any new designs or construction techniques been developed during the programme; have any useful information on costs been obtained; can standard plans and costings be applied to other areas; would an expansion of the programme create accommodation problems at central level?

- general factors: were exceptional factors noted which could have had a markedly favourable or unfavourable influence on the programme?

11.5 Organisation of evaluation activities

11.5.1 Evaluation of programme formulation and planning

This must normally be organised at the central level as it is essential that any programme which is supported by a public organisation is in keeping with government policies and guidelines for planning. It is important, however, that these guidelines should not be set so rigidly that they stifle initiative from the field staff or the community. It is from this level that many valuable innovations are likely to arise.

Evaluation must, however, involve the field staff and community leaders, on whom responsibility for initiating and carrying out the work fall. Discussion should play a large part in the process to allow the staff and community members to explain or defend the suggestions they have made. Their "defence" of the proposals will involve them in thinking deeply about the objectives and methods they have suggested and may evoke a stronger commitment to success.

Staff from the central level involved at this stage should preferably have had field experience in the area in question, or be prepared to spend some time getting to know the area and the people before attempting to evaluate the proposals. Voluntary agencies who may be giving support to the programme will normally expect to be involved at this stage. It is important to be quite clear about their objectives or aspirations in supporting the programme. These may not always be identical to those of the community. Any modifications of the programme which the evaluating group may require must be handled sensitively and fully discussed with the participating group or they may lose enthusiasm for a programme they do not feel they have determined for themselves.

11.5.2. Evaluation of programme implementation

Generally this should be done at district level and involve field staff, the community and representatives of any voluntary agencies supporting the programme as well as representatives of the central level and supporting agencies. In cases where the programme activities have implications for other work, such as agriculture or animal husbandry, it is necessary to involve representatives of these organisations in the discussions. The process, however, requires considerable assistance, and access to data, from staff of the central level and the structure of the evaluation group must be devised to achieve this. It is desirable for the evaluation group to be headed by a representative from the central level, or by a senior staff member from another area to monitor the validity of the information and the views on which the evaluation is based.

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Evaluation may be combined at first with a monitoring procedure and may take place at intervals of six months initially, the monitoring activity being extended to one year or longer, as a programme settles down. As far as practicable an agreed report on the programme should be prepared, but this should not preclude any individual or group attaching a minority or supplementary report if they consider the main report does not adequately represent their views or that it can only be fully understood in the light of the additional information. In particular, field discussions and a close review of results in the field should be carried out in relation to the data recorded in reports and returns.

An essential feature of programme implementation evaluation is to ensure that appropriate action is taken on it. In some cases programme slippages may be attributed to the inability of the central level to meet targets for staff, release of funds, or the supply of equipment or transport. Such details may tend to be glossed over at the central level, but it is essential that a measure be maintained of the effects on field performance on such problems. Conversely, any improvisations to overcome these difficulties should be noted and publicised as these may, in time, lead to less dependence on the central level for such support.

11.5.3   Post-programme evaluation

If a constructive programme of implementation evaluation has been carried out, there should be little need for an in-depth post-programme evaluation. Most of the information on which this can be based will already be available and action will have been taken on it. A post-programme evaluation would then consist of collating the existing information, summarising the achievements and benefits in relation to the costs and highlighting useful developments or areas in which improved procedures could be adopted. It is important not to overlook the effect of existing administrative procedures on field activities and to suggest areas in which flexibility is required to meet the need for quick responses to changing situations in the field, e.g. the need to bring forward, or delay, operations in response to weather conditions.

Where a formal in-depth evaluation is required the work should be given due importance. By its nature it may require some people who have not been directly involved in the programme, to secure an independent view of its achievements. For preference, these should currently be involved in some related field of work and have a good knowledge and understanding both of the area and the people who participated in the programme. The evaluators should allow themselves sufficient time to acquaint themselves fully with the background of the programme as well as reviewing in detail the actual achievements and the circumstances in which they were secured. Most countries can now find within their own personnel people of sufficient standing and experience in administration or academic fields to undertake this work.

Where evaluation by one or more people from outside the country is proposed a careful cost/benefit assessment of the proposed evaluation should be made. Because of the high costs of remuneration and travel, and the work commitments of such persons, an external group are frequently required to conduct the evaluation within a very limited time. Because of protocol and formal meetings with ministers and other officials, they can seldom spend an adequate period in the field. In the selection of external evaluators, it is also important to ensure that their views and recommendations are not unduly coloured by their experiences in other areas which are not directly related to the current situation.

