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AGRICULTURAL EXTENSION TRAINING

A Course Manual for Extension Training Programs

by

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The bicycle is a common means of traveling from headquarters to the farm in Kenya. The above scene is typical throughout East Africa where extensive markets may travel up to twenty miles to meet farmers.

INTRODUCTION

The experience gained in Kenya by the USAID Extension group in helping to train local staff in the use of recognized extension methods and techniques is summarized in this handbook. The approaches and materials for the two training programs outlined here have been adapted from a number of sources; Agency for International Development, United States Department of Agriculture, National Projection Agricultural Communications, and The Central Regional Project at Ilongo. The key word is adapted, for it is the rare subject content or material that can be directly introduced into a local program.

It is the intention of the authors of this handbook only to suggest that the approaches outlined in this handbook were adapted for and tried in the training of Kenya Extension staff. They have been successful in that situation.

A survey of conditions for extension training was the first step. Many of the situations described in the survey are found in most developing countries, but an understanding of specific local conditions becomes necessary before adaptable recommendations can be made. It is quite useless to outline a course of action from the central office before the rural people and their problems have been studied. The agricultural methods being used, the crops being grown, and the marketing problems are only a few of the factors which require this kind of study.

The survey in Kenya revealed the need for the introduction to the Ministry of Agriculture of a program of extension methods and techniques direct to the whole farm family including rural youth and home extension. Although these two latter areas are integral parts of any agricultural extension program, staff training in them has been designed to be carried out separately by individual technicians. This separation in the training program allows for broader exploration of these specialized subjects for field operations, staff personnel would be trained for a complete family-directed extension program.

Materials, handouts, visual aids and the content for the initial training sessions have been adapted to meet the situation as the survey of needs had suggested. A conscious attempt has been made to keep all the material relative to the background experience of the trainees. In all cases, direct participation in discussions and workshops are integral parts of training sessions.

This handbook, then, is a compilation of the contents and materials of one series of agricultural extension training sessions in a developing society. It is not suggested that they are the only avenue to extension training. Rather, it is hoped that this handbook will provide some ideas and approaches that may be adaptable to other trainers in similar situations.

The content of this handbook is arranged in the two phases of training that have been successfully operated in Kenya, plus a description of the material designed to explain program planning to agriculture officers. In each case the main sections of the syllabus have been used as handouts for trainees, and may be reproduced or adapted for class use. The main sections are followed by a series of suggestions to the teacher for conducting class sessions in agricultural extension training. The appendix contains the description and instructions for a number of games and other exercises that may help clarify points in the sessions and provide variety to the classroom situation.

A. EXTENSION TRAINING

Phase I

A. EXTENSION TRAINING - PHASE I

The first phase of extension training in Kenya was designed to introduce the basic concepts of method demonstrations, communicating with people, and the preparation and use of simple visual aids. Over views of the rural youth and home extension programs are included in the first phase to make trainees aware of the extension program as a family directed program.

While the sample course outline which follows is for a five-day program, trainers in Kenya have found that more time may be required for review and detailed discussion on the ideas presented, either with the whole group or with individual trainees. In general, however, the five day program seems to be the optimum time both in terms of economic attendance of trainees away from the daily operations and the amount of information retained.

SAMPLE PROGRAM FOR PHASE I EXTENSION TRAINING

1st day	Registration and Introductions	1/2 hr.
	Principles of Agriculture Extension (lecture)	1 hr.
	Communicating with others (lecture)	1 1/2 hrs.
	Method Demonstrations (lecture)	1 1/2 hrs.
	Hand Lettering (lecture)	1/2 hr.
2nd day	Which Visual For Me? (lecture)	1/2 hr.
	Adapting Illustrations for Visual Aids (lecture)	1/2 hr.
	Group Assignments for Method Demonstrations (groups)	1 hr.
	Method Demonstration - (lecture) "Making a Rope Halter"	1 1/2 hrs.
	Development of Group Plans for a Method Demonstration (groups)	2 hrs.
3rd day	Continue Demonstration Plans and Preparation (groups)	1 hr.
	Use of Handouts - Demonstration of the Gelatine Duplicator	1 hr.
	Completion of Plans Visuals, and Handouts (groups)	1 1/2 hrs.
	Presentation and Appraisal of Demonstration (individual groups)	2 hrs.
4th day	Presentation of Demonstrations (continued)	1 1/2 hrs.
	Polish up Your Plans (groups)	
	Home Extension Program (lecture)	1 hr.
	Demonstration Check Chart (lecture)	1/2 hr.
	The Farm Visit (lecture)	1 hr.
5th day	Rural Youth Program (lecture)	2 hrs.
	Summary and Evaluation	1 1/2 hrs.

THE PRINCIPLES OF AGRICULTURAL EXTENSION

What is Extension?

Extension in agriculture is impossible to define in a short concise phrase or sentence. An attempt to define it properly involves a lengthy explanation of several principles. Some say it is a philosophy involving a type of education. Others say it is: People working together to learn to solve their own problems. It is both of these and much more. Another definition: Agricultural extension is a system of education, extending beyond the classrooms of schools to the individual on the farm, and is available to every member of the family. It is a two-way method of taking proven practices to farmers and at the same time, sorting out the farmer's problems, and bringing them back to research people for solution. In turn, the solutions developed by research are returned to the farmer.

In some developing countries the evolution of agricultural extension came about very slowly. The picture of extension in the United States today represents a wide contrast to the picture fifty years ago when it had its beginning. Extension has kept pace with the times or it would not exist today. It passed through many stages while growing up. In the beginning, the biggest task of the extension worker was to win the confidence of the farmer. The extension workers of this country today are faced with a similar situation. To win the confidence of your farmers you must change an attitude that exists as the result of past law enforcement actions carried on by the Department of Agriculture. In all countries it was necessary in the beginning to convince farmers that extension had something of value to offer farmers. It was necessary to demonstrate to them that scientific farming has a practical place on the farm. When some of the more progressive farmers became convinced, this opened the door for the extension worker and made it possible for him to extend his efforts to others. It has been known for many years that a respected farmer can convince others to accept new ideas much more easily than can an extension worker. This is a fact worth noting.

To be successful, extension must start where the farmers are and gradually build them up to a level of higher standards of achievement. This has been true of every country where extension is successful. When farmers saw their neighbours making progress as the result of the assistance received from extension workers, it opened their eyes. Once they were convinced, they convinced others. The fact that large numbers of farmers attend your demonstrations is evidence that you have built their confidence in you. This has been the pattern throughout the world and is taking place in Kenya today.

From what has been said here, we can conclude that extension is a change in culture. Today, in countries where extension is advanced, the farmer seeks the assistance of the extension worker. This is quite a contrast to the attitude of years past.

We have discussed extension in terms of some of its broader aspects. There are several specifics which can be best described as the Principles of Agricultural Extension. An analogy will help to clarify their significance.

There are many barriers to establishing extension in any country. It is much like trying to cross a deep and swift river where there is no bridge. The river represents barriers to progress. The unenlightened farmer cannot cross the river of

barriers unless the extension worker helps him to bridge the gap. There are numerous barriers, but the three foremost are ignorance, poverty and disease. They do not exist separately, but are inter-dependent and found together in a society.

Agriculture extension is the best hope on which to build the bridge over the barriers to progress. Successful extension depends on several well established principles. We can call these principles planks for the bridge over the barriers.

1. The first plank for the bridge is A GRASS ROOTS APPROACH. This means that extension workers should start with farmers where they are.

As extension workers you have had special training to equip you for helping the unenlightened farmer. This training can become a handicap if you do not learn to put it to use properly. When you can talk to the farmer in terms related to his own experience and at a level which he understands you can then expect him to accept new ideas. If you speak to him in terms of your training you will confuse him. Approach him at his own level - The Grass Roots Level.

2. COOPERATION is the basis for existence of an extension service. The second plank for the "bridge" is cooperation. Through cooperative effort people can decide what they want and what they need. The extension service must cooperate to help satisfy these needs.

3. Agricultural extension is a system of voluntary education. VOLUNTARY EDUCATION is the next plank for the "bridge". As extension workers you believe you know what is best for the farmer. Unless you know and understand the farmer's interests, you are not equipped to understand his needs. He only needs what he is convinced that he wants. Your business is to help him recognize his needs.

4. Most jobs require a few tools with which to work. Several tools exist that are known as EXTENSION TOOLS. Some of them are:

- a. Pamphlets and handouts - for people who read
- b. Radio programs - for people who have radios.
- c. Meetings - for those able to attend.
- d. Demonstrations - for those who can attend.
- e. Home visits - where special assistance is needed.

5. A necessary plank is the USE OF LOCAL LEADERS. No country will ever be able to afford a sufficient number of extension workers to meet its full need. As extension workers, you will never be able to visit each individual farmer. Much can be accomplished through the use of local leaders. Local leaders may often get more ideas accepted than the extension worker can by approaching them individually. Local leaders who have accepted improved practices extend them to others.

6. The use of trained AGRICULTURAL SPECIALISTS is the next plank for the bridge over the barriers. No man can be a specialist in every field. Specialists pass their findings on to the farmers through the extension worker.

Farmers send their problems back to the specialists through the extension worker. You, as the extension worker are the middle man.

7. **SATISFACTION** is the plank in the bridge which promotes extension. When a farmer receives satisfaction as the result of the extension worker's assistance he seeks further assistance. This promotes the growth of the extension service as well as that of the extension worker. The farmer expects no salary when helping other farmers; he takes pride in showing them his accomplishments, thus causing them to seek your assistance. In this respect, extension is a voluntary service.
8. The whole family must cross the bridge of barriers to better living. **EXTENSION IS FAMILY DIRECTED**. Youth clubs and home extension are as important in your program as the men farmers. The leaders of tomorrow are the youth of today. Young people learn more easily than older seasoned farmers. The role of women in the farm is clear to everyone. To neglect the youth or the women would be tragedy. Extension must be directed to the family as a unit. We call this a balanced extension program.
9. Extension is **APPLIED SCIENCE** in a democracy. Applied agricultural science is a democratic process which works two ways. Problems are taken to scientists for solution. The solutions come back to the farmer through you. The whole idea of extension is based on the fact that scientific farming has better, quicker, easier and more profitable methods of doing the job than the old ideas which you are trying to change.
10. The final plank in the "bridge" is that of **CONTINUAL EVALUATION**. To know where we are, we must know where we have been. To know where we are going, we must know how to get there. Continual evaluation is the map or chart by which we direct ourselves. Progress is measured by study. Effectiveness is measured by the change made in people. Results are the basis for improvement. Evaluation is the process of making these determinations.

We have represented the principles of extension as being planks in a bridge over the river barring the way to progress. With these principles in use we can bridge the gap to enable the farmers to achieve a better living. This process is one which builds people. Your job is to build people by helping them to learn to solve their own problems. You have the training and the tools are available for your use. Put them to work and bridge the gap.

Presentation Notes for the Principles of Agricultural Extension

Using a flannelgraph, a bridge can be layed out over the River of Ignorance, Poverty and Disease. Each principle of agricultural extension is a plank in the bridge. On the starting side a family is waiting to cross the river. On the opposite side is a depiction of Better Living. This build-up has proved effective in getting and holding audience interest.

Each plank should be supported by an incident related to audience experience. It should be one which clarifies the meaning of each individual plank. For example, when explaining the "grass roots approach" ask the trainees if they were taught

long division before they learned simple addition and subtraction. The answer is obviously 'no'. Proceed to explain that the approach to farmers is equally as impossible if you do not start with the farmers where they are. It would be unwise to talk of chemical names for fertilizers to farmers when they are being introduced to them, since the very nature of these chemicals is probably a complete mystery to them.

The explanation given above is an example of the detail needed to develop the background for each principle to be explained. The question technique is useful in the development of this story. For example, a particular local situation lends itself to good use. Local situations are understood by the trainees.

In the past, extension as such was operated in Kenya as a regulatory process. The question is asked of a trainee: Under which situation are you most likely to succeed with the farmer?

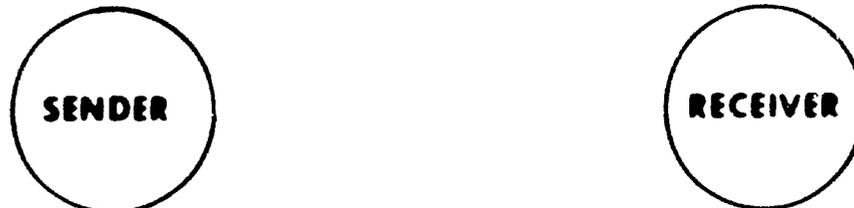
1. When he asks you how to spray his cattle for ticks?
2. When you tell him he must do so?

The visual for this exercise is quite easy to develop by using flannel strips for cross members of the bridge. Strips of flannel-backed paper large enough to contain the lettering for each of the principles are made to appear as logs or planks. The end can be grained. A thatched roofed hut is shown with a family in the foreground approaching the bridge. They cannot cross the river until all the planks are laid. Effective visuals multiply the effectiveness of the talk by building lasting impressions.

COMMUNICATING WITH OTHERS

The dictionary offers many definitions for the word communications. Basically, the word means sharing or common. In this discussion, we can think of communications as the sharing of experiences or information.

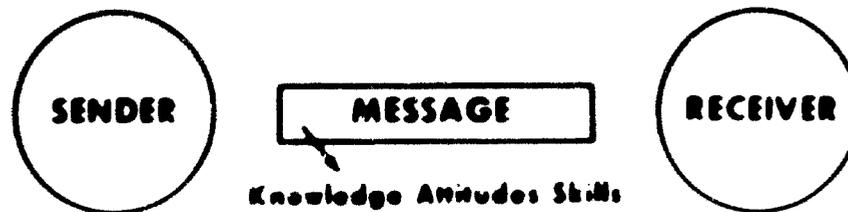
Obviously, at least two people must be involved in order for communications to take place. At any one instant, one of these persons (or parties) acts as the source, or sender, while the other is the receiver, or target.



Given these two factors, there is no communication until there is a message to communicate. This may be information (knowledge), or an attitude, or a skill.

Examples: Knowledge - hybrid maize yields bigger harvests.

Attitude - this country should produce enough food for all its people.



Still needed before communication can occur is a channel to carry the message. This is the medium or vehicle which bears the message. The most common channels are the voice, gestures, writing and illustrations.



Even though all of the ingredients are present for communication, the process may not be effective. To illustrate, let us consider an eskimo who wishes to describe an igloo to an Australian aborigine.

We have a sender and a receiver. The message is the description of an igloo. The channel is the eskimo's voice. Will communication take place? Will it be effective? Will the aborigine understand what the eskimo is trying to explain?

The vernacular difference presents an almost insurmountable barrier to communications. Therefore, the code or language must be mutually understood for effective communication. But the code embraces more than just words themselves. If the eskimo and the aborigine had a language in common, the eskimo would probably have difficulty in conveying his idea if he used only words. He would need to talk about snow and ice - things which the aborigine would probably not understand because he had never seen them. They were not included in his past experience. Therefore, the limits of past experience limit the ability of both the sender and the receiver to communicate.

Even in the same language, communication breaks down because one word may have several different meanings. Some common causes of poor communication resulting in misunderstanding are:

Inattention: lack of interest, distraction

Vocabulary differences: borers, aphids, beetles, spiders = *insects*.*

Poor pronunciation: "sixty" vs "sixteen".

Poor articulation: inability to express one's thoughts in words.

Plural meanings: "point" has dozens of meanings.

Associations: Meanings attached because of past experience.

*Common Swahili term for insects.

In view of the many obstacles imposed it is evident that the human voice, used alone, is not completely adequate for effective communication, particularly when new skills are to be communicated. To be more certain that the intended message is received it may be necessary to: -

Repeat the message in different words.

Use examples

Use drawings or photographs

Try to place oneself in the position of the receiver.

Ask questions

Give personal guidance.

Look for feed-back.

Communication is a two-way process

When the receiver reacts to the message of the sender, he automatically gives a message back. If he answers by voice or gestures, he then becomes the sender of a message, and the first source becomes the receiver.



Without this two-way activity, the sender is not certain that he has communicated. The response or feed-back may be vocal or it may be a smile, a yawn, or wild gestures. Each type of response gives the sender an idea of how effectively he has communicated. Often a complete lack of response is valuable because it may indicate that no communication has occurred. The teacher should heed the "feed-back" and encourage it and adjust his teaching methods accordingly. One of the chief limitations of radio as a direct teaching medium is its one-way message. The speaker gets no direct feed-back from the audience, -- consequently he cannot evaluate his effectiveness; nor can the audience ask questions or ask for repetition.

Yet another consideration in presenting a message is the Treatment, or how the idea is given to the receiver.

These methods may involve:

Reward - The prospect of benefit if the message is complied with.

Peril - The prospect of ill fortune if the message is not complied with.

Threat - A promise of legal action or physical force if the message is not complied with.

Rivalry - Challenging the receiver to equal or better the performance of someone else.

Threat - Betwitting the attitude or ability of the receiver.

Loyalty - Calling upon his pride in his country, his tribe, his community or other groups.

Sympathy - Taking advantage of his feeling for someone in an unfortunate situation.

Exploiting a crisis - Acting during a period when emotions are aroused over a catastrophe or near catastrophe.

The treatment to be used for a message must be carefully determined by the sender according to his audience, the urgency of the message, the type of reaction desired, and many other factors. One of the above treatments, the threat, is not consistent with the extension approach; others should be used only in moderation. Reward and peril are probably the most applicable, although loyalty is often useful (the spirit of Baraboo).

The complete diagram of the communications process is as follows:



If one finds that his communication is not achieving the desired result, he can often find the breakdown by examining the schematic diagram.

- Was there an audience?
- Was the message clear?
 - Was the proper channel used? (Words may be inadequate)
 - Was the treatment appropriate?
 - Was there feed-back? What did it indicate?

Extension workers are not interested in one-way communication. Unless feedback is encouraged and heeded, there can be no proper evaluation of the communication process.

Notes for "Communicating with Others"

Two methods of presenting this subject have been used. In the first, flannelboard strips were used and attached in the same order as appears on the handout. In the second method the entire model was presented with an overhead acetate overlay.

THE USE OF THE METHOD DEMONSTRATION AS A TEACHING DEVICE

Principles of learning as applied to the method demonstration.

A method demonstration is an organized system of teaching people how to do a practice or skill. It has been used in many countries since extension first came into existence. The basic principle of the use of this method of teaching people is that the people are taught a skill, one step at a time. It has long been known that people learn more, retain more and learn faster if the information being taught is presented in definite, clear-cut steps, where each single step advances the learner one stage nearer to the completion of the skill.

The sense of hearing

The method demonstration requires a teacher and a learner. This requires a teacher who understands how people learn. An understanding of how the senses are employed in learning a skill is basic for the ability to teach. The sense of hearing plays a very useful and important role in learning, but it can easily be pointed out that learning certain skills can take place without the use of this sense. A deaf person can be taught to do most tasks except those requiring the use of the ear to do the job. People have been taught rather complicated skills where the teacher and the learner had no common language ability. Thus the sense of hearing is not absolutely essential for some forms of learning. About ten per cent of the skills we learn are attributable to the use of the ear.

Hearing has limits in learning

Imagine how limited your learning would be if hearing was the only one of the five senses you possessed. It is almost impossible for a person to tell another how painful it was when he broke his arm. Could you tell another person the difference between paraffin and petrol? There are more effective methods of teaching than by just telling. Hearing alone is not enough.

The sense of seeing and learning

There is evidence to support the argument that the use of the eyes is not absolutely essential to learning, but admittedly, sightlessness is a far greater handicap here than deafness. About 35 per cent of the skills we learn are accomplished through the use of the senses of hearing and seeing. These are not hard and fast figures since individuals vary greatly in the use of these senses. It is definite that the combined use of the two senses serves the learner to greater advantage than the use of either of them separately.

We learn skills best by doing

There is only one way of knowing that a skill has been learned, and that is when the teacher actually sees the learner doing the job that is being taught. The use of the hands (doing), along with the application of hearing and seeing, increases our effectiveness in learning a skill. Seventy-five per cent of all skills learned make use of the senses of hearing, seeing and doing. Some skills may require the sense of taste and smell. We use our sense of taste to determine when milk is souring.

We use our sense of smell to distinguish between paraffin and petrol. Obviously, the limitations of the use of these senses arise from any danger coming from this activity. We do not identify poisonous insecticides by taste, nor do we detect poisonous gases by smell.

Your subject must be timely.

Before deciding what you will demonstrate, it is a sound practice to be certain the subject meets a few basic requirements. This can be determined by asking yourself first: is the subject timely? It is not time to demonstrate coffee pruning before the tree is planted. It is not time to demonstrate maize harvesting when it has just been planted. It is not timely to teach farmers how to operate tractors when they do not own them, and may not for a long time.

The farmer must need the skill.

The next question to ask yourself about the subject is: does the farmer need this skill? The fact that you feel the farmer needs to be taught a new method has little bearing on the farmer's opinions. You can say the farmer needs a skill when he has so decided for himself. If you cannot convince him he has a real need for the subject you plan to demonstrate, perhaps it is not time to attempt to demonstrate it.

If he cannot afford it - don't teach it

The third question is: can he afford it? Again, if the farmer does not believe he can afford it, he will not adopt your practice. It is only when he can be convinced that he cannot afford to farm without adopting your practice that he will ask you to help him to learn to use the information.

The materials must be available.

There yet remains another question: are the materials available? It is of little use to select the subject of a new hybrid maize to be planted if the seed is not available.

The questions asked about the subject to be demonstrated seem to be elementary, but many a demonstration has been doomed to failure before it was started, simply because one of these questions could not be answered - Yes.

How to use the method demonstration

It is helpful to think of a demonstration from the standpoint of three periods:

1. Before the meeting.
2. At the meeting.
3. After the meeting.

Careful planning is required for each of these periods.

Before the meeting

In setting up the time for a demonstration, we are not only to think of the hour, the day, the month and the season. There are other considerations about the time. It

would not be a good time to give a demonstration when you would run into competition with another meeting, or perhaps a visit to your area by a V.I.P. Such competition would be difficult.

Select the site

In regard to a place for a demonstration, the important thing is to be certain that you have a satisfactory site at which to hold it. The key point for each consideration in planning a demonstration is to plan ahead. You can be sure to have a site arranged if you take the matter up well ahead of time. Should you request a farmer to use his shamba to hold a maize planting demonstration, it would be disappointing to learn he had already planted his maize the day before.

Use a title which attracts an audience

Selecting a title which has an appeal is not always an easy job, but it deserves thought. You select a book by its title, or a magazine by its articles. A farmer may be attracted to a demonstration by a title which appeals to him or her, or he may not attend because it failed to arouse his interest. If you study your audience you can better know what appeals to their interests.

Teach one thing at a time

Your plans should be made to teach the farmer one thing at a time. You will only confuse the issue if you try to cover the entire area of coffee culture in one demonstration. He will remember most of the details about one phase of coffee culture, but he may forget several vital points made at a demonstration given on planting, pruning, mulching etc. Plan to teach one thing at a time. It is best not to divide a farmer's interests between several phases of an enterprise, yet a demonstration must provide a challenge to the farmer if he is to consider it worth his while to attend.

Watch your language

The language to be used at your demonstration may well spell success or doom to your performance. Language is not referred to as meaning only the vernacular you will use, but even more important is the choice of words. Plan to use language at the level of your audience's ability. People are not impressed by big words. Why say "di-chloro-di-phenyl-trichlor-ethane" when you mean D.D.T.? The farmer may not even have heard of D.D.T. in which case it would be wise to refer to it as a daw^o called D.D.T. Aristotle said: "Think like a wise man, but speak in the language of the people". It is the best assurance that you will be understood.

Relate to experience

Whenever possible relate to experience of people. One example of this was heard at a demonstration. In placing fertilizer in a ring around the base of a coffee tree, the demonstrator was asked why he did not simply put the fertilizer in one pile. He was able to relate to experience as follows: he referred to the roots of the tree as the mouth of the tree and said: "when you want food you put food to your mouth. Fertilizer is tree food, put the fertilizer to the mouth of the tree - the roots". The farmers understand this kind of talk because it relates to every day experience.

^o medicine

A farmer who has lost a large part of his crop to insect damage fully understands the economic importance of a recurrence. Make your comparisons relate to the past experiences of your audience.

Have everything ready

Embarrassing moments may come about at your demonstration because you failed to include an item on your list of materials. You may not be able to get a particular item if you wait until the last minute. It is possible that the dealer sold the last can of D.D.T. the day before. Plan well ahead to have your materials on hand.

Be ready for questions

Research will assist you to answer the difficult questions asked at your demonstration. Even then someone will ask a question you had not expected. Gather as much subject information as possible before you give your demonstration. When you are asked questions for which you have no answer, tell the person you do not have an answer. Inform him you will find it and give it to him another time. If you give misinformation, you will soon be found out. You cannot afford to lose prestige by giving incorrect information.

Practice

You will avoid making embarrassing mistakes if you will practice your presentation ahead of time. Practice until you become an expert at the skill you are demonstrating. Practice makes perfect - become a perfectionist.

Outline your plan

The purpose of this whole exercise is to get the demonstrator to develop written plans. Written plans help a demonstrator to stay on the subject. They help him to give the demonstration with greater certainty and proficiency. A good plan causes the demonstrator to complete his demonstration without omitting any steps or key points and to give the same information at each similar demonstration in his location. The strongest support for written plans is that when they are used as guides, each step is given in its logical order. A step is an action by the demonstrator that brings the job being demonstrated one phase nearer to completion. A key point is information which prevents a step from being improperly done, or that might otherwise ruin the job. An example of a step is: add two ounces of D.D.T. liquid to four gallons of water. The key point for that step would be: stir the dawa and water to assure a uniform mixture. Unstirred, the mixture would fail to do the job.

At the meeting

We have been thinking of all the things to do before the meeting. Long time planning ahead is the only known method of preparing for the day of the meeting.

Plan ahead

On the day of the meeting you should have everything you will need ready to go. All necessary materials should be checked before leaving your home or office so that nothing will be forgotten. You should plan to be at the demonstration site at least

² store, shop.

twenty minutes before your audience arrives. This will allow you time to arrange your materials in their logical order for the demonstration. Plan for audience comfort. Plan to arrange them so that they can see every action on your part. Demonstrations during the hot weather, when the sun is at its peak are uncalled for and show poor planning. Plan for a cooler part of the day. At the meeting you must show enthusiasm while presenting your demonstration. If you do not appear to be interested and convinced in what you are saying, it is quite likely that your audience will not show interest either. Act yourself. Appear relaxed during the demonstration; if you have confidence in your ability this will come naturally. Talk to your audience at all times. There is a difference between talking to an audience and talking at them. An audience being talked to is aware of it. They can feel that they are part of the discussion. Avoid talking to one individual for any length of time. You can soon lose your main audience with such methods. Each member should be made to feel that you are talking to him.

Question techniques

Your audience should be made aware of each individual step as you present it. They should not only clearly understand just what it is you are showing them, but should also clearly understand the importance of the step to the total demonstration. The questioning technique can often be used to determine if you are being clearly understood. If you will also allow and encourage the audience to ask questions you will find it a useful means of noting your effectiveness in being understood. Each time one of your audience asks a question, repeat the question before you give an answer. First, it assures that each of your audience had an opportunity to hear the question. Secondly, it gives you time to organize your thinking and give a sound answer. Most people will not ask to have you repeat the question even though they may have been interested. Some demonstrators use the technique of having a member of the audience demonstrate his ability to perform a step to give confidence to the group. If one of them can do it, there is less doubt about their own ability to perform what is being demonstrated.

Repeat steps whenever necessary

In testing members of the audience you may find it is necessary to repeat a step. This is considered to be a good teaching technique. Let no one leave your demonstration unable to carry it out at home on his own.

Watch for the faster and slower learners

Some members of your audience may be faster in learning the skill than others. When the audience is doing the demonstration, faster learners may be used to teach or assist the slower learners. Use this technique whenever practical.

Give a summary

A brief summary of what you have been demonstrating before you close helps to refresh the audience and sends them away with the sequence of the steps in their proper order. This period also serves to give last minute warnings of any dangers or hazards to avoid. After your summary, encourage any final questions so that none may go away not knowing. Advise them where and how to get further assistance if needed.

Don't fail to advertise your next meeting

Extension workers should take advantage of every group at a meeting or demonstration to announce the next meeting. Even though your next meeting may be on quite a different subject, there is the possibility that some of the audience may contact people who will be interested. If it is to be related to the present demonstration, do not fail to announce that the next meeting will be one further step toward the total job. Remember, your present audience gives good promise of being your audience in the future, if you are giving a good, well-planned demonstration today. As a parting shot, you may have materials to hand out for today's demonstration, or a short comment about the coming meeting.

After the meeting

Follow-up

Although your demonstration is over for the day, it is not finished. Extension work requires continued evaluation. Your follow-up serves several purposes, one of which is an evaluation of your effort. If you have put on a good demonstration, the farmers should know how to do it. If you have convinced them of the need for practicing the skill you taught them you can expect them to do it on their own farms. If they do nothing to use the practice, the matter needs to be investigated. All of these things are included in the follow-up.

It is not enough that you have taught him how to do a practice, he must be motivated to carry it out on his farm. If he has not adopted it, it may have been:

- a. too difficult
- b. too costly
- c. untimely
- d. poorly planned
- e. not needed

Any one of the above situations is reason enough for failure to adopt. Check the farmers so you can check yourself. Determine your short-comings. Correct them and avoid future failures

PLANNING A METHOD DEMONSTRATION

1. Demonstration title: Garlic Onions are Easy to Grow for Food and Profit.
2. Why is this demonstration important to your audience?
 - a. Garlic onions are a new crop in this area.
 - b. Garlic onions grow easily.
 - c. Garlic onions provide a good food addition for the home.
 - d. There is an available market for a good crop of garlic onions.

3. Materials needed for this demonstration.

Equipment and supplies:

- | | | |
|-------------------|----------------------------|--|
| (1) Planting plot | (4) Stick one foot long | (7) Pegs |
| (2) Jembe (hoe) | (5) Stick four inches long | (8) One debe* of well-rotted farmyard manure |
| (3) Hand rake | (6) String | (9) Garlic onion bulbs |

Visual aids and handouts:

- (1) Pamphlet on "Planting Garlic Onions"
- (2) Sample onion bulbs

* all lbs

4. Presenting the Demonstration

Step by step activities	Key points
I Mark out the first row.	Use a string and pegs to mark the row. Make sure the string is tight.
II Measure second row one foot from the first row.	Use stick 1 ft long to measure spacing.
III Additional rows are laid out at the same spacing	Keep rows straight using string and pegs.
IV Make the planting furrows 1" deep	Use jembe* to dig furrows along the line of the string.
V Place farmyard manure in furrows to the level of the ground	Use well-rotted manure.
VI Mix the manure into the furrow soil.	Prevents burning of the bulbs.
VII Mark the planting spaces along the furrow.	Use 4" stick to lay out the spaces.
VIII Plant the bulbs at the 4" spaces in the furrows with the point of the bulb up.	Bulb point must be <u>up</u> . Firm soil around each bulb.

5. Summary of points made during the demonstration:

- (1) Garlic onions can be planted during the long and the short rains.
- (2) The planting space is 4" between plants in the row, and the rows are one foot apart.
- (3) Furrows are dug and filled with well-rotted manure to the level of the ground.
- (4) The manure is mixed in the furrows with the soil.

*hoe

- (5) A single bulb is placed at each 4" space in the furrow.
- (6) The point of the bulb is upward.
- (7) The soil is firmed around the bulb for fast germination.

6. What are the people expected to do as a result of this demonstration?

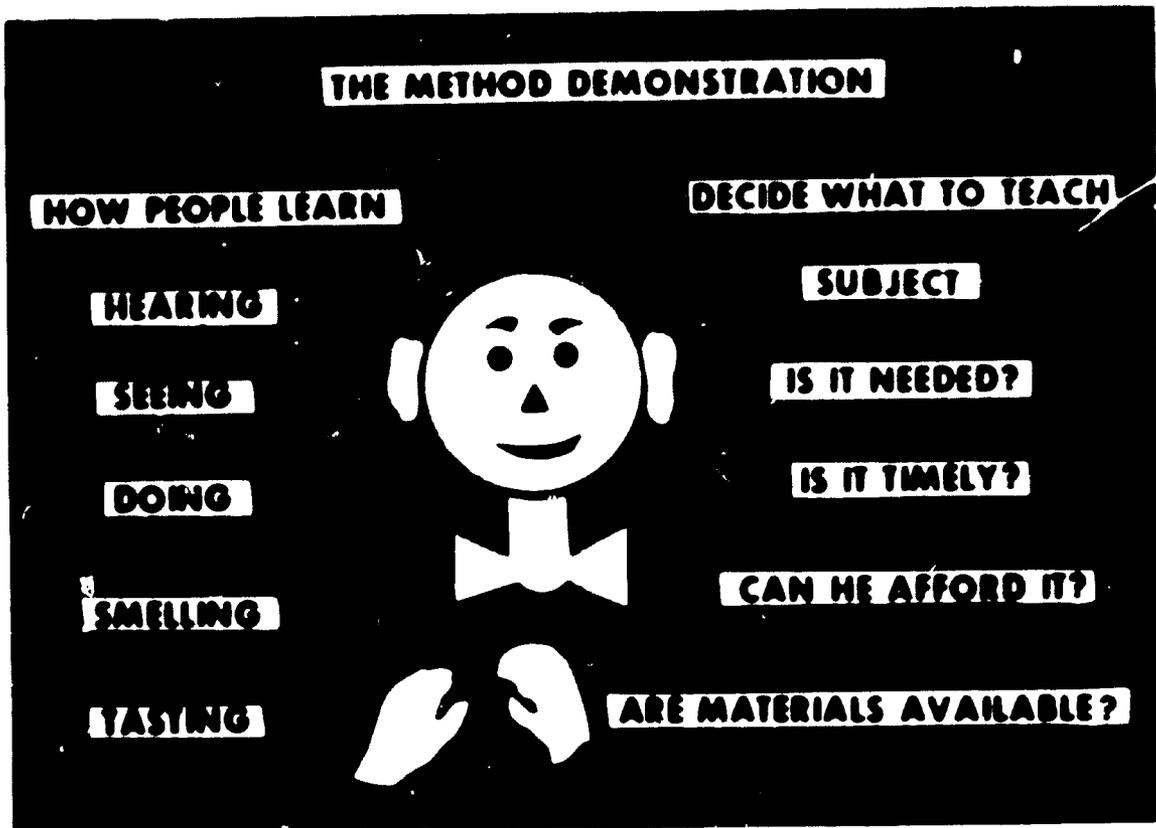
The farmers are expected to plant garlic onions properly for an easy cash crop.

7. Plans for follow-up and testing the effectiveness of the demonstration.

- (1) Visit the farmers who will plant onions and assist them as necessary.
- (2) Visit again before harvest time to assist them with marketing their crop.

Suggestions for the Presentation on the Use of the Method Demonstration as a Teaching Device

A strip tease chart and four fold-up charts can be used for this section. The strip tease chart includes the figure of a man. The head is made of flannel and is glued to the chart on the right side. The chart is made as shown:

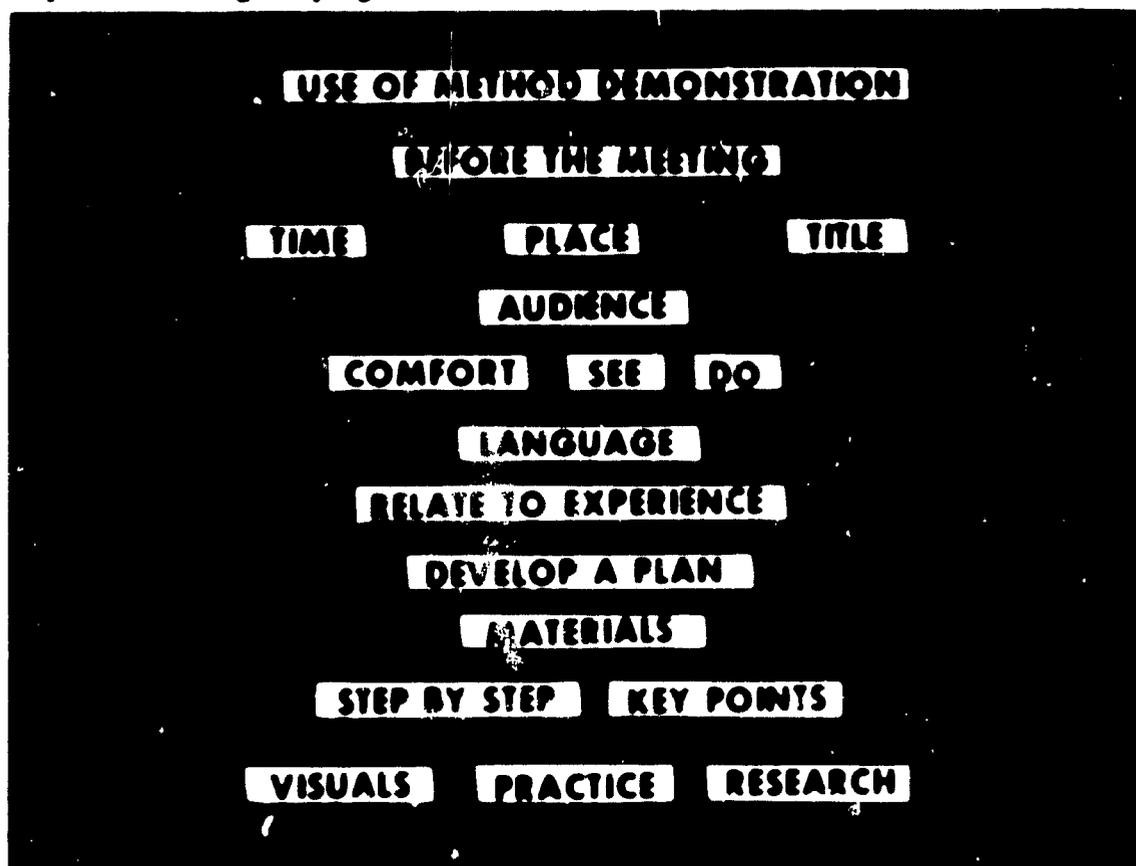


- Hearing
- Seeing
- Doing
- Tasting
- Smelling

Ears, eyes, nose and mouth are cut out of flannel to be set on the head during the talk. The vest, hands, neck and tie are cut out of coloured paper.