11.6 Feedback

No matter how carefully monitoring and evaluation activities are carried out, they are of no value unless their contents and recommendations are carefully considered, and where appropriate, implemented by the people and the staff concerned. This involves full, frank and friendly discussions, and a willingness to listen as well as to talk, by all taking part.

Extension is for the benefit of the people, and improvements suggested in the system of supporting it must take this fully into account. The people may not yet be sufficiently experienced to adopt a neat, formal system of administration while the staffs of government administrations, or even voluntary agencies, may not be attuned to the informal way in which many local decisions are made and successfully implemented.

Monitoring and evaluation, at all stages, must be widely discussed with all the partners concerned with a view to developing the positive features identified in the programme and finding a solution to the problems which have arisen. In most cases some degree of compromise is essential to ensure that the benefits of the programme are not lost in recriminations about things which may not have proved satisfactory. In general, the outcome of any monitoring or evaluation exercise should be a brief, clear statement of what action has been agreed. The success in implementing this statement could form the starting point for any subsequent evaluation.

12. ORGANISING AN EXTENSION TRAINING PROGRAMME

Training forms a major element in the establishment and implementation of a forestry extension programme. Training, in these circumstances, may, for convenience, be considered under two main headings:

- formal staff education and training in extension; and,
- informal extension information and training programmes.

There must, however, be close co-ordination between all forms and levels of training to ensure that they serve common objectives and seek to reach these by compatible means. Responsibility for ensuring this co-ordination should rest on a senior staff member at the central level of the forestry authority who should have the responsibility for establishing effective channels of consultation and co-operation between the various organisations involved in extension eduction and training. This section seeks to bring together material covered in the earlier sections of this publication to develop suitable training programmes within this context.

12.1 Staff education and training programmes

A paper presented to the Fourteenth Session of the FAO Advisory Committee on Forestry Education in September 1986 suggested appropriate curricula and training programmes for staff engaged in forestry extension at the graduate, technical and vocational levels.

It was proposed that professional forestry staff engaged in extension services should undertake a course lasting one academic year in subjects related specifically to forestry extension activities. The programme should be located at an academic institution which would award a recognised higher qualification or degree to successful candidates. The fields of study would cover areas of communications, professional studies and research, and planning and organisation of extension activities. Considerable emphasis would be placed on viewing forestry extension as one aspect of an overall rural development programme and of integrating forestry programmes into the established patterns of rural life in an area. The staffing and academic requirements of the course would be determined by the institution undertaking the programme.

Technical level education envisaged a programme of three months' study for staff who have completed a two year post-secondary course in forestry technology and who have, for preference, some subsequent field experience. The training would be located at an agricultural or forestry college providing post-secondary education in forestry and would involve extensive field and practical training components. Considerable emphasis would be placed on understanding the joint roles of forestry, agriculture, animal husbandry, water supplies, health and education in rural development and in integrating forestry extension activities into overall rural development programmes. The staffing and academic requirements in this case would also be determined by the college or institution organising the course.

The vocational training programme could run at a number of locations simultaneously, if staff requirements or environmental conditions in the area justified it. The training would focus on skills of communication and demonstration to produce extension assistants who could, in addition to their responsibilities for promoting extension programmes, provide training in extension techniques to large numbers of people participating in these, or in other development programmes where a forestry component would prove of value. These vocational training programmes would be organised and, in general, be staffed by the forestry extension organisation which would have the

responsibility for ensuring satisfactory standards of teaching and assessment at the various centres. Where such programmes are run at centres whose primary function is some other form or level of training, a suggested management structure for organising a programme is given in Section 12.6 below.

12.2 Public information and training programmes

Public information programmes are required at the central level to acquaint government ministers and officials, senior representatives of other public organisations and of voluntary agencies, academics, cultural and religious leaders and leaders of business organisations with the philosophy, requirements, and proposals of the forestry extension organisation, in order to secure an understanding at the higher levels of government and the community, of such a programme. An important objective is to secure a two-way flow of information, which will promote the understanding of, and support by, influential persons for the objectives and methods of forestry extension, while at the same time giving the forestry extension organisation access to the views of this strata of the public on their objectives and performance.

At the operational level, (district level and below), the public information and training pogrammes tend to place more emphasis on the training aspects of the work. Information plays an important role at the awareness and interest phases of an extension programme while a decision to implement a specific programme may generate a considerable need for training local voluntary leaders to motivate and instruct their communities to carry out the agreed tasks.

A basic requirement of all public information and training programmes is a clear determination of the objectives of each particular activity. The objectives should be expressed in specific terms, such as a change in knowledge, attitudes or skills relevant to the topic. To achieve this it is desirable to link audiences more closely to the specific objectives of a programme. While a general lecture on forestry extension requirements or proposals to an audience of government officials may appear to have been successful, it may be of little practical value unless it has established how members of the audience are expected to show their practical support for the proposals and how their subsequent actions can be measured. An instructional programme for religious leaders, linking extension concepts to the tenets of their faiths, with its success measured by how many favourable pronouncements they make on it in future, might be effective in that area.

12.3 Nature of training activities

Some appropriate forms of public information and training programmes for use in forestry extension activities are as follows.

Conferences

Conferences frequently involve the participation of representatives of groups outside the immediate organisation promoting the conference. Their function may be to promote a pooling of information or ideas and to develop a common stand on a particular topic. They consist of one or more sessions at which new ideas or information are presented in a stimulating way for subsequent discussion by the participants. In some cases, they may involve field visits to illustrate particular points. The participants may, in some cases, form a number of working parties to study particular aspects of the topic in greater detail and subsequently report to the full conference. The outcome is normally an agreed report by the participants. Conferences are a

very attractive form of informational or educational activity and are very popular especially where they involve travel and some entertainment provided by the hosts. They tend to give the organising body a high profile and wide exposure to press and TV coverage. It is doubtful, however, if the test of measurable results is always strictly applied to conferences, or if it were, if it would suggest a high return on the effort and expense involved. This, however, should not be taken as a reason for dismissing conferences as unimportant, but a justification for organising them more effectively and with closer attention to the desired outcome and subsequent implementation of the recommendations.

Training meetings

Training meetings can be organised at many different levels in an information or training programme. They normally require the participation of persons in activities leading to the acquisition of knowledge and skills. At the upper levels of an extension organisation, they can be used to present the organisation's views on a particular problem or promote a suitable line of approach to solving it. At the operational level they may concentrate on the development of skills in organisation and leadership amongst technical staff and voluntary leaders. They are usually of short duration, though to transfer a range of useful skills, a series of training meetings may be required.

Short courses

These may last from a few days to about three weeks and are designed to give more in-depth training and adequate practical experience to participants on some important technical matters. These may cover topics such as establishing forest nurseries or simple techniques of contouring land before planting. The participants, however, may mainly be confined to employees of agencies involved in development activities as individual farmers and herd owners may not be able to absent themselves from their normal activities for such lengthy periods, even though their living and travel expenses are met.

Workshops

These are a series of meetings organised around specific problem areas identified as important by those participating in the workshop. While they can be applied to matters of a purely technical nature they may also be used for analysing social or administrative problems, and making use of contributions from other participants, to devise solutions to them. They may deal with problems such as motivation, communication, programme planning and financial responsibility. They may also be used to explore different attitudes or approaches to development in a number of participating organisations, in order to establish a better understanding of each other's position and, if possible, reconcile existing differences. They should have some specific objective, though this may be modified during the discussion as differing points of view emerge.

Field trips

These have already been discussed in detail in Sections 8.11 and 8.12. Their function is to provide participants with opportunities to observe and study at first hand specific problems or achievements relevant to a particular extension or developmental situation. Again, they must have some specific objective. An informative and entertaining tour is of little value unless the information gained is not only recorded and disseminated to others but applied in some effective way.

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Exchange visits

These are carefully organised visits between participants in different fields of work. They may also include short exchanges of work responsibilities. The main outcome should be a higher degree of understanding and co-operation between the individuals and organisations involved. They can normally only be implemented when a certain degree of understanding and co-operation already exists between the different organisations involved in the exchange.

12.4 Selection of training methods

Training programmes frequently call for a combination of a number of training situations and the employment of various training methods.

The choice of methods of training may be based on the following assumptions:

- participants bring to the training situation their past knowledge and work experience which can be a significant contribution to the learning process both of themselves and of others;
- people learn most effectively in situations which encourage active participation in the learning process;
- no one method of learning can be singled out as the best; normally a combination of methods is most likely to bring about desired behavioural changes; and,
- the more senses involved in the learning task, the more effective the learning is likely to be.

The choice of the particular method or methods to be used will depend on what specifically is to be learned, as defined in the training objectives, on the particular circumstances prevailing at the time, and on the resources at the disposal of the staff. While learning planting techniques by practical demonstration may be most efficient in the planting season, the use of slide/tape presentations, videos or cine films may play a larger part if the instruction must be done during the dry season. In every situation, however, opportunities for active participation will greatly enhance the possibility of effective learning.

12.4.1 The lecture method

This term, "lecture", is, at least in business matters, tending to fall out of use. A lecture, unsupported by visual aids of any sort, is not highly effective and is now seldom employed. The term "presentation" is now more widely used for situations in which information given orally, by diagrams, charts, and illustrations is used to convey a series of ideas or suggestions to stimulate desired actions. However, the basic principles of preparing and presenting such a presentation still apply. The use of additional aids will simply enhance the performance.