The words - hearing, seeing, doing, etc., are covered with paper strips mounted in pockets and are removed as each is explained.

The talk is given much as it is in the narrative which follows these instructions. The face parts are made of flannel so they will cling to the head as they are placed in position during the progress of the talk.



The talk may be given somewhat as follows:

After telling briefly what a method demonstration is, it is explained that to teach people, one must have some understanding how they learn. The role of the senses can be brought into play by saying: "This man has no facilities with which to learn. By giving him ears he can learn by hearing" (Place ears on head). After explaining how hearing is used to learn, it is quite effective to demonstrate its limits. This can easily be done with the radio-block demonstration (See explanation in appendix).

When the role of seeing is being explained the eyes are attached. One might then ask if they can see the difference between sugar and salt, or water and kerosene. (Attach nose and mouth). Other examples of the use of the senses are: "Would you attempt to differentiate substances by taste?" "What if one were arsenic or parathion?" Through this build up you can demonstrate the interplay of the senses when building up to the importance of doing. To clarify this one, ask them if they could learn to drive a car simply by being told and shown. Should someone say "yes"; merely assure him you would not care to be his passenger under such circumstances.

Fold charts allow you to put across one point at a time. They are made up of phrases pasted to a sheet of paper. The paper is then folded to allow one phrase to be turned down at a time as it is being explained. The fold chart has definite advantages over flannel strips for field use.

- a. The talk is organized.
- b. It cannot get out of order.
- c. Omissions are not easily made.
- d. It is easily carried.

There are four fold-up charts:

- a. Decide what to teach.
- b. Before the meeting.
- c. At the meeting.
- d. Follow up.

Flannel strips have been used in place of the fold-up charts. The same phrases are used in either case.

After the talk the trainees are given a practical demonstration. There is probably no better method to show how to conduct a method demonstration than to give a demonstration in which trainees participate. Making a rope halter was chosen as the subject because it provides so many opportunities to apply a great number of techniques. Some of these are:

- a. The exercise is one which few, if any, have done
- b. It requires step-by-step teaching and learning to complete
- c. It convinces them that a new skill has been taught.
- d. It demonstrates the need for supervision and assistance
- e. Trainees are bound to agree that the instructor has taught and the trainees have learned
- f. In some instances they have been taught where the instructor and the trainee had no common language. This is very convincing.

At the conclusion of the exercise the use of the method demonstration as a teaching device can be briefly summarized by questions as:

- a. Did I have the material ready?
- b. Could everyone see?
- c. Was it necessary to present it in a step-by-step manner, etc.

This pursuit is convincing. At least 30 minutes requiring "yes" and "no" answers complete your summary in a convincing manner. The questions are developed to cover the fold chart phrases.

THE METHOD DEMONSTRATION

AT THE MEETING

MATERIALS
RIGHT ORDER
ENTHUSIASM
TALK TO AUDIENCE
ACT YOURSELF
EXPLAIN EACH STEP
TIME FOR QUESTIONS
REPEAT STEPS

DOING PLANNING
ASSISTANCE
FASTER SLOWER
DOING
QUESTIONS
SUMMARIZE
HANDOUTS
NEXT MEETING
APPRECIATION

USE OF METHOD DEMONSTRATION

AFTER THE MEETING

FOLLOW UP
VISIT
MATERIALS
ASSISTANCE
CHECK RESULTS
ACTION
ADOPTED

Trainee Demonstrations

The next session on method demonstrations is one in which trainee participation is used. This has proven to be the section of the course which has been consistently evaluated by the trainees as the most interesting. It confirms the importance of audience participation. Usually when the group consists of about 30 trainees it is divided into small groups of 5 to 6 members. Groups are given about 15 minutes to select a subject for demonstration. The instructor is the clearing agent to ensure a variety of good practical subjects.

The next step is for each group to develop a written plan to include all of the considerations covered in the instructor's talk on the use of the method demonstration.

It may require as much as five hours for groups to develop their plans, depending on the elaborateness of the preparations, visual aids, handouts and the demonstration itself. A standard plan form follows these notes.

Developing a Written Plan

After the groups have selected their subjects for demonstration, close supervision is required to train them to write plans. Looking at the plan form; section 1 - Demonstration - is where the title is placed. Some discussion is useful to give importance to the title. To call a demonstration "maize planting" arouses little interest among farmers. They have planted maize since they were children and probably are not fascinated by it. Something more startling as a title is needed. It is an improvement to give it a title such as "Double Your Maize Yield With Fertilizer." This effects their pocket-book, with a little imagination you can get excellent suggestions from the trainees. The idea to be taught must be included in the title.

Why is this demonstration important to your audience?

This section becomes the introduction for the demonstrator, and the motivation for his audience to learn the skill to be taught. Without an effective buildup the effort of demonstrating may be wasted. At a cotton dusting demonstration, the demonstrator would explain the damage done by the weevil. Some demonstrations are important for several reasons while others may be important for only one.

The reasons must have appeal. Use as many devices as possible to arouse interest. They may be: money, famine prevention, drought resistance, patriotism, pride or any number of other approaches that will be effective. The opening minutes of the demonstration meeting provide the opportunity to "sell" the idea.

Materials and equipment needed:

The best approach to developing this section is to list the materials needed as the steps are being listed by asking the question: "What do I or the participants need to do that?"

Visual aids and handouts:

The same questions can be asked for development of this section of the plan.

Step by step demonstration:

A step is an act. A key point is the information to explain the act. A step in planting may be: Mark out the rows. Such simple, concise steps make it easier for the demonstrator to follow the logical order of the activity with a quick glance at the outline. The key point for this step may be: Three feet between rows is the maximum space for best crop yield.

The summary section reminds the demonstrator to send farmers away from the demonstration with a review of the activity fresh in their minds.

What are the people expected to do?

In this section the demonstrator reminds himself to be sure that his audience understands the activity and its purpose, and gets some assurance from them that they can and will undertake its performance.

Plans for follow up:

This is to assure the audience of his availability if needed. It is also used to remind the demonstrator of the need to plan follow-up in the field to evaluate his own effectiveness in creating a change.

PLANNING A METHOD DEMONSTRATION

1. Demonstration _____

2. Why is this demonstration important to your audience?

- | | |
|----|----|
| 1. | 4. |
| 2. | 5. |
| 3. | 6. |

3. Materials needed for this demonstration:

a. Equipment and supplies.

- | | |
|----|----|
| 1. | 5. |
| 2. | 6. |
| 3. | 7. |
| 4. | 8. |

b. Visual aids and hand-outs:

- 1.
- 2.
- 3.

4. Presenting the Demonstration

Step-by-step demonstration	Key points

4. Summary of points made during demonstration.

5. What are the people expected to do as a result of this demonstration.

6. Plans for follow-up and testing the effectiveness of the demonstration.

WORK GROUP ASSIGNMENTS

Group I _____

Advisor _____ **Chairman** _____

1. _____ 4. _____

2. _____ 5. _____

3. _____ 6. _____

Group II _____

Advisor _____ **Chairman** _____

1. _____ 4. _____

2. _____ 5. _____

3. _____ 6. _____

Group III _____

Advisor _____ **Chairman** _____

1. _____ 4. _____

2. _____ 5. _____

3. _____ 6. _____

Group IV _____

Advisor _____ **Chairman** _____

1. _____ 4. _____

2. _____ 5. _____

3. _____ 6. _____

Group V _____

Advisor _____ **Chairman** _____

1. _____ 4. _____

2. _____ 5. _____

3. _____ 6. _____

Group VI _____

Advisor _____ **Chairman** _____

1. _____ 4. _____

2. _____ 5. _____

3. _____ 6. _____

Common Difficulties Experienced By Trainees in Developing Written Plans for Method Demonstrations.

1. **Description:** This is the Title of the demonstration. It should be a clearcut simple title that has appeal to a potential audience.

“Dehorning Cattle Grows More Beef”

“New Spacing Recommendations for Higher Yield Maize Crops”

2. **Why is this demonstration important to your audience?**

The demonstrator should be able to list several reasons why farmers will want to attend the demonstration. These are farmers' reasons which will affect the farmer and his family directly in terms of economics or home food supply.

Dehorning protects cattle from injuring each other.

Market quality is improved.

Market price is increased.

Closer row spacing cuts down weed growth.

Increased crop yields higher per acre profit.

3. **Materials and supplies needed:**

All the items needed should be listed. This section provides a checkoff list of materials to have available at the demonstration. It is very embarrassing to discover the need for a length of string in the middle of a demonstration.

What other visual materials can you easily make to improve the demonstration? Charts, or photographs showing the end results may be valuable. Are handouts available or can they be produced if they are needed? The time to think of these is during the planning stage and not during the demonstration.

4. **The body of the demonstration** is a simplified step-by-step description of the activity being demonstrated. Each separate act taken is a step. If you would teach the skill you must teach it as a series of steps.

The key points for each step are the important information that reinforce the step or make it successful.

Step	Key point
1. Place peg with string attached in ground at beginning of new furrow	Pegs should be in ground deeply enough to stand upright
2. Place second peg at other end of new furrow	
3. Attach string from 1st peg to 2nd peg	Be sure string is stretched tightly so that it does not sag
4. With jomba, dig furrow 6" deep along the stretched string	Soil should be thrown out of furrow only to one side

5. Summary:

A brief review of the purpose of the demonstration and the steps to accomplish it. Every good demonstration should contain a quick review of the total action. It gives the audience a chance to see the whole job and remember what was done.

6. What are the people expected to do . . .

Most demonstrations are based on learning a new technique. This section of the plan should state our expectations of the farmers' learning. Will you use the last part of the demonstration for audience performance? Does your materials list show the materials needed for audience members to demonstrate their understanding of the new technique?

7. Follow-up:

How can you be sure these farmers learned what you thought they had been shown? How do you find out if they are practicing the new methods on their own shambas*? If the farmers have not learned the skill or do not adopt the new method you have not taught or you have not convinced them of its value. Plan how you will follow up the demonstration with other meetings, pamphlets or posters on the method, or farm visits.

If you plan your demonstrations in an organized and systematic manner after you study the situation and the potential audience, you can be reasonably sure that your demonstrations will be popular and effective.

* farms.

A B C

A B

SIMPLE LETTERING

The illustration can be used as a handout to introduce the subject and to provide practice. Explain the idea of ruling out the space in which a letter is to appear. The horizontal top and bottom lines are drawn lightly in pencil. Then vertical lines are drawn to represent the width of each letter and the space between letters. The ratio of the height to width of all letters is approximately 4 : 3 except for 'M' and 'W' which are about square, and for 'I' which is only a single line wide.

Another horizontal line midway between top and bottom serves as a guide for the cross members in such letters as B, E, R, H, S, etc. With a block for each letter draw in the diagonal lines for such letters as A, K, V, Y, W, etc., or the rounded corners for O, P, G, S, U, etc.

Spacing between letters is not always equal. Letters that have large open outside spaces as A, J, P, and T should be spaced with other letters to form a good visual appearance. This is a matter of eye-judgment. If it looks good to you, it will look good to the audience.

Ink the letters over the drawn pencil lines. When the ink is dry, erase the construction lines and the caption or sign is complete.

Three points to remember:

1. Use only simple block letters. Fancy scripts are more difficult to read.
2. The width of the ink stroke is as important as the overall size of the letter for legibility. Your eye is the best judge of the readability of the lettering.
3. Test the lettering at the distances your audience will have to read. Lettering should be big enough for the people at the rear of the audience to see easily without straining.

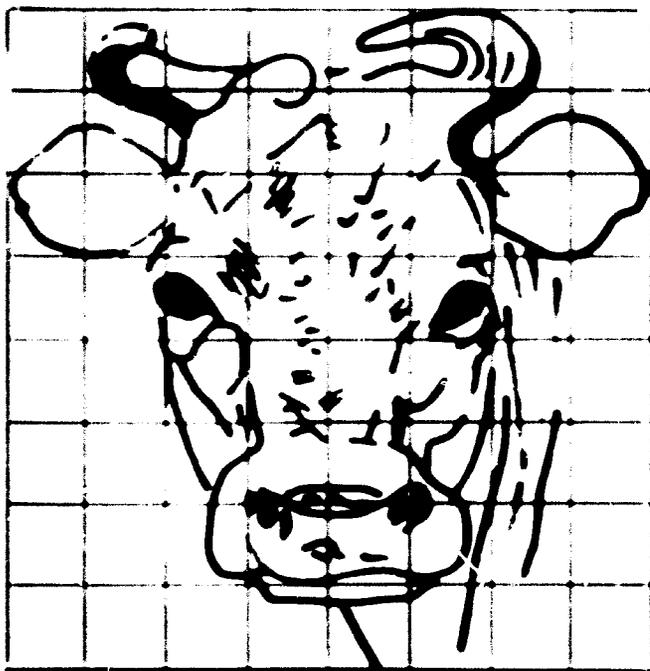
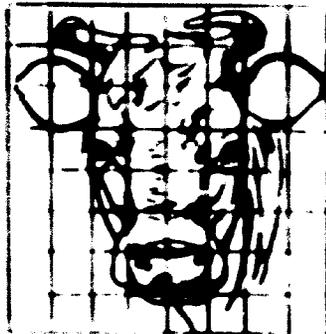
ADAPTING ILLUSTRATIONS FOR VISUAL AIDS

Frequently, the non-artist may desire illustrations for his poster, flip-chart, flannelboard or other visual aid. There are several ways in which illustrations may be "borrowed" or modified for his purpose.

1. An actual cut-out from a magazine, catalogue, or poster, if the original publication can be damaged.
2. A tracing of the original through carbon paper to another sheet of paper. With this method, the original is not destroyed, but may be damaged by "denting" with the tracing instrument.
3. Tracing the original by placing a thin sheet of paper on top of the original. The paper must be thin enough to see through, in order to follow the outline of the original. This method can be used when the original illustration must not be damaged.

THE ABOVE THREE METHODS PROVIDE ILLUSTRATIONS OF THE SAME SIZE AS THE ORIGINAL, ONLY.

4. Enlarged line drawings can be made by:
 - (a) using a suitable slide and a slide projector and projecting the image on a mounted piece of paper, or
 - (b) using a printed illustration and an opaque projector in the same fashion.
5. Enlarged or reduced copies of line drawings can be made by hand using the grid system as illustrated on page 31.



Enlarging or Reducing a Drawing

An original drawing, obtained from any of the above methods is first measured for height or width. The same dimension of the required copy is determined and the two measurements are compared for scale. Thus if the original is 6 inches wide and the enlargement will be 12 inches wide, the scale is 2X or 2:1. If the original is 36 inches wide and the reduction is to be 8 inches wide, the scale is $1/3$ or $1/3$.

A regular series of vertical and horizontal lines is now drawn with pencil and rule over the original drawing. This divides the original into a number of squares. A second grid will be drawn on a paper for the new drawing. These grid lines are spaced according to the grid on the original multiplied by the scale. The spacing of the original should be selected so that the second grid will be spaced at a common measurement. Thus: For a 2:1 enlargement, the original grid may be 1/2 inch spacing. Multiplied by 2 the new grid becomes 1 inch. With a reduction of 1/3 the original grid may be 1 1/2 inches. Multiplied by 1/3 (divide by 3) the new grid will be 1/2 inch.

The original is now regarded square by square. Any lines appearing in a square on the original are drawn in the same relative position in the equivalent square of the new copy. The same operation is repeated for each square until the drawing is complete.

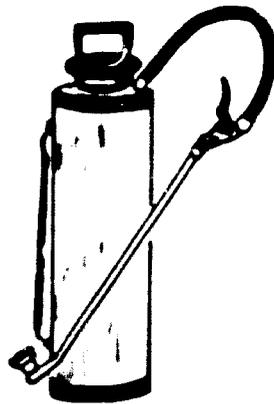
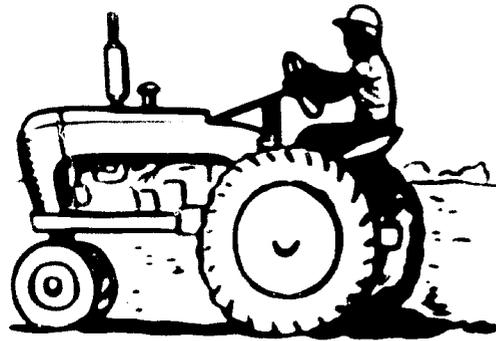
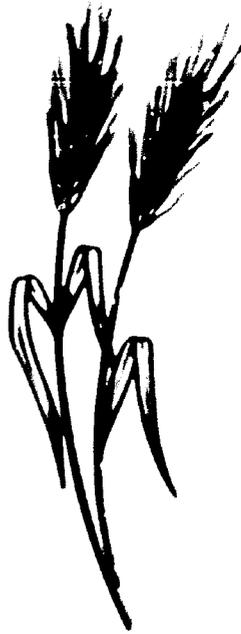
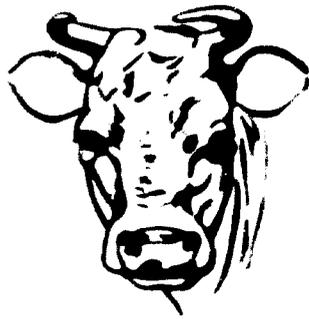
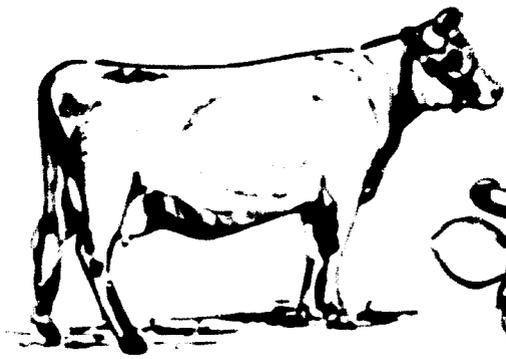
After inking or colouring the new drawing, the grid pencil lines may be erased.

Uses of Clip-Art

Clip-art is drawings, sketches, or other kinds of pictorial material that is collected for use by agriculture workers from magazines, old posters, etc. These drawings can usually be traced, enlarged, reduced or used directly on flannelgraphs, in local pamphlets, posters or other extension information purposes.

Agriculture extension workers should be encouraged to collect similar materials for their own clip-art files. Appropriate illustrations usually improve handouts and demonstration programs.

These samples (as illustrated on facing page) are some of the kinds of clip-art materials that can be collected for extension information use.