A lecture, so enhanced, is still a useful method of giving background information to a large audience. If a suitable situation for its use does arise, the following points should make it as effective as circumstances permit.

A good lecture consists of two phases: preparation and presentation.

Preparation

It takes considerably longer to prepare a lecture than it does to deliver it, even if the lecturer knows the subject thoroughly. This leads to the unfortunate tendency on the part of some speakers to use the same material repeatedly without regard to the particular circumstances or the audience.

Some important points to consider are:

Audience

- find out all there is to be known about the audience; their age and educational levels; their knowledge of the topic and their particular interests in it.

Objective

- determine the nature and extent of the knowledge the audience is expected to acquire as a result of the lecture and the general impressions you want them to take away.

Specific points

- consider the specific points of knowledge you think are necessary to establish the objectives; limit these to 4 or 5 points as an audience may not be able to comprehend and retain many important ideas in one session.

Material

- gather available material to support the points you wish to establish; classify it into "must know", "should know" and "could know" categories, and select the material to present within the time available in the correct order of importance.

AV Aids

- review the type and range of AV aids which are appropriate to use in relation to the topic and the location of the lecture and the specific points these aids can be used to reinforce in the presentation.

Organise the available material into a structure to support the major points of the lecture. Review and regroup this as necessary until it appears to form a well organised flow of information. Devise a suitable introduction to gain the attention of the audience and a short conclusion to summarise the main points of the talk.

Presentation

A lecturer must adjust his manner of presentation to the subject matter, the audience and the location. The tone and pitch of the voice must suit the topic, whether it requires carefully argued statements on particular points or a more vigorous, general exposition of a theme. The number and type of the audience will also determine whether the speaker can use a well modulated, almost conversational, tone or a loud, forceful, perhaps almost strident, approach. The location of the lecture, the acoustics of the building, the time of day, the temperature and humidity will all influence the presentation of the material. The pace of presentation will depend both

on the size of the audience and on their familiarity with the topic. Good eye contact and the avoidance of distracting mannerisms by the presenter are vital. The presentation of any projected or static visual aids must be practised to ensure they complement the flow of information and not disrupt it. Clues·from the audience in the form of restlessness or signs of boredom should alert a speaker either to vary his presentation or, preferably, to wind-up his talk as soon as practicable.

The decision whether or not to use a public address system is important. Too often this is a status symbol for presenters, rather than an aid to understanding. A poor quality p.a. system may in fact distort sound and make a talk harder to follow. A speaker who can hold the attention of an audience by good voice projection and make himself clear by careful diction and phasing of his words presents a much more impressive figure than someone whose natural intonations, if any, are lost in electronic amplification.

Questions after the presentation provide an opportunity to assess how much interest it has aroused and enable the speaker to clear up any points which may not have been fully understood by the audience. Questions for which a speaker has no immediate answer can be handled by throwing them open to the audience to discuss or, if they are on a more precise point, by promising the questioner a written answer as soon as possible.

12.4.2   Group discussion methods

It is important for extension staff to acquire skills in the use of the discussion technique. A number of other training methods depend on a person's ability to lead discussions. The technique should, however, be used with discretion. It will only produce effective conclusions if the participants already have sufficient knowledge or experience of a topic to make a constructive contribution to the discussion.

Preparations for discussions

- select a suitable topic for discussion;
- prepare an outline of the main points that are likely to be raised and allocate a period of time, provisionally, to each;
- consider any additional problems or objections which might be raised and how these might possibly be dealt with during the discussion.

Conduct of a discussion

To open a discussion try to tie the topic up with some matter which has previously been discussed or with a matter of some relevance to the group members.

The role of the discussion leader is to assist the group members to put forward, and examine critically, points of view which will serve to achieve the objective of the discussion. It is not to limit or control the views expressed or the flow of discussion for any other reasons. However, it is important to ensure that the main line of discussion does not stray from the major topic, as may sometimes happen when one member, who may have strongly held views on a particular topic, tends to divert the discussion to his or her main interest. A leader can guide a discussion back to its main theme by the skilful use of questions.

Points raised during a discussion can be recorded on a flipchart, a chalkboard, or on cards on a feltboard, which will allow them to be re-arranged and developed into a possible final conclusion. Irrelevant

material can in this way be identified and set aside during the discussion. All members should be encouraged to participate as fully as possible to ensure a sense of involvement in the outcome. Sufficient control of the discussion should be exercised by the leader to ensure that all the important points are properly considered and sufficient time allowed for review and conclusions. All the points expressed should be summarised at the end, including opposing viewpoints, and the group should be encouraged or guided to move towards a conclusion based on a consensus, rather than on a vote.

Group discussions are suitable for exploring matters of policy or of tactics in pursuing extension objectives and may lead to adopting lines of advance which have already taken possible objections fully into consideration.

Case-study method

The case-study method is important in training staff to handle administrative problems which may arise in the course of their work. It can play an important role in in-service training for staff moving from technical or clerical to administrative functions. It serves to provide experience in problem analysis and decision making. Before asking a group to work on a case it is necessary to "set the scene" by establishing some assumptions, such as the structure of the organisation, staffing, resources, capacity to expand, policy constraints, etc.

A case can then be presented as a set of facts concerning tasks, funds, staff or resources requiring the best available solution within the limits imposed. It is useful to introduce a case study before the end of a day so the group members can think it over and, if necessary, discuss it amongst themselves in their free time. The case presented should be closely related to the members' normal work and care must be taken to establish the relevance of the discussions and conclusions to the members' real-life situation. In extension activities, problems concerning the allocation of equipment, transport, staff or funds are relevant and could provide suitable points for study. During the actual discussion of the case the procedures referred to in discussion leading should apply to the group.

Role-playing techniques

Role-playing techniques are an extension of the case-study method, where the students act out specific roles in a situation. The technique is applicable to operational level staff of an extension organisation who require to improve their skills in dealing with the public.

Role-playing is useful for:

- developing the participants' communication skills;
- building staff members' confidence in dealing with real-life situations; and,
- enabling leaders to give advice and, where necessary, some criticism, based on the handling of a simulated situation.

Two types of approach can be used, structured or spontaneous role-playing. In structured role-playing, the scene is set by the leader who may, in fact, provide a script or at least an outline of what each character should contribute. This procedure is helpful in studying different patterns of leadership, communication of information or interpretion of a report. In spontaneous role-playing, the participants act out roles, which are selected for them, in a simple situation without advance planning.

The general procedure for initiating a role-playing session is:

- describe the situation, usually in brief notes for each part-
icipant; these may instruct one or more members to behave in a
"difficult" or unco-operative way to determine the reaction of
others to this situation;
- allow time for the players to think how they are to respond to
the information given and the role assigned to them;
- set the process in operation but wind it up if it appears to
be degenerating into a genuine dispute situation amongst
participants; and,
- review the performance of the participants; evaluate their
strong and weak points, their reaction to conflict situations,
their skill and tact in handling difficult situations.

The members of the group not actively participating in role-playing may
be told in confidence of the role each player is expected to take and asked
to observe closely how they handle the situation so they can participate in
the subsequent discussion of the performance.

Management games

Management games are useful in motivating the trainees by injecting
variety into the sessions. An instructor should build up a number of
situations, all based more or less on real events, on which problems can be
set, to be solved, in this case, by the combined activities of a number of
participants each taking the part of a member of a management team, e.g.
production manager, financial controller, personnel offficer, stores
controller, etc. The participants should be set certain limits of resources
and time within which they must act in order to produce a solution. The game
becomes an exercise in team-work and co-operation, adjusting individual
"ideal" solutions to the requirements or limitations of other members of the
team.

12.5 Steps in organising a training programme

12.5.1 Determining training needs

Before resources are committed to training, a clear need for a training
programme must be established. Two questions which must be asked are:

- who is to be trained; and,
- for what purpose are they to be trained?

In practice, it is often necessary to answer the second question first
in order to determine the training objectives, the subject-matter content
and, to some extent, the methods to be employed. The question of who is to
be trained is not always one over which the training organisation can have
much influence but they should, at least, be given detailed information on
the background and experience of the members of each course sufficiently well
in advance to modify both objectives and standard training programmes to meet
their particular needs.

The development of a training programme requires a careful and
systematic analysis and evaluation of the areas of study to be included in
the programme. These needs may be expressed by the employing organisation,
or by potential employers of the participants. In some cases, they may be
expressed by the general public who have to rely on the persons trained for
assistance in developmental matters. In many circumstances, they may be
determined, to a large extent, by the participants' felt needs or the views

of the people with whom the trainees must co-operate in their work situations. A knowledge of the job requirements, the standard of performance required and the degree of supervision or assistance available in the work situation is also important. Some system of priorities must be devised in listing subject-matter areas to be included in the programme and determining the emphasis to be given to each of them.

The development of an effective training programme requires the co-operation of both planners and participants in determining objectives and programme content, if the participants are to devote their full interest and energies to the programme.