Preparing a Gelatin Duplicator

1. In an aluminum saucepan of at least two quarts capacity, put 10 volumetric ounces of water at room temperature.
2. Add a small pinch of alum. Stir until dissolved completely.
3. Slowly add 5 volumetric ounces of granular gelatin while stirring. Be sure the gelatine is wet completely through.
4. Place pan in a larger pot of water. Mixture must be cooked, but only in a water bath, or over steam; otherwise it will burn and be spoiled.
5. As mixture begins to melt slowly stir in 10 volumetric ounces of glycerine. The glycerine does not need to be chemically pure.
6. Continue cooking with light stirring for twenty minutes.
7. Carefully skim off as much of the froth as possible.
8. Pour into rectangular biscuit tray approximately 9 x 13 inches.
9. With a stiff card or paper "wipe off" any remaining froth from the surface.
10. Set tray on a level surface to harden.

Demonstration (for Agriculture Field Staff)

Title: Use of the Gelatine Duplicator

Why is this demonstration important to your audience?

1. Simple to use
2. Inexpensive to make (no costly equipment)
3. Copies can be made quickly

Materials needed for this demonstration:

Equipment and supplies:

- | | |
|----------------------------|-----------------------------|
| 1. Gelatine duplicator pad | 5. Bond paper for copies |
| 2. Sponge | 6. Pencil or ball-point pen |
| 3. Hectograph carbon paper | 7. Basin of water. |
| 4. Master copy paper | |

Visual aids and handouts:

Give each participant an actual copy of this demonstration plan made on the gelatine duplicator.

Presenting the Demonstration:

Steps	Key points
1. Prepare master copy to be duplicated.	Make sandwich of bond paper sheet on top, hectograph carbon paper underneath (carbon surface down) and master copy paper at the bottom. Write or draw on hard surface.
2. Moisten gelatine pad with wet sponge for about one minute.	Use gentle strokes on surface.
3. Wipe off excess water if any with a semi-dry sponge.	
4. Bend corner of clean sheet of bond paper and place on gelatine pad to blot remaining water	Bent corner on sheet facilitates removal.
5. Make similar bend to corner of master copy carrying the carbon image. Place master copy on gelatine pad, image side down	Smooth out master copy sheet. Leave in place on gelatine pad for 1 1/2 minutes.
6. Remove master sheet from pad	Peel off with single rolling motion
7. Place clean sheet of bond paper for over carbon image now on gelatine. Peel off after two seconds	Image is transferred to bond paper.
8. Repeat with new sheet of bond paper for as many copies as desired (up to about 60) Let each participant make a copy	
9. Wash pad as in step 2	To remove some of the surface ink.
10. Cover pad with clean sheet of paper and store flat away from heat.	The remaining ink will sink into the pad. The pad can be reused with a new image after about six hours.

What are the people expected to do as a result of this demonstration?

Make and use their own gelatine duplicator to make inexpensive handouts for farmers.

Plans for follow-up:

Class discussion on uses of the gelatine duplicator.

Considerations in Preparing Audio Visual Aids

i. What is the purpose?

An audio visual aid should be made to serve one of the following purposes:

A. Attract Attention

Most audio or visual aids will draw peoples' attention to your message. A poster is an attention-getter; the fact that you will show movies or slides is enough to attract some people, regardless of what your message is. Similarly, an exhibit, a handout, or a loudspeaker announcement can capture attention. But once you have their attention, you must sustain it.

B. Clarify an Idea

Large scale photos, take-apart models, mock-ups, films, and slides are some of the aids which can help your audience to understand a thought which may be new to them - or not within their recent past experience. Words alone may be inadequate to describe what you have in mind.

C. Organize Your Message

The use of a flip chart, flannelgraph, slide set, and other aids require planning - with the result that the speaker's presentation is organized the way he wants it to be. Organized thoughts mean a better presentation.

D. Multiply Your Effort

Another way in which audio visual aids can serve you is to enable your message to reach more people. A loudspeaker will do this - so will a poster, or an exhibit, or a printed leaflet, or a taped sound recording. The effort which you expend once may serve many people on many occasions.

E. Lend Authority

Certain audio visual aids provide a sense of authority to the message.

A printed booklet, a motion picture, or an exhibit, for example, suggest that a great deal of study has gone into the message. The use of the name of the authority (e.g. the Kenya Ministry of Agriculture, or Egerton Agricultural College) can also be helpful.

F. Remind the Audience

Your audience will probably not remember much of your message unless there are reminders. A handout will recall your message to their minds each time they see it. Posters, news articles, radio programs, photos or a repeated slogan can have the same effect.

Before you plan your audio-visual aid, determine which of the above purposes it is to serve. Then choose the aid which will best do the job.

2. Present and Future Use:

A. Availability

Is the audio-visual aid you want available to you? If you need to make it yourself, are the necessary production material and talent at your disposal? These may be in the form of drawings, photographs, charts, models, etc and the ability to make them. If some of the materials are not available, you will find it necessary to use a different kind of aid, or improvise one from materials that are available.

B. Production

Is this an aid which will be made in only one copy, such as a flannel presentation, or should it be reproduced in quantity, such as posters, leaflets, handouts.

C. Multiple Use

If your visual aid can be used on more than one occasion, or for more than one purpose, plan for this when you make it - it may save you work in the future. (For example: a poster announcing a farmers' meeting in the village A might be re-usable to announce a similar meeting in village B. Or the sketch of a cow used on a poster might be usable later as a cut-out figure for a flannel presentation. Many times other technicians can use the material for another purpose

D. Modification

Will you want to modify your visual aid for re-use in the future? A slide set can be changed merely by substituting different slides, but a film strip or a motion picture is very difficult and expensive to change. A poster can sometimes be made to serve more than one purpose by leaving blank the space for title, or date, or place to be written in for the special occasion

E. Ease of Use

Can the aid be used very simply by you? Or will you need considerable practice or some assistance in the presentation?

F. Portability

Does it need to be light-weight and small so that it can be carried by hand? If transport is necessary, is it available?

G. Universally Usable

Can it be used anywhere, in-doors and out? Or does it require a protected area? Is electricity necessary and available? Does it require additional items such as running water, or ice, or an electric fan, etc?

H. Audience

How large will be the audience and of what character? That is, will they be "captive" in a classroom situation, or transient as at an exhibit at a show, or a

passerby on the street, or a chance listener to the radio? Will the audience be selected? Will they be all men or all adults, or mixed, men, women and children? Will they be all rural people? All literate, or all just partially literate? Will they be there because they want to hear (or see) your message, or do you have to capture their interest first? How large a group do you want to reach at one time? 200 persons? 50? 10? or perhaps only one? Will the aid you use be adequately visible or audible for that size of audience?

3. The cost:

A. Time

Will you have enough time to get the aid prepared for the presentation? How much time will it take? Is it worth it?

B. Cost

If materials or services must be purchased, is this within your budgetary means? And will your expected results be worth this cash expenditure? Will additional copies reduce the unit cost? Getting multiple use from your good audio-visual aids reduces the cost factor.

The Agriculture Information Center

For most extension staff purposes, the simple visual aid produced locally in one or two copies, for direct, local use will be the most useful. There will be times when large-scale district or province-wide campaigns will require multiple copies of posters, pamphlets, charts or other materials. The Kenya Ministry of Agriculture supports the Agriculture Information Center at the Agriculture Research Station, Nairobi to advise and assist field personnel in selecting and producing audio and visual materials for extension education programs.

In addition, the Agriculture Information Center regularly publishes bulletins on agriculture practices for distribution to farmers and their families. There is produced a weekly radio program, "Mkulima Wa Kenya". Posters on a variety of farm subjects are printed.

Information and communications require interchange of reaction. District office and field staff should be encouraged to participate actively in using the facilities of the Agriculture Information center for the development of extension education material for mass communications purposes.

TRAINER'S GUIDE FOR EVALUATING DEMONSTRATIONS

Trainers can upgrade the performance of agricultural instructors through objective evaluations of their method demonstrations. The discussion on the use of the method demonstration as a teaching device is followed by instructor groups planning a practical demonstration for their own district or location. Each group presents their demonstration for their own district or location. Each group presents their demonstration with the remaining instructors acting the role of a farmer audience. Following each demonstration an evaluation is made by the officer in charge. A few pointers on conducting an evaluation give the officer a systematic approach and make it an easier task.

A good approach to the evaluation is to use the check chart. This can be a simple job if the demonstration is scored on a 3-2-1 basis as indicated above the column - Good-Fair-Poor. While the chart can only serve as an evaluation guide, it is useful to point out strengths and weaknesses in the presentations.

Technique of Evaluating

A good evaluator makes every effort to point out the strong points of each performance. It is quite simple to point the weaknesses, but it must be realized that we are more interested in developing strengths than in pointing out weaknesses. The audience will remember the good techniques that have been used, especially if they are pointed out by the evaluator. We are all subject to being pleased by favourable comments about our work.

Including the Audience

The evaluator should be quick to realize the benefit of including the audience as much as possible in his evaluation. This can be done either by questions or calling for comments from the audience. A combination of both techniques produces the desired results. The audience quickly learns to look for good techniques and to detect them. The process then becomes an audience evaluation as it should be.

Additional Pointers

1. Observe how the demonstrator handles the questions during his performance. This is where an audience can cause him to lose control of the presentation. Practice and good judgment are the only solutions to this problem.
2. Note whether or not each question asked by the audience is repeated by the demonstrator. Some interested members may have missed it and may be too timid to ask to have it repeated. Repeating the question gives the demonstrator the advantage of having time to think through his reply.
3. Ask the audience if they believe they can successfully perform the skill which they have been taught. After all, this is the main purpose for giving method demonstrations.
4. When the evaluation is finished, the demonstrator should have gathered a list of suggestions for improving his methods. This is accomplished by asking the audience how it could be improved. Many times, the demonstrator learns as much from the evaluation as he does from planning and giving it.

FARM VISITS

There are a number of reasons for making farm-home visits. They may come about through a request from a farmer for assistance. Perhaps he has had an invasion of maize or other crop pests or diseases, or any one of a variety of other problems. You may be planning a campaign such as organizing 4-K clubs. You may want to use his farm for a demonstration site or you may be seeking assistance from a farm leader in getting a cooperative movement started. Whatever your reason may be, a farm visit should be of enough importance to plan ahead, or the visit should not be made at all. Certain problems are of a confidential nature and require individual home visits.

As with the method demonstration, good planning brings better results. There are three periods to plan for:

1. Before the Visit

In these times of tight budgets and staff shortages, it is vitally important that every agricultural field worker make efficient use of his time. There is only one way to approach this problem. Schedule the use of your time. No government in the world can have its officers traipsing over the countryside to visit farmers unless their visits are planned for efficient time use. A schedule of visits should be entered on your calendar so that you are not back-tracking and duplicating the route of your travels from one day to the next. We have already said that every visit should have a purpose. It can only have a purpose when both you and the farmer know why you are making the visit. You must inform the farmer well ahead of time so that he won't say: "Why is this man coming to see me?" If you have a set purpose it will be no surprise to him and the visit can come off as you have planned it.

To avoid unnecessary trips you will need to have assembled any information needed to assist the farmer when you see him. Assemble the information a few days before the visit to allow time to gather any information needed from other sources.

In planning and scheduling the time for the visit, plan it for the farmer's convenience. It would seem foolish to arrive at a time when he could not see you; or perhaps you might not find him home. He must be respected as a human being at all times if you intend to accomplish your purpose. Common courtesy demands that you arrange your visit for the convenience of both you and the farmer.

If you are expected to assist him to spray his cattle, you may be expected to have the dawa with you to do the job. It is your job to know the situation. You must know what supplies will be needed.

Well ahead of your visit, you should have asked yourself the three basic questions:

- a. Is the job too difficult? Can I help him learn how to do this skill or job he wants to do? You will have to rely on your own judgment in this matter, remembering the mechanics of communicating with others and demonstrating a skill.

- b. The second question to ask yourself is: Can he afford it? If the practice exceeds his ability to pay for it, you must either convince him he cannot afford to do without it, or it should not be attempted.
- c. The third basic question: "Is he ready?", must be answered. Yes, if the practice is to be attempted. The schedule of your visit must be timed for a period when he will be ready. It would be wasteful to plan to show a farmer how to transplant cabbage when the plants were not large enough to be transplanted. Certainly you would not teach a farmer how to prune tea when he had just planted it. There is a tendency to attempt to teach an entire subject at one sitting. This is a serious mistake. He will forget how to pluck the tea by the time it is ready to be harvested. Teach only one thing at a time.

In our discussions on Communicating With Others we repeatedly said that whatever you do, relate it to his experience. Don't say: Di-chloro-di phenyl-tri-chloro ethane when you mean DDT. If in the farmer's experience he has not heard of DDT perhaps you can simply call it a dawa.

It may be necessary for you to prepare materials before you visit the farmer. You may need some nails, or to sharpen pruning shears. Have them ready to avoid the unnecessary waste of time when you arrive to do the job.

You may want to brief the farmer ahead of time. Ask him to have the cattle up in the corral instead of waiting while his children bring them in from a distant grazing area.

2. During the Visit

When you get to the farm and have made your greetings, the farmer will already have been told the purpose of your visit. It is then time to get down to business. Talk with the farmer, not to him. There is a difference. When we talk with people it is a two-way conversation. If you do all the talking his mind may wander and he will not hear you. Involve him in the discussion. Compliment him on his achievements. There is always something good to be said no matter how small it may be. Get his views. You may be surprised what you will learn. It is a compliment to him if you ask for his views.

Because your time is limited you must be able to cut him off when the conversation has reached the end of its usefulness. You are trying for short but effective visits. Time is money, when your government is paying the bill. Do not waste time or money. Be sure the purpose of your visit is understood. Learn to design your questions to give you exactly the information you wish to get. Don't say: "Do you spray your cattle?" Say: "What do you think about spraying cattle?" Try to phrase questions to bring answers other than "yes" or "no". If you want to make progress with a farmer you must gain his confidence. Asking his views and including him in the conversation is one method of gaining confidence. There are other useful devices for accomplishing this. Complement him on his children, his dog, and his cabbage. Another way to do this is to help him to have confidence in himself. You may assist him with the job until he becomes skillful. At least you will know he can do the job after you leave. He will develop confidence in you if he sees you are an expert in doing it yourself.

It will always be necessary to get the farmer interested in what you came to discuss with him. There are many ways of arousing his interest. All of them are based on his vital desires. You may suggest that if he plants in rows which will increase maize production, he may be able to better pay his children's school fees. If you fail to stimulate his interest, the farmer will probably forget why you came to his farm.

Before you leave him be sure he understands what he is to do and how he is to do it. Remember that if the farmer does it wrong after being shown how, you have not communicated. During all of your discussions, listen. Learn to be a good listener. He may have an idea that will be useful to you. This is one way to get to know how people think. It is your business to know how, what and why people think as they do. He may shed light on the problem you came to help him solve. Should you make any promises or any commitments during the course of your discussion with the farmer, take notes and refer to them when back at your headquarters. Later keep your promises.

If the farmer happens to disagree with your opinions, respect his viewpoint. He may have good reasons for them. It may be the result of previous instructions which caused a failure. Find out why he disagrees, but be tactful in your efforts to convince him of your viewpoint. Never leave the farmer without giving him a chance to ask final questions. He may be shy; he may fear you will think him stupid. Relieve his fears of this when gaining his confidence. At this point it would be wise to give him any handouts you may have. It is not possible to have a handout for every visit, it may not be necessary, but where they can be used to strengthen the purpose of your visit and will leave a summary of your instructions they can be useful.

3 Follow Up

Will you need to make future visits to follow up on his progress? This should be known before leaving the farmer, so arrangements can be made for the visit. The future visit may be made with him at a group meeting. It is wasteful of your time to travel to his farm to see him if the same purpose can be accomplished at a meeting you are having in the near future.

Again you should be thinking of the next visit and of any materials needed. It would be a disappointment to the farmer if you forgot to bring some special seed you had promised him. Keep promises if you wish to keep his confidence. Make certain that he has your instructions for action clearly in mind. Only you can be sure of this. Should he make a request for assistance for a future date, note this in your diary and keep the date.

4. Record of Visit

A cumulative record of visits will prove valuable to you, or to an officer following you.

FARM AND HOME VISITS

Advantages

1. *A. I. gets first hand information about farmers' problems.

Limitations

1. Time consuming.

*A. I. (Agriculture Instructor) similar to Extension Worker

Advantages (Cont.)

2. Develops good will.
3. Builds farmers' confidence in AI.
4. Enables AI to locate leaders and cooperators.
5. Stimulates interest of farmers.
6. Visits are a source of news.
7. More practices adopted through this method.
8. Opportunity for family approach to problems.
9. Opportunity to make new contacts.

Limitations (Cont.)

2. Limits number of farmers contacted.
3. Contacts are limited by scheduling difficulties.
4. Neighbours not visited may be disappointed.
5. There is a tendency to visit some farmers repeatedly, neglecting others.
6. Cost is above average.

USEFUL HINTS FOR MAKING FARM VISITS

1. Human problems are individual and often are best dealt with individually.
2. Complex problems that are extremely important to the farmer and his family are not likely to be of enough interest to others to make a group meeting effective. In such cases a farm visit is more useful.
3. Confidential farm family problems are best dealt with individually and kept in confidence.
4. Success is often measured by a known standard. Your goal is not to produce standard farmers. They are individuals and must be respected as such.
5. A farm visit can be a success only when both you and the farmer are at ease with each other.

LISTENING

1. Be a good listener.
2. Save your advice until you have heard his full story.
3. Sometimes "Silence is golden."

QUESTIONING

1. You can betray attitudes by the way you ask a question. "Don't you believe....." may not be as good as, "How do you think....."
2. The farmer can profit from your advice only when it becomes his opinion.
3. You can get useful information and provide valuable assistance by asking proper questions.
4. You can direct the discussion through tactful questioning and save valuable time.
5. You can miss valuable information by implying the answer. "Don't you think....." may not be as good as, "What can you do when....."

ADVICE

1. You may be asked questions at first to test you.
2. Talk to them in the language and vocabulary of the farmer's family. Use common terms.
3. If they ask you what to do about a certain problem first ask what others have done about it.
4. Encourage them to make their own decisions, but it is wrong to use this to cover up your ignorance.

THE PART OF VISITS IN YOUR PROGRAM

1. The object of a visit is the family being served.
2. Visits can be helpful in the discovery of problems vital to your program.
3. Visits can reveal or help you locate materials and information for result demonstrations.

PLANNING VISITS

1. Have your note book and pencil ready to take notes when you visit.
2. Put a note of your planned visit into your calendar.
3. Always be sure the farmer knows what you're noting, and why.

THE RECORD OF YOUR VISIT

1. There are six items of a visit of which you should keep a record.
 - a. Name of the farmer
 - b. Time, date and place of visit
 - c. Purpose of visit
 - d. Observations you made
 - e. Help given to the farmer
 - f. Evaluation. What results did you get?
 - g. Follow-up required
2. Keep visit records in the order of the visits made and keep each family's visit records clipped together.

WHY WE MAKE FARM VISITS

1. All visits are made to help the farmer with his problems.
2. You visit them to know them, understand their situation, and to get first hand information.
3. If you arrange a visit, let the farmer know your reason for making it.

4. If the farmer asks you to visit, review the purpose of your visit with him at the outset.
5. Be prepared to shift your assistance to adapt it to existing conditions.