12.5.2   Determining the objectives of training

Training objectives must be stated specifically in terms of what a participant should be able to do as a result of the training. The more specific the statement of objectives, the easier it is to identify the steps needed to achieve these objectives and to evaluate how successfully they have been achieved.

12.5.3   Determining the training content

The training content must be directly related to the objectives which have been determined for the programme. The following steps may serve as a guide to determining the content of a programme:

- consider what change in knowledge, attitudes or skills is expected of each participant as a result of the training activity;
- list the important aspects that make up the subject-matter content;
- given certain facilities, resources and a time frame, select the most important topics that should be included in the programme;
- set up a priority list for topics for study;
- break down major topics into more specific components in terms of behavioural changes desired;   and,
- for each specific component make a list of the knowledge or skills a participant should develop.

12.5.4   Developing a final programme and teaching plan

A well organised training programme consists of the following:

- a statement of the objectives of the training activity;
- a statement of the coverage of the subject matter to be presented;
- lists of teaching aids, equipment and other materials required;
- identification of the persons who are to be involved in the training;
- selection of the methods of training;
- a brief explanation of the manner in which the group is to participate in each training activity;
- a list of the learning activities to be assigned to the participants;   and,
- provision for evaluation of the participants before the start of training, during training, after training and a follow-up of performance after each participant has continued his normal activities for some time.

12.5.5   Scheduling training activities

It is necessary to determine the extent of the training course. The number, nature, frequency, time and duration of the sessions need to be specified. There is often, in the case of relatively short courses, a tendency to try to crowd a great deal into a short period without proper regard for the students' ability to absorb all the material or acquire the necessary skills. The preparation of the schedule must take into account local conditions, such as daily variations in weather, particularly where practical activities are involved. The time allotted for activities must be realistic and must provide appropriate time for moving between training areas, break periods, private study or practice and leisure. The participants and others involved must be fully informed of the schedule. They should be given an opportunity to comment on it and their views should be taken into account in implementing it, as far as circumstances permit.

12.5.6   Organising for work

This stage draws attention to the organisational problems in implementing a training programme. Depending on the nature and size of the training group, a number of functions or services may be performed by a single person, a training management committee, or by a number of committees. When several committees are involved, one person must always be designated as co-ordinator and have authority to ensure that all the arrangements made are consistent. This topic is discussed in detail in Section 12.6 below.

12.5.7   Implementing the programme

During the implementation of the training programme, defects or weaknesses may appear in the training plan. Such defects should be corrected as quickly as possible. This can be done if a suitably detailed written programme, or Scheme of Work, covering each session of the course, has been prepared in advance and if reasonable allocations of time have been made for unforseen circumstances.

12.5.8   Evaluation and follow-up

Provision should be made for evaluation of the participants during and after training. An initial evaluation may be administered at the start of training to determine the level of knowledge, skills or attitudes of the persons. This must be handled very carefully as it can prove somewhat disturbing to participants to be faced with a series of questions to which they may have very few answers.

Personal evaluation should be carried out throughout the course and the participants informed individually of the results to motivate them in their work and to give the instructors a measure of the achievement of their objectives.

The participants should be asked to comment on the training sessions or activities at frequent intervals. Suggestions or comments received from them should, as far as practicable, be used in making revisions or adjustments to the training programme. At the end of the course the participants should be evaluated in terms of the specific objectives of the training and their participation in it and they should be informed of the results of the evaluation.

A programme for following-up the participants in their normal activities should be made to determine if what they have learned is relevant to their actual jobs. This is a vital step to obtaining information on which

to base decisions for improving future training programmes.

12.6 Management of a training programme

According to the staff available, and the general pattern of working adopted, the planning and implementation of training activities may be assigned to individuals or to various working committees at a training centre. In general, a committee should only be entrusted with the work where some obvious advantages can be seen in sharing the responsibilities for decision making and that these advantages compensate for the additional staff burdens and possible delays of committee sessions and decisions.

Where committees are used, their tasks should be clearly defined and assigned to members who are both willing and competent to undertake them. Care must be exercised to ensure that there is no overlapping of functions between committees. A central contact person should be assigned to provide leadership and co-ordination of the work of the committees.

The number and organisation of working committees depends, amongst other things, on the size of the training group, the kind of training programme and activities to be undertaken, and whether the training organisation has any prior experience of running such a programme. Experience will establish a pattern of organisation in which only a limited number of new decisions will have to be taken on each repetition of the programme. Not all the committees mentioned below may be necessary but, wherever working committees are organised, it is important to keep in mind that each member should feel he or she has an important role to play as a member of a team. Each member should be well acquainted with the objectives of the training programme and the various activities planned. Moreover, committee members should be willing to accept the responsibilities involved and to carry them out, even at some inconvenience to themselves. The important link between these committees is an acceptable leader who may be referred to as coordinator or director, or some other title which reflects his central role in the programme.

The following is an example of a list of working committees and their designated functions, suggested for one- to four-week training programmes involving about 30 participants.

12.6.1 Planning, steering and management committee

The leader of this committee will normally be designated as overall co-ordinator of the training programme and is likely to be an experienced staff member of the training organisation. This committee should have the following functions:

- to draw up plans and programmes for training, in consultation with the instructors concerned, within the guidelines laid down by the head of the training organisation;
- to formulate general procedural plans and guidelines for training and make these known to both staff and participants;
- to maintain liaison with the other working committees;
- to plan the sessions each day and brief guest staff and re-source persons on the activities of the day;
- to provide the equipment needed for the various sessions; and,
- to arrange for custodial services for meeting rooms and training areas.

12.6.2 Accommodation, food and social committee

While there must be a basic framework of staff on this committee, it is necessary that there should also be some representation from the participants so that their views can influence the decisions of the committee. The functions of this committee should be:

- to arrange the housing of the participants;
- to arrange with the catering organisation for meals for the participants in the institute or in the field, as required;
- to arrange refreshments for participants during breaks; and,
- to plan and implement a programme of social activities.

12.6.3 Registration, evaluation and information committee

The functions of this committee should be:

- to arrange for receiving and registering the participants in the programme;
- to keep records of any daily participants or guest staff;
- to design and administer procedures for evaluation of the daily training sessions or activities, particularly where guest lecturers or demonstrators are involved;
- to tabulate and interpret evaluation data and prepare a report on the results;
- to set-up and maintain an information centre and bulletin board services for the duration of the course; and,
- to arrange for photographic and press and TV coverage of the training activities as appropriate.

12.6.4 Travel arrangements, transport and tours committee

The functions of this committee should be:

- to maintain contact with travel agencies, and bus companies or train services, in connection with the arrival and departure of participants and guest staff;
- to assist participants and guest staff in confirming travel arragements;
- to arrange transport of participants and guest staff to and from the nearest town or travel centre to the training institution;
- to arrange transport services for the training activities for the duration of the programme; and,
- to arrange tours and field trips as required by the training programme.

12.6.5 Library committee

In some institutions the libararian and his staff may carry out all the functions of this committee. If one is formed, its duties should be:

- to prepare a list of relevant references such as books, journals, charts, and maps for use by the participants and guest staff;
- to arrange for making these references, copies or reprints available to participants for the duration of the course; and,
- to assist participants and guest staff to make the fullest use of the library services and learning resources during the course.

12.6.6 Documentation and proceedings committee

The requirement for this committee will depend on the administrative structure within the training organisation. Where it does function its responsibilities should be:

- to prepare and distribute adequate supplies of paper and writing materials for the use of participants and guest staff;
- to collate all the training materials prepared for the course and arrange for their distribution, as required;
- to supply reports or information to groups in session at any time during the training, as required;
- to record the proceedings of sessions of working groups;
- to prepare daily summaries of proceedings and be responsible for their reproduction and distribution; and,
- to collate, edit and prepare a final report on the training programme.

12.6.7 Finance committee

The relation of this committee with the finance officer or accountant primarily responsible for the disbursement of funds should be carefully worked out so that there is no weakening of this person's formal responsibilities. Where a committee is formed its functions should be:

- to allocate funds necessary for the operation of the training programme in accordance with an approved budget;
- to arrange for disbursements to be made at appropriate times; and,
- to prepare a financial report on the training programme as the basis for drafting future budgets.

12.7 Estimating training costs

Organising and conducting an effective training programme takes time, effort and money. Unfortunately, money is not always available in the amounts organisers would like. It is, therefore, important that those responsible for a training programme 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 programme 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 programme 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,
     honoraria and other staff expenses.

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

Item	Cost

Transport

Number 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 kilometre for each vehicle used.
Include overtime or any special payments for drivers.

Training fees

Where fees may be charged by an associated training organisation
providing facilities or instruction for part of the course provision must be
made for these on the basis,

Number of participants x fees charged per participant.

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 programme. 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.

Other expenses

Make provision for exceptional expenses such as special items of
equipment or supplies used in the training or special clothing or safety
equipment requirements.

<u>Miscellaneous</u>

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.