TYPE OF VISITS

1. Visits to encourage participation.
 - a. Face to face contact gets you the confidence of the farmer.
 - b. Encourages more farmers to come in to a program.
2. Visits to help farmer understand his goals.
 - a. Individual discussions help the farmer to recognize his own goals.
 - b. Helps to separate important from unimportant goals.
3. Visits to help farmer see other approaches.
 - a. Visits often cause families to make long term decisions.

HOW TO MAKE A VISIT

Points to consider:

- a. Look the farmer in the face.
- b. Your own views may not be the only possible solution to a farmer's problems.
- c. Respect the farmer's viewpoint with seriousness.
- d. Respect his time and busy periods.
- e. Look for something to praise him for (don't try flattery, he is not stupid).
- f. Praise makes good conversation starters - use it, but don't be diverted from the main purpose of your visit.
- g. Let the farmer talk. Let him know his views are important.
- h. Develop a sense of timing. A short, but effective visit is the most desirable.

OBSERVATION

1. Things you see do not appear the same as they do to the farmer. You have the benefit of many experiences.
2. Notice the physical surroundings:
 - a. What things are most important to him?
 - b. What he has to work with?
 - c. What is his financial situation?

RECORD OF FARM VISIT

1. Name of Farmer _____
2. Location of Farm _____
3. The visit - Time _____ Date _____ Place _____
4. Purpose of visit _____

5. Observation you made _____

6. Help given to the farmer _____

7. Evaluation or follow-up _____
Date of follow-up _____
What results did you get? _____

Signature of officer: _____
making the visit.

NOTES FOR "FARM VISIT" TALKS

A good approach to the farm visit presentation is similar in many respects to the one for demonstrations. It is divided into three stages: Before the visit, At the visit and After the visit. As in the demonstration talk, it is important to relate to the farmer's experience if you are to convince the trainee of the importance of details.

In explaining the cost factor and limitations of farm visits an effective approach may use a local example. To introduce the subject the following questions will help:

1. How many farmers do you serve in your locations?
(The average was 700.)
2. How many days a month do you have staff meetings?
(The average was two.)
3. Annual leave? (15 days.)
4. Sick leave? (Average 10 days.)
5. Work days per year: (300.)

In this example it may be seen that less than 100 work days can be used for making farm visits. The distance traveled by instructors to make a visit were as much as 20 miles each way. Considering the location, the trainees conclude that an average of two farmers was all that could be visited in any one day. On this basis an instructor would see each farmer every three years if he was to see them all. The punch question came when they were asked: "What would the farmer think if at the conclusion of your visit, you said: Thank you, Mr. Farmer, I will return to see how you are getting on in three years time?" The question needed no answer and the response was a loud laugh from the audience. It is such related incidents which drive home their significance.

NOTES FOR THE RECORD OF THE FARM VISIT

A simple record on a small card is sufficient. There are many good reasons for keeping a record. A few are:

1. It provides a permanent record of the visit. If 700 farmers are an average for each instructor, it would be quite difficult to keep all the details on the visit in your head. Why not let a piece of paper store this information for future use?
2. Records provide material for reports.
3. Help you to check your commitments.
4. Give the instructor the appearance of being businesslike.
5. Serve as a reference. They may prevent him from being embarrassed at a future date should he forget what took place at the time of the visit.
6. They are useful in following up.
7. They provide useful statistics.

The discussion period following the talk on visits has often run overtime. The talk usually requires about 40 minutes; the questions have required up to one half hour. It is good to have long question periods where instructors can unload their problems for discussion by the entire group. It makes others feel good to know that they are not alone with their problems. One question seems to stimulate two more.

Flannelstrips have been used on which the talk can be developed. Although the strips do not tell the whole story by themselves, they serve to provide continuity and prevent omissions from being made.

A handout is given which compares the advantages and limitations of visits and provides a few useful hints for making them. The visit evaluation sheet helps the extension worker to plan his individual visits.

AGRICULTURAL EDUCATION

(An Extension Rural Youth Program for Developing Kenya in a Changing World.)

The youth of Kenya today are similar to youth all over the world. Although the setting is different, their problems are basically the same. Daily news reports make it impossible for any of us to deny the fact that youth is a problem.

It has been said, "Seton finds some mischief still for idle hands to do". The rural youth of Kenya are idle today, not because there is nothing for them to do, but because this vast source of potential energy is not being guided into useful channels. In a developing country such as Kenya, much work and many useful activities remain to be explored. We must also understand that youth will be guided by undesirable elements if positive, worthwhile programs are not provided for their guidance. So youth, being the same the world over, will find something to do whether it be constructive or destructive.

Kenya today is an agricultural country. The land, the farms, the crops, the farmer, his wife and his children are a unit and cannot be dealt with as separate entities. The future development of agricultural youth is a great challenge for all of us in the Ministry of Agriculture and Animal Husbandry.

There is a way to accomplish this task. This method has been proven again and again during the past half century in over sixty countries around the world. Agriculture Extension Youth Clubs can be the tool with which to shape their future - and the future of Kenya.

Here are some of the major problems facing Kenya youth which we must consider when developing effective Rural Youth programs:

I. Problems Facing Farm Youth

A. Not interested in farming: The young African of today is generally not interested in farming as a career or in agriculture as a future occupation. Farming has little status in the minds of the African youth. This disrespect for agriculture may be the result of African culture, the Kenya school system, past agriculture policies, or other influences. Although this situation is improving, it still remains a serious problem and must be considered when a rural youth program is developed.

B. Considers farming as women's work: The African man considers cultivation of the land women's /and girls' work. Tribal customs and traditions, no doubt, bring about this attitude. A part of this attitude may be influenced by his inability to see cash income being derived from the growing of crops, and he only thinks of farming as a means of securing food for the family. The present trend in Kenya agriculture is that as more cash crops are grown by the African family, the men of the family become more interested in farming and do more of the actual work on the farm.

C. African areas must produce more saleable crops: Today four-fifths of the high potential land of Kenya is owned by African farmers who produce only one-fifth of the saleable export crops. As the many settlement schemes progress, the African farmer in all areas must produce more cash crops, both for domestic and export

markets. In most areas today, little work on the farm is accomplished by the African youth. Past experience in many countries indicates that extension rural youth programs can help to change this situation through individual farm projects. This is a real challenge to the Ministry of Agriculture, and youth can assist in producing more crops.

D. Ten percent only of the youth attend secondary schools: Less than ten percent of the qualified youth of today is enrolled in secondary schools. The lack of secondary schools for youth may become more critical in ensuing years because of the increasing number of students in intermediate schools. The vast majority of youth not attending secondary schools, as well as many of the secondary students, will in the future be engaged in agriculture. Herein lies another real challenge to the Ministry of Agriculture. The small percentage of youth enrolled in secondary schools must be considered when programs are developed through these schools.

E. Lack of off-farm jobs: The youth in Kenya today, especially those with little education, find few off-farm jobs available to them. Kenya is essentially an agricultural country and it is likely to remain so for many years to come.

F. Agricultural programs in schools have met with limited success: The Ministry of Agriculture has attempted to utilize agricultural instructors as teachers in the primary and intermediate schools. This teaching has included lectures and practical work in the school gardens. This effort, in general, has not been successful. The average teacher's negative attitude towards farming, the agricultural instructor's lack of status in the community and poor teaching methods have contributed to this failure.

G. Youth centers cannot meet agriculture's needs: The Kenya youth centers, operated by the Ministry of Social Services, are essentially day schools featuring academic and vocational subjects. Present trends indicate that as the number of intermediate and secondary schools increase in an area, the need for youth centers is reduced. The youth centers are making a real contribution, especially towards the delinquent youth, by teaching trades such as carpentry and tinnery. Few youth centers today are emphasizing agriculture as a subject and those that are teaching agriculture are, in general, doing a rather poor job. They lack the staff to teach agricultural subjects.

II. The Need for Grassroots Agriculture Training is Great

The need for agricultural and home economics training at the grassroots level is great. The Ministry of Agriculture has the trained staff to meet the challenge if the problem is properly approached with proven extension methods. The approach should be adapted to the needs of the people of Kenya.

III. These Problems Are Not Unique to Kenya

Sixty-two countries around the world have moved to meet this need for a grassroots program in agriculture for rural youth. Agricultural extension rural youth programs have again and again proven themselves as a useful tool in the development of the agricultural community and the economy of various countries.

An extension rural youth program can:

A. Teach rural boys and girls better farm and home practices which will contribute towards better nutrition, health and a higher standard of living.

B. Give each member first-hand, practical experience through projects in conducting a farm or home making enterprise, taking advantage of modern improved practices.

C. Teach young people the dignity of labor and respect for agriculture as a profession.

D. Provide activities which tend to reduce delinquency.

E. Direct the energy of the youth into proper and productive channels.

F. Produce food, feed and fiber for home and market.

G. Prepare young people to be better farmers and home makers in the future by developing farm and home making skills, leadership ability co-operative spirit, good citizenship and good character.

H. Prepare young people to be better citizens of the future by teaching them democratic practices and principles and how to work together for common benefit.

I. Teach young people the value of keeping records and how to handle money wisely.

J. Teach young people to assume responsibility and take pride in a job well done.

K. Develop interest and participation in health improvement for the individual and the community.

L. Progress with their friends in work, fun, play and fellowship through their local extension rural youth club. Rural youth club programs adapted to meet the need of the youth have proven popular and successful on every continent.

IV. How Can This Be Done?

A. Staff Training

The Ministry of Agriculture's field staff needs to receive training in extension methods and techniques with respect to extension rural youth programs. Returning U.S. participants, A.I.D. Extension Advisors and others are assisting with this training, as arranged by district agricultural officers. Staff members at farmers training centers are also giving high priority to extension rural youth training.

B. Volunteer Leaders

Volunteer leaders for the local rural youth clubs are still needed as the program develops and expands. Volunteer leaders are able to help the agricultural

field staff become more effective and also assist in localizing the clubs. Volunteer leaders are difficult to find, however, they are available and a start can be made towards the idea of enlisting unpaid volunteer leaders. School teachers, progressive farmers and students at farmers training centers are potential volunteer leaders.

C. Rural Youth Clubs Must Belong to the Rural People

The rural youth of the local club, as well as their parents, must feel that the local club is theirs and not a government club. The local agricultural instructor merely helps them with their club. They should run their own club, elect their own officers and work with their own leaders.

D. Rural Youth Club Activities Operate Best When Home and Farm Centered

The major activities of the extension rural youth program can be most effective if centered in the home and farm. A club boy might work on a poultry or garden project at the home. Parents must be involved and interested in the club member's projects if the program is to succeed.

E. Support for Rural Youth Club Program Needed At All Levels

The field extension worker in Kenya must receive support from divisional, district, regional and national officers to be successful. The field worker will need advice, training, visual aids and other material to effectively carry out an extension rural youth program.

Support from agricultural, civil and private organizations will continue to be needed as the program develops.

William F. Litwiler,
Rural Youth Advisor (USAID)
Ministry of Agriculture
Republic of Kenya

B. TRAINING OFFICERS FOR AGRICULTURAL EXTENSION PROGRAM PLANNING

One of the major problems of a developing country is that of foreign exchange to purchase the necessary equipment and supplies directly supporting the development and expansion of agriculture. Tractors and equipment are needed to increase the acreage of exportable crops. Fertilizers and chemicals for increasing production must be purchased from other countries. The only source of exchange is through the sale of agricultural commodities.

Kenya agriculture has in the past been almost exclusively composed of small subsistence farms. With independence, the development of cash crop production by Africans became necessary to prevent a serious decline in the Gross National Production, the greatest part of which had in the past been produced by Europeans. A plan for development of existing resources was produced by the Ministry of Agriculture to ensure a stable change over. The conversion of African smallscale farmers to cash crop operations was a tremendous undertaking. The implementation of the National Development Plan required thorough planning, down to the individual farmer. Field staff of the Department of Agriculture had limited experience in gearing a local plan to a national program. The need for planning at the district and local levels was urgent. A systematic approach adapted to East African conditions was introduced to meet this need.

Approach to Program Planning

The theme suggested for use at the training sessions is "Plan with People - Not for Them". A philosophy is needed to redirect staff thinking from a regulatory system to an extension type service.

To introduce the idea of including farmers in the planning of programs representative farmers can be selected to participate at each of the courses offered in the individual provinces. Planning has not usually included direct farmer representation at the Agricultural Department meetings, other than information collected during individual farm visits and at meetings. Farmers, like other individuals, enjoy having a hand at making plans which directly affect them.

The narrative on "Facts About Program Planning" points out how officers can be mistaken in identifying the farmers' actual problems. Staff assumptions may cause them to set unrelated objectives. The farmers' evaluation of past interviews at training sessions has often caused the field staff to change their perspective in relation to a actual problems and objectives. When scheduling training sessions for Program Planning, experience has taught us to arrange several details well in advance.

The Provincial Officer should be briefed on the concepts of planning. He may be requested to outline the agricultural situation to the trainees at the official opening of the course, providing guidelines for emphasis needed on the current principal crop and livestock problems.

Sample situations should be presented to help the trainees understand the process of determining the situation for a specific crop. The example used for the treatment

of the situation in the narrative may serve as a guide to extension trainers planning a course.

The presentation given to the trainers should be interrupted at each successive step of planning to permit divisional group meetings and reports.

To help determine the local situations farmer interviews can be held. The most satisfactory methods result from a tape recording where one staff member known to the farmers asks a series of questions to reveal their basic problems. The recording is played back to the trainees after which they are permitted to ask the farmers questions. A word of caution! The interviews are conducted for the sole purpose of collecting information. In no sense should they be considered as a learning situation for the farmers. If they have cause to fear being laughed at, they will tend to be close-mouthed and give answers they think are expected by the interviewer. Having forewarned the trainees of this danger interviews are usually successful.

From the situation and the interviews the problems were identified for which solutions were determined. Methods for solving the problems were selected by each group for their particular problems.

When all of the information has been assembled the written plan can then be started. It is suggested that a worksheet be made on a piece of paper the size of the final plan. A sheet of light cardboard $22 \frac{1}{2}'' \times 17 \frac{1}{2}''$ has been used for the final plan. The following headlines can be used across the long edge of the paper:

<u>Heading</u>	<u>Width of column</u>
Problem	2 $\frac{1}{2}''$
Objectives	3 $\frac{1}{2}''$
Plan of action	4 $\frac{1}{2}''$
When	1 $\frac{1}{2}''$
Number of days	1 $\frac{1}{2}''$
Person responsible	4 "
Evaluation	5 $\frac{1}{4}''$

Most trainees take pride in their plans and will be more apt to pin it up in their office if it is neatly written. The idea of using a worksheet first is recommended. When the worksheet is far enough along for the trainer to know the trainees have grasped the idea of the process, a sample developed by the trainer should be pinned up for them to see. It is a better scheme to have the trainees get the knack of drawing up their own ideas first, or their completed plans tend to be a stereotype of the trainer's model. After completing the drafted plan, a group discussion serves to provide useful ideas to others who may have omitted essential steps to follow.

Evaluation is a continuous process in program planning, consequently an eye to the future must be maintained throughout the plan development. The sample shows the column headings of a suggested program plan.

Appraisal of the Program Plan

On the final day of the course, the Provincial Officer should be encouraged to attend. If he has not been able to attend all of the meetings it is most important that he attend the last session to review individual plans, make his recommendations and ultimately give approval. It is directly to his interest to give this final approval since the sum total of the division and district plans make up his provincial program.

Follow-up Planning

Every trainer should make follow-up visits to the areas for which plans were developed. If it is not possible to visit each officer trained at his station, a random sampling is to be encouraged. The information collected from these visits serves to measure the success and shortcomings of the training. Additionally, valuable guidance can be given which will assist the planner in improving his plans for future years.

SAMPLE PROGRAM PLAN

Problem	Objectives	Plan of Action	When	Days	Persons Responsible	Evaluation
Farmers are not aware of the advantage of using hybrid maize seed and fertilizer, consequently many are still planting their native seed which yields about 5 bags per acre	To teach farmers to use hybrid seed and fertilizer to be able to get 20 bags	Staff meeting to organize details	Early Dec	1	DAO & staff	Feedback from officers. *Plans for Jan. 16 meeting discussed. Poster being designed to show value of hybrid seed by A/C
		Meeting to introduce idea of growing hybrid maize. Have native and hybrid seed cobs. Handout details for planting. Use farmer testimonials. Get estimate of seed and fertilizer needs.	Mid-Jan	1	DAO down thru AAI to farmers	*Meeting held Jan. 16 covers over 250 farmers on hand. *Maize planting demonstrations announced. *Farmers related experience with hybrid seed. Created great farmer interest. Get farmer commitments for seed and fertilizer needs for 2350 acres. Suppliers notified. Get seed and fertilizer commitments earlier next year. Suggest re-fresher course for TAs and ATAs.
		Maize planting demonstration - announcement by chiefs at market. Use posters.	Mar-1st	1	DAO thru AIs to farmers	Attend chief's meetings. Talk with local leaders and farmers. *DAO spoke at 3 chief's barazas** 175 posters placed.
		Conduct method demonstration on planting and fertilizing hybrid maize. Recognize the cooperating farmer. Plant half acre native seed for check plot.	Mar 15	1	DAO down thru AAI to a farmer's thumb.	*Mobile van called in to create interest. Questions and answers from the farmers. *Farmer was run at cost price. 12 mobile demonstrations operating. Radio announcement made about demonstration. Next year organize FTC course for farmers. Responses to mobile cinema indicate need for increased van use.

*Items indicate final evaluation results.

**Council or committee.

SAMPLE PROGRAM PLAN (Continued)

Problem	Objective	Plan of Action	When	Days	Person Responsible	Evaluation
		Farm visits to assist farmers with planting. Note problems.	April 1-20	8	AI and AAI	Report findings of visits to DAO. *TAs report hybrid seed plantings up 39% in area. *Rains created ideal planting conditions in good time. Next year use van before planting.
		Farm visits to check program. Note pest and other problems. DAO makes a few visits. *Suggest simple form of reporting.	March 15 to June 10	5	AI and AAI	View growth and note plant progress. (Compare notes to hybrid growth. *Rains appear to be normal. Test plots look promising. Farm plots appear normal. Dusting demonstrations. 15 insect sprays normal.
		Announce yield improvement meeting through chief. Use posters.	Aug. Sept. 1	1	DAO to chief	Note response of chief and a few successful farmers. *Farm tour conducted from 3 locations. Expand number of tours next year. *Posters attracted much interest. Expand use of posters next year.
		Hold meeting to inspect yield. Display yields. Make comparison of hybrid plots. Use farmer testimonials photos, recognition speech by public officials, press release, radio spots, announce expansion plan for next year.	Sept. 15	1	DAO supported by full staff	*Native test plots averaged 7 bags. Hybrid plantings averaged 18 bags. Test plots averaged 21 bags. Next year give more emphasis to storage problems. Attendance, satisfaction of adopting farmers, increased yield estimate. *DC awarded 50 farmers achievement certificates for yields of 25 bags. *Plan for coming year announced. *Radio station announced program a success. *PAO gave talk at final meeting. *Article appeared in the planning period. *Higher yields more than offset lower prices. *Encourage attendance at final meeting by VIPs.

*Items indicate final evaluation results.