12.8 Checklist for organising and conducting a training programme

These notes will be of value mainly to those required to organise a training programme for the first time. If detailed records are maintained of each programme implemented, and notes kept of observations made by participants and staff on the course content, teaching methods, programme of work and general living conditions, a much more specific checklist for a particular organisation can be evolved. Initially, however, the following outline may be of value.

12.8.1 Purposes of training

Determine the training needs in relation to the organisation's programme and the job requirements of the persons to be trained.

Consider the timeliness of the programme both in relation to the overall needs of the organisation and to the seasonal relevance of any topic.

Define the specific objectives of the training. (The more specific this statement is, the more specific the statement of intended behavioural changes can be.)

Define the changes expected in terms of knowledge, attitudes or skills.

Consider the most appropriate location for the training in relation to the specific objectives.

12.8.2 Selection of participants

Collect details of their background, i.e. their age, sex, previous level of training or education, work experience, special interests or characteristics.

Consider what advance information they require about the training in order to prepare themselves properly; arrange to supply this at an appropriate time.

Verify that the participants understand the objectives of the training programme and accept the requirements in terms of commitment to the hours and nature of the work, etc.

Verify that they have been informed how the training will be of value to them.

Consider if the programme appears to meet fully the needs of the participants.

12.8.3 Content of the training programme

Define the needs of training and then select the content of the programme to meet these needs.

Arrange the content and materials, in clear progressive units, so they will facilitate effective teaching and learning.

12.8.4 Choice of instructors

Select instructors who are likely to prove the most effective teachers in the particular circumstances, (e.g. experienced technicians may be more suited to teaching at certain levels or in certain topics than highly qualified graduates).

Brief the instructors well in advance on the objectives of the training and on the participants, so they can plan appropriate teaching materials and methods.

The instructors should meet and discuss the overall teaching strategy and ensure that their particular classes fit into the total programme.

12.8.5 Training methods

Review the training methods available and choose the one most likely to achieve the objectives of the training.

List the behavioural changes desired as a result of the training and consider it the methods selected are likely to achieve this, e.g.

- to provide knowledge through lectures, assigned readings and field trips;
- to influence attitudes through group discussions, case studies, demonstrations;
- to teach a skill by demonstrations and supervised practice.

The choice must be made in the light of practicability, economy, availability of resources and the ability of the instructors to use the method effectively.

12.8.6. Detailed arrangements

Verify that adequate arrangements for housing and feeding the participants been made, and that all the necessary materials are available, or are on order.

Decide where and when the training sessions will be held and the areas and facilities required for practical exercises.

Prepare realistic and appropriate time schedules and follow them as closely as practicable. Allow reasonable time for private study, or private practice where skills are involved.

Make the schedule known to all participants and staff as early as possible.

Ensure the meeting places are appropriate to the topic and as well arranged and comfortable as circumstances allow.

Ensure the meeting places are properly prepared and that all the instructional facilities and equipment are available.

Arrange for appropriate record keeping, recognition of the participants at the end of the training and any other necessary activities related to the training programme.

Arrange field trips well in advance; make the necessary contacts with the staff and visit the area to check things to be seen and the times required for the visit.

Arrange for the use of library facilities to avoid clashing with other ongoing programmes.

Look out for details which may have been overlooked in the early stages of planning, and correct these as soon as noted.

Keep good, clear records of all the arrangements made, and the reasons for decisions, to improve planning procedures in future.

12.8.7   Provisions for evaluation during and after training

If appropriate, carry out an evaluation of the participants to determine the level of knowledge, attitudes and skills at the commencement of the training.

Find out the reactions of the participants to the sessions or activities of the course as early as possible. Use a post-meeting reaction sheet to collect data, and discuss any problems raised by the students.

Encourage suggestions or comments from the participants and instructors. Make revisions or adjustments in the training programme, if necessary, as it proceeds. Always record the reasons for these changes. They may be applicable to only one particular group of participants.

Evaluate the training in relation to the specific objectives of training. (Collect objective evidence to determine to what extent the behavioural changes specified for the training have been achieved.)

Let the participants and the instructors know the results of the evaluation. Consider whether this should be done privately or publicly.

12.8.8   Post-training evaluation

Use a questionnaire, or personal interviews, to find out the applicability of what the participants have learned to the requirements of the work they have to do.

Collect observations on which to base decisions for improving future training programmes.

12.8.9   Feedback

Arrange detailed discussions amongst the training and administrative staff of all the information gathered on the execution of the training programme and the comments by the

participants both during its progress and on its relevance and value to them in their subsequent activities. Incorporate the lessons learned into future programmes.

12.8.10 Follow-up

Contact participants six or twelve months after the programme ends and collect their views on the relevance and value of the topics covered to their actual duties. Take account of these observations in planning future programmes.

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