Notes for Officer Training (Training Trainers)

Kenya is divided into six provinces which are in many ways independent of the national headquarters. The provinces carry out their own day to day administration and staff business, overall policies being set by the head office. A national training program in extension is a series of provincial programs when viewed from the

central office. It is not possible for a national training officer to conduct every extension training session to be given in the country, but a qualified person with adequate training could train officer staff to train subordinates in turn.

The nature and size of the country, the differences in ecological zones and the independence of provinces in scheduling their programs, all preclude a hard and fast national training schedule. These and other factors make it necessary to train trainers on a provincial basis. The advantage of this approach is the flexibility it provides. The disadvantage is the difficulty of planning and scheduling.

One week is about all the time that district and divisional officers can usually be away from their headquarters. Even then there may be periods when there are administrative matters which interrupt attendance. In such a short period of time only a part of normal Phase I course can be given. At officers' training, more time is required to present the information, develop the materials and allow for practice. It is estimated that two weeks would be required to properly train officers to conduct a full one week course. Major emphasis should be given at the officers' courses to the method demonstration use.

The suggested procedure is to introduce the use of the method demonstration first as a teaching device. In every session there will be some officers who have had no extension training. Those who have, generally will make no complaint about repetition. It may be advisable to use them as resource persons. By asking questions directed occasionally to them, good audience participation and more objective answers may be provided. One must be certain they can feed back the same material, of course it can be put into their own words. A narrative on the subject has proven useful.

After completing visuals the officers are given time to practice their presentations as they will give them to their trainees at their own sessions. A full day is required for the preparation of visuals and practice. Before the officers undertake the talk on demonstrations they should try their hand at developing a written plan. The second day of training is suggested for planning and giving demonstrations. This enables them to plan, give, evaluate and rate their own trainees. The demonstrations should be conducted as they were for instructor training. After an evaluation by the technician giving the course, officers are encouraged to take part in the remaining evaluations. The demonstration check chart is used as their guideline for evaluations.

WEEKLY EVALUATION OF CONFERENCE

Will you please help us to evaluate the session this week? You can help us to improve our future meetings. Circle the word which you think best fits. Please do not sign your name on this paper.

1. Did you get any new ideas from the program this week?

Many Several Some A few None

2. Did you find the program interesting?

Very much Quite a bit Not much Not at all

3. What parts of the program will be most useful to you?

(1) _____

(2) _____

(3) _____

4. What could we do to improve these sessions?

- a. Have (more) (less) group discussions, or about the same.
- b. Teaching periods (too long) (too short) or about right.
- c. Subjects taught (too many) (too few) or about right.
- d. Practicals (too many) (too few) or about right.

5. How did you like the total program this week?

Circle the word which you think fits best.

Excellent Good Fair Poor Useless

AGRICULTURAL EXTENSION PROGRAM PLANNING

Some Facts About Planning

Every successful businessman in the world today works from a plan of action. There are jobs to be done and actions to be taken which require planning. Farming is no exception; it is a business, regardless of the size. As officers in the Department of Agriculture, you have a major role in the business of farming. Although you may not share in the profits and losses directly, the success or failure of the farmers in the area of your responsibility must ultimately effect your personal welfare.

You are directly charged by the Department of Agriculture to advise, assist, teach and organize a program which is beneficial to the farmers as well as to your country. The sum total of all the farming in your area is a big business. The fact that your influence is only indirect makes your task more difficult. You can advise the farmer when he should plant his maize; you cannot force him to plant it when you want him to. Remember it is the farmer who decides if and when the seeds shall be planted.

We have some forces at hand which help to make our influence with farmers more active. To get maximum action on the farmer's part requires thorough planning. If you are an officer who arrives at the office in the morning and says: "Now what should I plan to do today?" It is obvious that you have not planned very far in advance.

There are more aspects of planning that must be clarified before we can define what extension program planning is. Every normal individual accepts plans more readily when he has a hand in making some of the decision affecting his action. You like to make your own decisions on how you will spend your money, buy your clothes, or choose your entertainment. The farmer is no different. He wants to decide which crops he will grow and how he will cultivate them.

You have one important advantage over the farmer. You have the technical know-how he needs. In many situations he may not be aware that he needs help; then your job becomes even more difficult. It must include him not waiting to use the advice you are able to give him. The old Maxim: "You can lead a cow to water, but you cannot make her drink" is the key to your relations with the farmer. If you can make him thirst for your information, you are prepared to satisfy his wants. The most effective means of developing this thirst for knowledge is through good, sound planning. It requires a systematic approach to get the farmers to know what they want and how to proceed to get it.

What is Agricultural Extension Program Planning?

It is an outline of activities to be followed by extension workers and farmers toward solving a problem the farmers want to have solved.

NOTE: It has been stated that the problems are those that the farmers want to have solved. Before problems can be solved it is necessary to have a mutual understanding of what the problems are. We are walking on dangerous ground when we assume we know what are the farmers' problems. At one program planning session, a group of agriculture officers decided that the cotton farmers' biggest problem was in harvesting the crop. An interview with several of the typical, local cotton farmers revealed that they were more concerned about getting insecticides at the right time and of being able to pay for them. Had the officer group proceeded to plan to solve the harvesting problem, the farmers would probably have lost interest in the final program because it would not have met their most important felt need. We must not presume to know what the problems are until we have the facts to support our appraisal. The use of a systematic approach will strengthen a program with facts.

The Scope of a Program

Before proceeding, there are some important questions to be answered. Who develops this program? It is a task of the extension worker to write down the program, but it must be developed with the farmers, to help them solve their own problems, using your assistance. Not only must it meet their needs, but it must meet those of the local area, district and the nation. Should these basic requirements not be met it will be your program and you alone will not be able to carry it through. Thus, a well planned program is broad-based and meets the needs of a large number of people. By proceeding one step at a time we can achieve that objective.

A system for Planning Programs

A large number of facts are needed before we can draw conclusions as to what are the problems. We need to know the situation before we can make an appraisal.

The situation

We collect and analyze facts to understand the situation. A study of the situation for one crop will serve as an example for a typical approach.

(Extract from the Kenya Development Plan, 1966-70, pp 53-55)

"Coffee has been one of Kenya's principal export crops for many years. It has enjoyed a considerable share of the world market. This share has been as much as 36% of the

total market and not less than 17% since coffee was established in Kenya. The world supply is in surplus, thus competition for the market is increasing. New plantings have been stopped in view of the situation, consequently any increased production must come from the acreage already planted.

"The high quality of Kenya coffee gives it an advantage in competition for the world demand. Unless this quality is maintained it may lose this advantage. Over half of the 250,000 small growers in this country have had little experience and training in improved coffee husbandry. The coffee societies' management have become lax in their grading and processing of the crop. Coffee Berry Disease is spreading from higher to lower elevations in the last few years and has destroyed more than 80% of the crop on a number of holdings. First quality crop is declining while inferior grades increase."

Analyzing the facts

Now let us analyze some of the facts.

If the farmers were asked about the situation they would probably say that coffee growing is becoming less profitable, and in part this may be a fact. A closer look at the situation will reveal other pertinent facts, possibly hidden to them. It is for this reason that the extension worker is needed. You can see things farmers are unaware of. They may not be in touch with world production figures. They may not realize that by increasing the amount of top grade coffee their profits on an equal yield can increase. They may not know how to increase top grades through cultural practices. Extension workers have the know-how. Farmers are not likely to be conscious of the effect of lower grades on the country's foreign exchange situation. These facts are known to the extension workers. For every situation there are basic facts which come to light when the situation is analyzed by the extension worker in cooperation with the farmer.

Identifying the problem

From the situation, the problems can be identified if the facts are properly analyzed. In the analysis above, it is clearly stated that top grade coffee production is declining. From the standpoint of the country, the problem seems to be a decline in foreign exchange due to decreased sale of premium priced coffee.

As an extension worker you realize that a decreased premium grade can be caused by poor cultural practices and processing. If the farmer has not been trained to use improved practices he fails to understand why his profits are declining. The role of the extension workers becomes quite clear.

When all of the problems have been identified the next step must be undertaken.

Establishing the objectives

We know where we are by studying the situation. The objectives tell us where we want to go. If grade one coffee is found to be 40% of the total production and we want it to be 100% that would be our objective - to increase grade 1 coffee from 40% to 100%. Although admittedly such a goal would be extremely desirable, it may not be realistic. There are several requirements for setting up good, realistic objectives. They must be attainable. We might be able to increase Grade 1 coffee from 40% to 60 or 70%, that would seem realistic, and consequently more attainable. Having set figures, it

gives us something to measure. Just to say: "Increase Grade 1 coffee", is not measurable. We can determine from production figures an amount such as 10 or 20% that is something measurable. The objective here is to increase grade 1 coffee production. The goal is to increase it some definite amount, 10 or 20%. If the farmers can be made to understand what we are aiming at and what is required to achieve it, the objective and goal are understandable. Every objective must be written so it can be understood by those who are to achieve it.

Before an objective will be achieved, it must be desirable. The fact that coffee is paid for on a grade basis and because Grade 1 coffee commands a higher price, you have good reason to assume that it will be desirable.

We can only be sure an objective is desirable when we are certain that the returns are in balance with the effort required to achieve that objective. Further, the increased returns must be wanted enough to cause the farmer to expend the necessary effort. It may require a great deal more effort and expense on some farmer's part to get mulching material for his plantation, if mulching is a requirement for producing an increased amount of high grade coffee.

Objectives which meet all goals are better founded than those which only partially meet a few. If increased top grade coffee production benefits the nation, the province, district, division and the farmer as well, there is more reason to believe it is to be achievable than if it only benefits the country at large.

When setting up objectives it must be kept in mind that their function is to change the situation from what it is to what is desired. There are three means of moving in the direction of achievement. We, as extension workers can change knowledge, attitudes and skills. Some times all three factors must be changed to achieve an objective.

Determining the solution

Solutions must relate to objectives and the objectives must relate to the problems. We are very likely to find some problems which have no immediate solutions. If world markets are flooded with commodity we may not be able to solve their problem. The only possible alternative might be to increase quality and efficiency, thereby becoming more able to compete with declining prices. We may not be able to eliminate East Coast Fever in cattle, but we do have a relatively effective control. Even then the alternative solutions must be economically practical. Furthermore, the solutions must be thoroughly understood before the desired results may be realized. This often requires educating the farmers in the use of the new methods. Our job as extension workers is to teach new and improved methods.

Selecting the methods

When known and practical solutions exist the methods of getting farmers to adopt the practices must be chosen. The more times people are exposed to a new idea through a variety of channels, the more likely they are to adopt the idea. This can be taken to mean that if you use radio, newspapers, meetings, and demonstration, the farmers are more likely to adopt the idea than they are if you reach them with a single method.

Farmer, must pass through five stages of adoption before the idea is accepted. If they are not aware of the idea, they will never become interested. If they are not interested, they can't evaluate its usefulness. If they don't evaluate it they will never try it. If they never try it, they certainly won't adopt it. These five stages of adoption are as inseparable as the links of a chain. Adoption takes place only after people have successfully passed through the five stages.

The written plan

The written plan for extension program planning is referred to as the Plan of Work or the Calendar. Which ever you prefer to call it, one important feature is that it must be written. It must also include the thinking of the farmers. Involve people in the planning, the operations, and the final evaluation, otherwise, it will be your plan and only yours. Design it so you can say; This is our plan, not mine. A good plan designates responsibilities. It tells who will be responsible for what, how, when and where. Consequently, we plan with people, not for them.

A good program

A good program can be measured by its characteristics. It develops leadership if you plan with people. The leaders come to the top when given the opportunity to participate. Their usefulness to you and the program is almost unlimited. A part of your job is to recognize leaders and to make use of their qualities. It has long been known to extension workers that the local leader has more influence in getting farmers to accept new ideas than has the worker himself.

A requirement of a good program is that it is family directed. In countries where women commonly cultivate the crops it would be a mistake not to include them in the program plans. Demonstrations in the field or courses at farmer training centers may be designed to include them. The importance of youth's influence must be considered when it is known that they are less resistant to change than their parents. Many new ideas are accepted by the parents after seeing their children successfully adopt practices. A program is destined to fail if the women and children who grow and harvest crops reject the idea of planting them.

Who participates?

Certainly the farmers must participate because it is their program. Among the farmers are the local farm leaders. They will be your most useful participants. You, as an extension worker will take a leading role in the plan of action. You give it direction. The district and provincial staff provide coordination by assisting you in making it possible to get seed, insecticide, fertilizer and other materials and assistance beyond your reach. They also coordinate activities from your level up to the national goals. Specialists are needed to help solve problems for which they are more capable and better trained. Others who may be needed are supply house representatives, chiefs, sub-chiefs and occasionally officers of the administrative branches of government. The more people you can involve the greater are the chances for a successful program.

Evaluation

Evaluation, the observed measurement of the planned program, must be continuous at every stage of operation. As each planned action is completed, the results

must be examined against the objectives of that action. If the activity was successful we should be able to describe why. Equally, if the action was not successful we should also be able to note the reasons. Only then can an extension service be truly effective.

Evaluation at any stage may affect the future planned program actions. More activity in the form of demonstrations may be needed; more information media may need to become involved to reinforce the presentations, or it may indeed be that the rate of programmed improvement is faster than anticipated. Source of the features of the plan can be modified as evaluation suggests.

Progress reports at all levels are based on these evaluations; in fact the evaluations are the progress reports.

The Action

The best written program plan is only a piece of paper until it is carried out by action. Hanging it on the wall for all to see creates an interesting room decoration, but it remains only that unless the actions planned are carried into the field. The program plan is your working plan and it must be worked to be valuable.

PLAN YOUR WORK - WORK YOUR PLAN.

C. EXTENSION TRAINING

Phase II

C. EXTENSION TRAINING - PHASE II

Phase II is the second course in extension training offered in Kenya. It is designed to extend the ideas presented in the first course for method demonstrations. Instruction is added on effective methods of holding meetings, use of local leaders, and audience management.

Phase II should be scheduled after officers and field staff have had an opportunity to experiment with the extension methods studied in Phase I.

SAMPLE PROGRAM FOR PHASE II - EXTENSION TRAINING

1st day	Registration and Introductions	45 min.
	Review of Principles of Agriculture Extension (lecture-discussion)	45 min.
	Understanding your Audience (lecture)	1-1/2 hrs.
	Reviews of Method Demonstration (lecture-discussion)	1 hr.
	Group Selections and Subjects for Demonstrations (work shop)	1 hr.
	2nd day	How Farm People Accept New Ideas (lecture)
	Develop Your Demonstration Plans and Visuals (work shop)	3 hrs.
	The Learning Process (lecture)	1 hr.
	Method Demonstration Plans (work shop)	1 hr.
3rd day	Audience Management (lecture)	1 hr.
	Demonstration Presentation (groups)	3-1/2 hrs.
	Polish Your Plans for Reproduction (groups)	1 hr.
4th day	Conducting 4-K and Farmer's Meetings (lecture)	1 hr.

4th day (cont)	The Order of Business (lecture)	1 hr.
	Selection of Officers - Acting on Motions (lecture-demonstration)	1-1/2 hrs.
	The Use of Local Leaders (lecture)	1 hr.
	Tour of the Experiment Station (field trip)	1 hr.
5th day	What is Money? (lecture)	1 hr.
	The Field Day Check Chart (lecture)	1 hr.
	Evaluation of Course (discussion)	1-1/2 hrs.

UNDERSTANDING YOUR AUDIENCE

In our efforts to understand the people whom we are trying to reach in agricultural teaching, we must consider the basic motivations of every individual. These are sometimes stated as the wants and fears of the individual. You can probably name several specific needs such as food, water, and protection. The list can be very long, but if analyzed, all of the items can be grouped under a few headings. Some sociologists may have different groupings, but the following will serve for our discussion:

Basic motivations

- Security (For self and family). This includes food, protection from enemies, clothing, warmth, health, shelter.
- Recognition or Response He wants his associates to recognize him as an individual, somewhat different from everyone else, but not too different. He wants response (or love) from the members of his family.
- Belonging He also wants to be considered a member of a group.
- New Experiences The factor that probably most sets man apart from other species. He is curious, adventuresome and very often not content with things as they are. He wants to try something new, it is this characteristic which enables change agents to introduce new ideas.

Each person follows two distinct behaviour patterns - his behaviour as an individual, and his behaviour as a member of a group. He may express one opinion if approached individually, but a different opinion if he is in the presence of a group.

The latter opinion may even vary if he moves from one group to another, for each individual belongs to many groups, formal and informal. For example: one person may be a member of the following formal groups:

Political party, cooperative, religious organization, business organization, community organization.

At the same time he may belong to several informal groupings, determined by:

Economic wealth, occupation, nationality, tribal origin, schooling, family, sex group, initiation group, age group, social group, sports organization. You can probably think of many others.

In any organization there is a rank of authority. The person who is an ordinary member of his community may be president of his cooperative.

Another person may be an elder in his tribe, but only an ordinary member of his cooperative. The relationships between these two men will vary according to the group situation in which they find themselves.

By way of analogy, you have probably noticed a line of authority in the farm chicken flock. In each flock there is one boss rooster. He is the "bwana Minubwa" and has the right to peck all other roosters and all of the hens. Another rooster will be "second in command". He has the right to peck all other roosters (except the boss rooster) and can boss all of the hens. Any other roosters fall into a definite position in the hierarchy. The hens, too, have a system of seniority with each hen having the right to peck all hens below her in status, but never may she peck a hen above her or a rooster. This is referred to as the "pecking order".

In human society a similar "pecking order" exists in all organizations. There is the story of the family man who was reprimanded severely one day by his employer. This damaged the man's desire for security and individuality. To compensate for this, when he arrived home at night he vented his anger on his wife, cursing her unjustly. The wife's self-respect was thus damaged, so she turned on the next lower person in the "pecking order", her 8-year old son. She slapped him soundly for some insignificant matter, leaving the boy with an injured ego. He was so provoked he went outdoors and kicked the dog (the next one down the "pecking order"). The dog could not take revenge on the father or the mother or the boy, because they outranked him. The dog's only recourse was to chase the cat up a tree. The cat escaped unharmed and by this time the chain of anger and vengeance had exhausted itself.

This entire chain of events followed a "pecking order" and resulted from one act of discord between the father and his employer. In each case, a hurt pride was avenged and each character re-established his position in the "pecking order".

The extension worker must be sensitive to the position of each individual in any particular group. A mis-step may cause hurt feelings and antagonism. Unexpected reactions from an individual can often be traced to his position within the group.

Development projects must give recognition to the leaders of the various groups in the community. Leaders of some groups may not be able to contribute to the

*Head man.

project but if they are ignored or antagonized they may contribute to the downfall of the project. Formal and informal leaders often provide valuable guidance in the planning stages. The leaders will often need to be called upon to execute your plans. If they have no particular direct part to play they can be named to honorary positions so that you will have their support if needed.

Finally, any proposed project needs to be aimed at meeting at least one of the "felt needs" of the individuals in your audience. If you plan to introduce a new planting method, you will need to relate this idea to the personal desires of the farm family. They will not change their old method just because an agricultural official advises it. But if they understand that this method will result in more income (security) an improved home (recognition), schooling for their children (security), or time saved for other activities (new experiences) your audience may be more receptive to your idea. Finally, most people like to be a little different from their neighbours, but not so different that they are subject to ridicule. Your change ideas must not put anyone on the spot.

Notes for Discussion Types of Audience

This discussion has aroused more interest than many of the sessions. Perhaps it is because these types of people are in any group. Our usual approach is to introduce the subject by asking the trainees to watch for types they have experienced at their meetings. Oddly enough, it seems to make no difference where this discussion is tried, the same types exist all over the world. It is interesting to find that almost everyone has experienced each individual type. The terms: Hair-splitter, eager-beaver, and fence-sitter should be explained, since their significance may not apply to one society as they might to another. Audience types is a part of one session, the other being situations and remedies. The type of person is described and explained, such as "eager-beaver". Then ask them if they have ever found this type of person at their meetings with farmers. In every instance, this has drawn much comment and considerable laughter. No doubt they have specific individuals in mind for each type. In discussing the latter, the situation is read then the trainees are asked for remedies. After they offer their ideas the possible remedy is read to determine how closely they agree. The combination of types followed by situation and remedies is a real interest-greater. The types described become standard for use in the discussion of possible remedies. Once again the value of audience participation is demonstrated when you have this session.

Audience Types

Attention-seeker

The individual who wants to attract attention to himself. He enjoys drawing audience attention away from the chairman or leader. He may use one or more of several techniques to accomplish his purpose.

Hair-splitter

This person is so affected by little unimportant details that he can't see the forest for the trees. He might argue that a glass is half empty when some one says it is half full, or if the instructor says: "Plant the seed 2" deep" he may want to vary it by 1/4 inch.

Eager-beaver

This one is always ready to go further than the limit. If the group decides to donate a \$ to a good cause he wants to give \$10. If the group wants to meet once a month, he wants them to meet twice. He volunteers to assist with everything and often cannot meet his promise.

Peace-sitter

This one can never make up his mind. He fears taking a step with his right foot for fear the left will not follow. He would rather put off a group decision until the next meeting if possible. If all members were as undecided no group decisions would ever be made.

Superior being

In his own opinion this one has yet to make his first mistake. He always has an answer for every problem of the group. He is easily offended if his opinions are not accepted. He uses the form "I" to excess. "I think..." "I would not do..."

Silent member

This one is always a problem at a meeting. No one ever knows what he is thinking, what he wants, or how he would do it. A roomful of an audience of his type is the "kiss of death of any meeting.

Talker

This one is often found at the back of the room. His remarks are seldom complimentary. If he is called on for an opinion he seldom has any contribution to make. Often he uses the stage voice whisper which can be heard by everyone, but not intended to be heard by the chairman.

Distractor

He usually finds some excuse to be moving about doing some unnecessary thing. Perhaps it is going for a drink of water, or somewhere else. If nothing else, he manages to tap his foot or drum with his pencil.

Sympathy-seeker

This one is always playing off the audience against the chairman. If the group votes to contribute \$30/- each for a good cause, he starts complaining about hardship. If they volunteer to give an hour of time to help with a 4-K club, he is working too hard already. He is easily hurt but always ready to accept any sympathy offered. He always feels he and his kind are being overlooked.

HOW FARM PEOPLE ACCEPT NEW IDEAS

Before an individual will adopt a new idea - whether it is a new practice, or a new crop variety, or a new food dish, he goes through an evolution of five stages:

AWARENES:

This is his exposure to the new idea. He may see it, or hear it from friends, or on the radio, or read about it in a magazine, newspaper or extension bulletin.

INTEREST:

At some later time he related the idea to his own situation and becomes curious about its possibilities.

EVALUATION

Before he will try the new idea, he asks questions of himself, of his neighbor, or of the agricultural field man. What is the value of the new idea for me? How much will it cost in money, time and work? What are the risks involved? Have any of my friends tried it? If the answers do not satisfy him he may never go beyond this stage. If his curiosity persists he will go to the next stage.

TRIAL

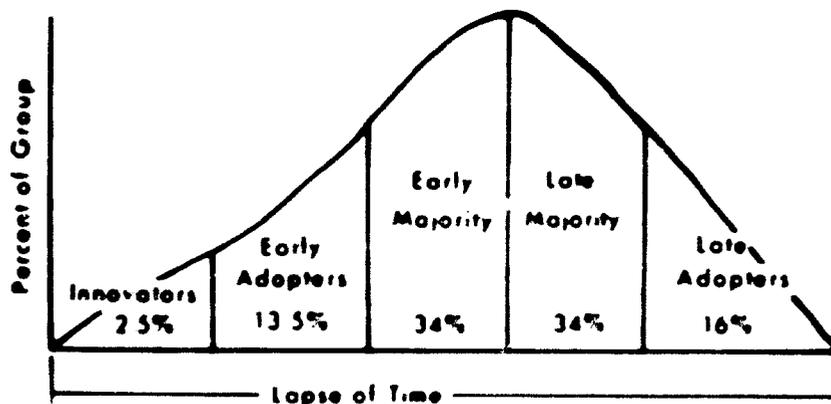
He indicates his willingness to try the new idea on a small scale. It may mean trying it on a very small part of his shamba, or on part of his herd, or by tasting just a little bit of a new food at a home demonstration.

If the trial is satisfying, that is, if it promises something better than he has had in the past (in terms of higher yield, or lower cost, or better quality, or less work, or some other type of satisfaction) he will probably move to the final stage.

ADOPTION

At this stage the new idea is incorporated into the person's regular routine. He is also likely to try to sell the idea to others.

The speed with which people move from the awareness stage to the adoption stage varies from person to person and depends upon many factors. Some people may have more exposure to the new ideas through radio, newspapers, and meetings. Some may be in a better position economically to try something new. Some people are more receptive or eager to try new things.



In general, the normal curve of adoption looks about like this for large groups of people under average circumstances. The curve shows approximate division of adoption groups. In small groups, segments may merge and it may be impossible to identify clearly separate classes of adopters.

The innovators are the small percentage of a group who are willing and able to try something new. They should be sought out by the agricultural instructor, and encouraged in the initial stages.

These "pioneers" open the door for the subsequent adopters. Innovators usually have one or more of the following characteristics: more education, more widely traveled, more contact with agricultural institutions and specialists, higher social status in the community, more access to the mass media, belong to several organizations.

Notes on How Farm People Accept New Ideas

This session usually requires about 1-1/2 hours to conduct. It has stimulated rather lengthy discussions at the conclusion, and is rated high by the trainees.

One instructor opens with a story to establish an idea:

There was an up and coming extension agent who had outstanding success in getting farmers to his meetings with the exception of one holdout. He was old Joe. Joe had never attended a single one. This bothered the ambitious extension agent to no end. One day he thought; "I will drop by and see Joe today". Arriving at the farm, the worker was faced with a completely rundown yard and house. The agent explained that he wanted to have a talk with Joe about his farm. Joe seemed agreeable and asked him what he would like to see. The extension worker said: "Let's have a look at your cows" Joe replied: "They are right over there in the shed. Come along and we will have a look". The cowshed looked even more rundown than the house. A good puff of wind might easily have flattened it, but Joe still used it. Standing at the stalls were two very scrubby looking cows and a bull which had an ancestry of several breeds. Being the diplomat, the young agent said: "How much milk do you get from these two cows, Joe?" "Oh, about two quarts I guess, but it's enough for me". "You know, the agent said, if you would get rid of these two animals and buy one good one, you could get six times as much milk and have some left over to feed a couple of pigs. And that bull there, you don't need him at all. Farmers are using artificial insemination these days, so a bull is not needed by every farmer. Besides that, you get much better grade calves." "No," said Joe, "both my father and grandfather kept animals like them, they were good enough for him, so they are good enough for me".

The agent was not about to give up at this point. Viewing the maize field he saw a miserably poor stand. There was no uniformity, the plants looked diseased and there was just about everything a good farmer would not want in a maize field. "Joe", he said "Why don't you get some hybrid seed and grow a real crop of maize?" "Well, said Joe, "My father planted this kind of maize and my grandfather did before him, so it is good enough for me".

A visit to the poultry coop and the pig pen resulted in the same wall of resistance. Finally the extension agent was ready to call it a hopeless endeavour. He attempted to excuse himself by mentioning an appointment he had to keep. Joe said: "Mr. Agent, you have been kind enough to pay me a visit, the least I can do is have you in for a cup of coffee". "O.K." said the agent, "but I have only a few minutes". The house inside was a real mess. Dirty dishes were on the table and in the sink. Joe had to wash out the coffee pot and two cups before he could make and serve the coffee. As a last effort the agent made one more try. "Joe", he said, "Why don't you get married? A wife could tidy up the house and give you more time on the farm". "No" said Joe, "my father never got married nor did my grandfather, and that's good enough for me".

Although we have not experienced an uproar from the trainees in most cases, the point is well taken. When they are asked if there are any "old Joes" in their districts there is a unanimous "Yes". There are Old Joes in every country. This story leads into the talk on How Farm People Accept New Ideas.

For every new idea there is a time lag before it is adopted by farmers. It was at least fourteen years before the idea of hybrid maize was adopted in the U.S. Soil testing for fertilizer needs required 20 years. Many farmers have not adopted this idea yet.

Extension workers are change agents. You work to change farmers to adopt new ideas. This discussion is about How Farm People Change. Two processes work to help bring about change:

1. Diffusion - The period during which the idea is being spread
2. Adoption - The period between the time people hear of the idea until they put it into practice.

Before people adopt a new idea they pass through a series of stages.

The five stages can be nicely developed using an analogy. These are underlined on the board as it is developed. To explain these stages the story of a farmer will assist.

A part-time farmer lived just outside a small village. He worked several hours each day for a shopkeeper. Each day he traveled the same route to and from work. One day he noticed a neighbor giving his cow a bath. It seemed unusual thing to do, but made no difference to him. Again on the next Saturday the farmer was bathing the cow. Out of curiosity our farmer called out and asked the other farmer why he bathed the animal every Saturday. The farmer explained that he was not bathing his animal, but spraying it for ticks. This was the first time our man had been aware that cows are sprayed for ticks. He had now reached the first of the five stages necessary for adoption of an idea - awareness. It was no concern of his that his neighbor sprayed his cows for ticks and he knew nothing else about it, but he was now aware that people spray their cattle. The picture changed when this man's daughter was married. As a bride price he received some good grade milk cows. On the following Saturday he again saw the farmer spraying his cow. This time he stopped to talk. He enquired about the cow, the ticks and the reason for spraying them. His neighbor explained that ticks carry sickness that either kills cows or makes them so sick that they produce little milk. This information gave our man a start. "What if my cows get sick". "What if they should die." These and many other questions ran through his mind. He had now reached the second stage of - adopting - interest.

He was interested because it could seriously affect his wealth.

Returning from work that afternoon he stopped again to talk with his neighbor. He had many questions to ask his neighbor. "How much does the spray material cost"? "From where do I get it"? "What does the spray pump cost"? "How do you mix the material"?

He had now progressed from the stage of awareness to that of evaluation. He was trying to make up his mind. During the conversation his neighbor had offered to lend him the spray pump. The farmer got the name of the spray material and decided to buy it the next day. That afternoon he stopped again at his neighbor's house to borrow the pump. With the instructions for using it he set off home.

As tired as he was from the long walk home, he was in no mood to wait any longer. Without any delay he mixed the spray as he had been instructed. He felt a bit clumsy at first, but he did a rather thorough job of it. The farmer had now reached the next stage towards adoption - trial. Returning from work the next evening he walked somewhat faster than usual. He had one thing in mind. "Had the spray killed the ticks?" He hurried to see the cows. In looking at them, he noticed that almost every tick had dropped off. There were a few in some rather hidden places. He asked where he could get help and was told of the local agricultural instructor (often known as the extension agent in some countries). The next day he looked up the instructor who went with him to his farm. The instructor gave him more complete information on how to spray the cows. The next day there was not a tick to be found on the animals. He had now tried the skill.

He knew he could do the job, but wondered how it would affect his animals. After several weeks of spraying, he was convinced that the animals looked better. They had increased their milk production - enough in fact to more than pay for the cost of the materials. He concluded that it is not only important to spray, but it is essential. When he received his next pay he bought a spray pump. When the agricultural instructor dropped in to check the results of the spraying, the farmer said: "I think that is a good idea of mine to start spraying my cows". When he saw other cattle owners after that, he would stop to discuss cattle problems with them. Somehow he would manage to bring up the subject of the importance of spraying them for ticks. Now he had reached the fifth stage known as adoption. He was completely sold on the idea and wanted to tell others about it. He had truly adopted the idea.

This little story clearly points out the five stages of adoption:

1. awareness
2. interest
3. evaluation
4. trial
5. adoption

It applies to every new idea introduced; buying a car, a new radio, or even a new shirt, requires that the adopter pass through them before adoption takes place. These stages are as inseparable as the links in a chain. Should any link (stage) be broken, adoption will not take place. When a farmer passes from the Awareness to the Interest stage, the instructor must follow through. To drop him at any one of these stages is to miss getting him to adopt.

Speed of adoption

Several things effect the speed at which practices are adopted.

1. Cost of return

Practices which are high in cost tend to be slowly adopted. However, if the cost is high but gives fast returns the practice is adopted faster than those requiring long periods before returns come. Getting people to plant tree crops is difficult because of the long wait for returns, even though eventually they may bring good returns.

2. Complexity of the Idea

New ideas that are simple are adopted faster than complicated ones. It is easier to get a man to adopt the idea of increased fertilizer rates than to get another to adopt the new idea of using fertilizer when he had never used it before.

3. Visibility

Ideas showing easily visible results are adopted faster than those not so visible. Irrigation shows visible effects as compared to the idea of rodent poisoning where the dead animals die in their burrows. The results in the latter are not as readily visible and are slower to be adopted.

4. Divisibility

Ideas which can be carried out on a trial basis are much more readily adopted than those that cannot. It is easier to get farmers to adopt the idea of fertilizer use than those of building milking parlors. Fertilizers can be tested on trial plots while the milking parlor must be a complete unit with no opportunity for a trial.

5. Compatibility

Ideas which are consistent with existing ideas and do not clash with present customs are adopted more easily than some others. It is inconceivable to think you could introduce pork production to a Muslim who cannot by religion eat, or handle pork. Contour planting, where the custom for hundreds of years has been that of planting up and down hill, is a difficult one to sell as an idea.

Categories of Adopters

When a new idea is introduced to farmers some seem to take hold and adopt later and still others at a later period. Some may never adopt. About 2-1/2% of the people adopt within a reasonably short time. These are the Innovators - the first people to make a change, the first to accept a new idea. For every good new idea a few people are first to try it. Here are your local leaders. You need to keep your eyes open for them. If there were no innovators no new ideas would be accepted.

The innovators open the door for the next group who are known as the early adopters. They compose about 13-1/2% of farmers. The early adopter is somewhat more cautious than the innovator. He wants someone else to get his feet wet first. He would like to see the idea tried before he takes a chance on getting hurt. With him "seeing is believing". Once convinced, he is ready to go.

At this point we have included 16% of the people. There is still the largest segment of the people who have not adopted up to this point. As the early adopters accept, another group, the early majority are beginning to become interested after a long period of awareness. They begin to realize that the early adopters are profiting from the idea. Not wanting to be left too far behind, they begin to jump on the wagon.

Early majority compose about 34% of the farm population. With this group adopting we now have some 50% of the farm population who have accepted.

There must be some hope for the remainder. Another group of 34% known as the late majority are those who drag their feet in resisting change. They have a reason: they cannot afford it, the weather was not right, or anyone of numerous other excuses. Competition may force them to change their minds. They are slowly convinced, but not until 50% of the people have adopted.

There are 16% of the farm people who are the laggards. Some of these never do get around to accepting. These are the "old Joes". Maybe their fathers and grandfathers did it the old way so it is good enough for them. It may be that they never became interested or even aware of the new idea. Whatever the reason, they are the last to adopt. Some never do, no matter how much time is spent trying to get them to change.

Knowing how people adopt, we can better use our time and effort when introducing new ideas. Some questions will help us to decide.

1. With which group would you spend the most time in the initial stages of introduction of a new idea?
2. With which group would you work next?
3. How much time would you spend with the late adopters?
4. Bear in mind that the five stages of adoption influence each group. It is all a matter of planning to use your time to get the best results.

THE LEARNING PROCESS

When a human being is born, he comes into the world with two types of heritage - biological and cultural. In addition, he possesses certain reactions which are called instincts. His biological heritage, more commonly called heredity, comprises his physical capacities and his sense (sight, hearing, taste, etc). His cultural heritage, usually referred to as environment, is the situation into which he is born and includes the society, the culture, the family and his physical surroundings. From the moment the child is born the learning process begins and is dependent upon his instincts, his heredity and his environment.

In this discussion, we shall study the child's behaviour, since it may be easier to understand. It must be remembered, however, that the learning process becomes more complex as a person matures, because of the knowledge he has already acquired and the limitations imposed by his environment.

The child's natural instinct to cry serves as the starting point for the learning process which will continue throughout his life. When the baby cries, the first reaction of his mother or nurse is to give him milk. After a few experiences the child learns that he can obtain food by crying. During his first few months of life, crying is his only means of expression and he finds that this also serves to provide him his other wants.

His mother at the same time, learns to distinguish the baby's needs by the time and the manner in which he cries. Both have learned by a method called association. The child soon acquires other knowledge as he finds the same person attending to

his needs. Before long he learns to recognize the person who looks after him (usually his mother) through his inherited senses of sight, smell and touch.

As the child becomes older he learns to drink from a cup. This is an act of the learning process which involves considerable trial and error. His first efforts are usually unsatisfying as the milk is spilt down his front or into his nose. After several trials he eventually finds the way to his mouth. As soon as satisfaction is obtained he learns what has caused it. He undergoes similar experiences when he tries to dress himself or tie his shoes. The results are often frustrating at first, but eventually the child usually learns.

Another form of learning takes place by the repetition of new knowledge or skill. Once the child has learned to find his mouth with the cup, he fixes this ability by repetition so that after many experiences he no longer needs to think about the operation. He has trained his muscles in a motor skill. Motor skills are also the process by which we learn to ride bicycles or to tie neckties. This type of learning is classified as habits and skills.

The mind can also be trained to fix knowledge through repetition. When the child first learns to count he requires patience and repetition. Once the numbers are placed in their right order they can become a permanent part of his knowledge if he repeats them often enough. He can recall them without mental strain by the process called rote. "Memorizing" may be a better word. This is the way in which people learn songs. Much of the material learned in school uses this same process.

The learning processes of association, trial and error, habits and skills and rote are involved singly or in combination in all learning processes, whether they be new skills, knowledge or attitudes. In all cases learning does not take place unless there is satisfaction or discomfort involved as a result. (The child learns not to touch fire because of discomfort associated with his first experience).

The inclination to learn seems to decrease after a person reaches maturity. There is much evidence to show how quickly children can learn new languages, or new skills, or new games. As people grow older there is both a mental and physical resistance to change the knowledge, skills and attitudes which have become imbedded in their make up. The mirror demonstration used in this extension training course is a vivid example of this. Although the practical exercise of the demonstration seems very simple at the outset, the introduction of the mirror usually causes complete confusion for the participant. Similar tasks may have been done before, but here the method is altered slightly. This results in frustration, both mentally and physically, as the participant attempts to do something in a slightly unfamiliar manner. This, however, is very analogous to the situation in which the farmer or his wife find themselves, when attempting a new method of operation. The change advocated by the Agricultural Instructor may be relatively minor, but if the first attempt by the farmer leads to mental or physical frustration he may abandon any further effort to adopt the practice.

It is at this point that assistance and encouragement are most vitally needed. The mirror demonstration also indicates that once the initial frustration is overcome, the task can be performed with more success at each attempt. Originally this is learned through trial and error. From the second attempt onward, one learns through developing new motor skills. Once satisfaction is derived there is something

of a challenge to continue developing the skill. This again must be considered when inducing farmers to change their traditional methods of operation.

In developing new skills among the farming audience, the trial and error method is usually the first step. If, however, the new practice can be adapted to a practice already known, the process of learning becomes easier through association. (It is easier to learn to ride a motorcycle if one already knows how to ride a bicycle., If satisfaction is derived from the new operation this can be developed into a habit or skill through repeated practice.

With a person's cultural heritage or environment, we are confronted with many obstacles to the acquisition of new knowledge, attitudes or skills. A person's environment, regardless of where he may be in the world, involves written and unwritten rules concerning customs, traditions, religious beliefs, moral standards, prejudices, all the social laws. All these may affect a person's readiness to accept new ideas or practices.

In view of the difficulties in learning a new practice, a person may seek an excuse for not adopting it. This excuse may be found in the many "rules" of his culture and his society. Here is where one encounters the argument of: "This is how my father did it, and his father before him." Or: "We have always done it this way." A person may want to improve his lot but not at the cost of being rejected by his neighbors. Whatever new ideas are introduced, one must take care that they do not conflict with the environmental rules of the individual or his society.

AUDIENCE MANAGEMENT

When people are given an opportunity to participate in group discussions, demonstrations or meetings, situations often arise which make it difficult to manage them effectively. When a leader allows his audience to get out of hand he is no longer the leader.

Below are a few of the situations that arise and some suggested remedies:

Situation	Possible remedies
1. A member of the audience asks a good related question that will be answered later in your appearance.	Thank the person and tell him that his question will be answered before you have finished; then make certain you do answer it.
2. A member asks a question unrelated to the work of the day.	Tactfully inform this person that although his question is a good one it might be better to discuss it at another meeting. Offer to talk to him about it after the meeting.

Situation	Possible remedies
<p>3. A member suggests his own method is superior to yours being demonstrated. (There is a possibility he may spoil your presentation.)</p>	<p>Explain to him that this is not your own method but has been developed by the Ministry of Agriculture backed by experience and research. Further until you have been given proven information by the Ministry of Agriculture you will continue to use the present practice. Assure him he should still use his own method if not convinced.</p>
<p>4. A member asks a question. Some may not have heard it.</p>	<p>Your answer should be given only after you have repeated his question. This gives you a double advantage:</p> <ol style="list-style-type: none"> a. Permits all interested member to hear. b. Allows you thinking time, avoiding hasty, impulsive answers.
<p>5. A few member of your audience hold individual conversations during your demonstration or meeting.</p>	<p>This is a danger signal to you. Either your work is uninteresting to them or the individuals concerned need more importance.</p> <ol style="list-style-type: none"> a. Ask one of them a question about their work. b. Call their attention to an important step now in progress. c. Engage one of them in a manual part of the skill being demonstrated. d. In general, give them some importance or attention.
<p>6. Someone asks you a question closely related to the work of the day but for which you do not have the correct answer. You feel your reputation is at stake.</p>	<p>Admit you do not have the answer at present. No one has all the answers to everything.</p> <ol style="list-style-type: none"> a. Promise an answer in the near future and then keep your promise. b. Suggest you will make an effort to find the answer and then do it. c. Ask if any member knows a possible answer, or who might know of someone who does.

Situation	Possible remedies
<p>7. Members arrive late (or your work causing a disturbance by greeting their friends after your demonstration or meeting has started.</p>	<p>Make it known ahead of time that you plan to start on time. Request your audience to be there on time.</p> <ul style="list-style-type: none"> a. Use a gong or other warning signal. b. Use audience sympathy as it applies to their own time and convenience.
<p>8. Your demonstration or meeting seems to be going too slow (a few of the signals are:</p> <ul style="list-style-type: none"> a. a restive audience b. Individual conversations c. Long pauses occur in your delivery. 	<p>It may or may not be your speed of delivery.</p> <ul style="list-style-type: none"> a. Speed up the rate of progress. b. Stop belabouring small points. Involve everyone in an activity if possible, looking at specimens, trying an operation, assisting someone else, passing out handouts, picking up tools etc. c. Practice your work so as to be able to have a running comment during the demonstration.
<p>9. A noisy tractor or lorry passes nearby where you are giving your work.</p>	<ul style="list-style-type: none"> a. Pause long enough to have it pass by. b. Make some comment about it and then: "Now back to your demonstration". <p>Choose your site and time to avoid these distractions if possible.</p>
<p>10. Members of audience appear not to understand a point.</p>	<p>It is dangerous to assume that people know something. You must be certain. Avoid saying: "I think we all know how to do..." Say: "Is there anyone who does not understand or feels he cannot do....."</p>
<p>11. An attention seeker wants the members to know he is an authority on the subject.</p>	<p>An audience would resent your ridiculing him but if he is given reasonable time, the audience will give you their sympathy, when it becomes clear what he is doing. Point out that we must move on in the interest of time of the audience.</p>
<p>12. A member of your audience heckles you in undertones inaudible to you.</p>	<p>Solicit his opinions. Invite him to present his views.</p>

Situation	Possible remedies
13. A member asks you a question that runs on to such length that the identity of it is lost in a long speech.	Ask him to put the question in a few words, understandable to the audience.
14. A member of your audience seems to want to argue with you.	<p>Keep cool, you cannot win an argument. Stand on the authority of the Ministry of Agriculture. Use it as your authority. Never challenge them from a personal stand.</p> <p>Occasionally the question can be thrown back to the audience for their comment. This method must be carefully used.</p>
15. Nonsense questions. Some questions are both unrelated and of no use. Such as How many potatoes are there in 100 lbs?	Such questions consume time and are of no use. Be diplomatic. Do not feel obligated to have an answer.

CONDUCTING A MEETING

HOW TO LEAD A MEETING

I. Open the meeting

- Put group at ease.
- State objectives and explain plan.
- Arouse interest.
- Start on time.

II. Present or get facts and ideas

- Make sure facts are clearly presented.
- Stimulate and direct discussion
- Keep discussion moving on subject.
- Encourage the thinking of everyone in the group.
- Use the blackboard or other visuals.

III. Weigh facts and ideas

- Help group weigh and analyse ideas.
- Get group acceptance or agreement.
- Summarize frequently.
- Avoid experting.

IV. Sum up

- Summarize agreement or conclusions.
- Indicate action needed or action to be taken.
- Make follow up assignments.
- Close on time.

Preparing for Meeting

1. Determine objectives.
2. Develop plans.
3. Announce meeting.
4. Arrange site and materials.

How to lead a meeting

1. Open the meeting.
2. Present or get facts and ideas.
3. Weigh facts and ideas.
4. Sum up.

Conducting meetings

Some meetings succeed while others fail. Well planned meetings are more apt to succeed than those poorly planned. An outline is provided here to serve as a guide with your planning. If you have no formula which is better, you may find this one helpful.

Preparing for a meeting

1. Determine the objective:
 - a. What do I plan to accomplish with this group over a long period of time?
 - b. What specific things do I propose to accomplish by this particular meeting that would contribute toward my general objective?
 - c. What will I present as the objective of this meeting from the viewpoint of the group (adapted to their needs).

Develop your plan

1. Select the group to attend.
 - a. Invite proper sized group.
 - b. 4 to 40 optimum size.
 - c. Plan for group to have the authority to make decisions and to have them prepared to make them.
 - d. Each member to contribute as well as to receive.

2. Check availability of member audience.

- a. Do not assume audience will be there, check ahead.
- b. Avoid necessity of having substitutes.
- c. Avoid meeting date conflicts.

3. Set time, place and date.

a. Time - consider:

- | | |
|--------------|------------------|
| • season | • transportation |
| • timeliness | • traditions |
| • weather | • customs |
| • roads | • urgency |
| • holidays | • conflicts |

4. Determine type of meeting to be held:

- a. Informational
- b. Instructional
- c. Action planning.

Announce the meeting

1. Plan meeting notice.

- a. Objective and subject.
- b. Date, time, place.
- c. Who calls the meeting.
- d. Statement of purpose.
- e. Who is to attend.
- f. Time allotted for meeting.
- g. What is expected of attending audience.

2. Determine necessary materials.

- a. Send out list of materials to be discussed.
- b. Minutes of last meeting, if any.
- c. Organizational or functional charts.

3. Prepare and issue notice and materials.

- a. Issue sufficiently in advance.
- b. Indicate what receiver is to do with materials.

4. **Make assignments.**
 - a. **Special reports.**
 - b. **Indicate specialists needed.**
 - c. **Take minutes.**
 - d. **Arrange for calls and messages.**
 - e. **Provide directions to place.**
 - f. **Hotels, transportation, eating, etc.**
 - g. **Report advance information to press.**

Arrange place and materials

1. **Have equipment and materials ready.**
 - a. **Use meeting readiness check chart.**
2. **Check physical facilities:**
 - a. **Seating.**
 - b. **Lighting.**
 - c. **Ventilation.**
 - d. **Audience comfort.**

How to lead the meeting

1. Open the meeting.
 - (i) Put the group at ease.
 - a. **Be at ease yourself.**
 - b. **Tell the story.**
 - c. **Relate to current events.**
 - d. **Use well modulated, low voice.**
 - e. **Make introductions.**
 - (ii) State objectives and explain plan.
 - a. **A clear statement starts off the meeting with proper direction.**
 - b. **State overall objectives.**
 - c. **State immediate objectives.**
 - d. **Let the group make every decision possible.**
 - (1) **Who will take the minutes?**
 - (2) **How long will the meeting last?**
 - (3) **What about tea breaks?**
 - (4) **Are individual notes necessary?**

- (5) Are questions permissible?
- (6) Are special speakers needed?
- (7) Will individual assignments be made?
- (8) What form of summary will be given?
- (9) Will mimeo summaries be mailed to members?

(ii) Arouse interest

- a. Develop friendly attitude toward the group.
- b. Establish a need for their thinking and cooperation.
- c. Associate objectives and subject with the group's experience.
- d. Point out personal benefits.
- e. Use friendly competition.
- f. Use visuals, etc.

2. Present the facts

(i) Present the facts clearly

- a. Clear thinking precedes clear expression.
- b. Present one idea at a time.
- c. Relate ideas.
- d. Use language for group level.
- e. Get facts on blackboard.

(ii) Stimulate and direct discussion.

- a. How would you do it in your district?
- b. Where would you get the information?
- c. What evidence is there that this is true?
- d. Give us an example of what you mean.
- e. If this is true, what shall we do?
- f. When shall we put it into effect?
- g. Who is most concerned in your district?
- h. How would Mr. X's idea work?
- i. Why is it necessary to do this?

NOTE

The above questions are samples of how to encourage discussion. Your questions are better, but design them to fit the situation and to bring out the facts.

(iii) Keep discussion moving.

- a. Use chalk board for the objectives.
- b. Re-stating the objectives.

- c. Asking questions.
- d. Appoint someone to study questions which are doubtful as to use.
- e. When the purpose of the meeting is accomplished bring it to a close.

(iv) Encourage thinking by every individual present.

- a. Do not allow one or two persons to dominate the discussion.
- b. Keep a participation chart.

3. Weigh the facts.

(i) Help the group weigh the facts.

- a. Condense ideas into short statements.
- b. Weigh actions against objectives.

(ii) Get group acceptance.

- a. Use blackboard to list objectives.

(iii) Summarize frequently.

- a. "Let's see where we are now"
- b. Use questions to sharpen the facts on the objectives.
- c. Use questions to steer the group.

4. Sum up.

(i) Summarize agreements or conclusions.

- a. The chairman is responsible for "nailing down" the conclusions.
- b. Get down in writing the cold facts concluded.

(ii) Indicate the action needed.

- a. What is going to be done about it.
- b. Where are we going from here?
- c. Get the group to indicate action needed.

(iii) Make follow-up assignments.

- a. Who is to do the work.
- b. Write down the assignments.
- c. Appoint a committee for further study.
- d. Request special reports from individuals.
- e. Write up, distribute and file minutes.
- f. Report the meeting to the press.

- g. Inform absent members of actions.**
- h. Assign responsibility for future meetings.**

(iv) Close on time.

- a. Think of your audience**
- b. If it runs over time, excuse those who must go.**
- c. Unfinished business can be carried on at future meetings.**
- d. Do not plan to do more than is possible in the time scheduled.**

HOW GROUPS PROPOSE AND TAKE ACTION AT MEETINGS:

One of the main purposes of meetings is to conduct business. Any action expressing the will of a group is considered to be business and requires a uniform expression on the part of the members. A standard procedure is available for use at meetings that simplifies and expedites action. This can be done through the process of proposing and passing a motion. A motion is a proposal by an individual of a group for the members' consideration and action.

To give an example, let us study a typical group action. During the course of a meeting a member was discussing the benefits to be gained by the group from a visit to the nearby agricultural experimental station. From his report others agreed it would be a worthwhile tour. There are two possible sources for group action:

- a. The chairman of the group can call for a motion by saying: "Would some member care to put this in the form of a motion?"**
- b. The other source for action comes from a single member.**

Whatever the source of action it can be handled smoothly through what we call the motion process.

The Motion Process

A member may propose a motion for the action of the group by standing and addressing the chair. He rises to his feet and says: "Mr. Chairman". The chairman recognizes the member by saying: "Mr. _____ (name of member)". When recognized the member may proceed: "I would like to move that this group make a tour of the experimental station". The Chairman responds as follows: "A motion has been made by Mr. _____ that this group take a tour of the experimental station. Would someone care to second this motion?" Any other member of the group may second the motion. If no one does, the motion cannot be acted upon. If a member wishes to give the motion support he says: "Mr. Chairman". When properly recognized by the chairman the member says: "I second the motion." The chairman replies: "It has been moved and seconded that this group make a tour of the experimental station".

Call for discussion

At this time the chairman says: Is there any discussion? Now members may express their opinions. They may:

- a. Take opposition.
- b. Support it.
- c. Ask questions about time, date etc.
- d. Inquire about transport.

If these details can be worked out to the agreement of the group the motion may be acted upon by a vote using the proper procedure.

Voting Procedure

When discussion has ceased, the Chairman says: "There being no further discussion we will now vote on the motion. All those in favor will say: "Aye". The members who support the motion respond with "aye". The Chairman says: "All those who oppose the motion please say "No". The opposing reply: "No."

If there appears to be rather equal division in the vote a member can request a standing vote. The chairman conducts the standing vote by requesting the members supporting the motion to stand. The secretary counts and reports. If more than half of the members support it the motion is passed. It is considered good procedure to have the opposition rise for a count even though the motion has been carried. When the vote has been determined, the chairman announces the result by saying: "The motion is carried", or "The motion has been defeated" whichever the case may be.

In the event of a tie vote, the chairman has the privilege to vote. He, otherwise, abstains. A good chairman will often not vote in any case, since such close decisions are not considered to be popular decisions.

The process described is a fair and just method of group action. Once you have tried it you will like it.

RIGHTS AND PRIVILEGES OF GROUP MEMBERS AND CHAIRMEN

<u>Chairman</u>	<u>Members</u>
Calls meeting to order	Attend meetings
Contacts business	Discuss business when recognized by Chairman
Calls for motions	Make motions
Conducts the vote	Discuss motions
	Vote on motions
	Call for standing vote
Appoints committee members and committee chairmen	Serve on committees and act, when appointed as chairman
Calls for committee reports	Give committee reports
Calls for adjournment	Move for adjournment
Calls for vote on adjournment	Vote for adjournment

WRITING MINUTES FOR THE MEETING

It is sometimes helpful to have an outline for writing up a set of minutes for a group or club meeting. The outline provided here is useful in setting a pattern for writing minutes. The pattern or style should be constant for the sake of uniformity and having the members understand them.

Place: _____

Date: _____

Time: _____

The regular monthly meeting of the _____ (name of club or group) was called to order by chairman _____ (name). _____ (number) members were present. The minutes of the previous meeting were read and approved. The chairman of the _____ (name of committee) gave a progress report on the findings of their committee which met on a previous date. (Fill in here with the main points of the report). (Member's name) moved that the report be adopted. The motion was seconded and passed by a vote of the members. (Member's name) suggested that the members of the group make a tour of the Kiambu Poultry producers' cooperative in the near future. Chairman _____ (name) appointed a committee to investigate the possibility for a date to visit and to list any problems related to the trip. The following members were appointed (members' names) _____, _____, _____, and Mr. _____ to serve as chairman of the committee. The next item of business to come before the group was the _____ (month, date) meeting. The chairman appointed _____, _____, _____ (members' names) as a committee of three to contact the Regional Agricultural Officer as a possible speaker on the Coffee Berry Disease problem in the area.

There being no further business it was moved, seconded and passed that the meeting be adjourned.

Respectfully submitted:

Secretary

Notes for Conducting Meetings:

In organizing youth clubs or meetings with farmers, extension workers usually have a need for a knowledge of basic parliamentary procedures.

A simple approach can be used. After an introduction to the purpose and functions of meetings, the motion process should be explained. The instructor assumes the role of temporary chairman. Action is taken as follows:

1. The temporary chairman calls for nominations for chairman. It is explained to the trainees that it is not necessary to second nominations. It is not uncommon to want to nominate almost everybody. It may be explained that if 8 candidates were proposed out of a group of 17, it was possible that the election could be won by a

candidate with only 3 votes, assuming that all others received 2 votes each. There may be a primary and a final election. This will probably satisfy their urge to want everyone to be in the election. After nominations are made and closed, balloting can be explained.

2. The chairman is seated and a few mock motions are acted on to explain the steps.

Flannel graph and strips can be used as each step occurs and is explained:

- a. Proposal of the motion
- b. The second
- c. Discussion
- d. Presentation (for vote)
- e. The count
- f. The result

3. The order of business should then be explained. Flannelgraph strips may again be used to introduce each step. The standard order of business is as follows:

- a. Call to order
- b. Roll call of members
- c. Reading of minutes
- d. Treasurer's report*
- e. Committee reports
- f. Call for old business
- g. Call for new business
- h. Adjournment
- i. Recreation**

*Kenya 4-K clubs have no treasurer and this should be explained to the trainees.

**Recreation is a regular club activity.

The agenda should be designed to satisfy requirements of youth club meetings. It is planned to be as simple as possible, but to meet the minimum requirements.

Full coverage of business meetings is included in the outline following explanation. It will probably be found, however, that the time required to put across the basic principles makes it impossible to give greater coverage. It is better to cover less material thoroughly than to attempt to cover the field in a hit and miss manner, simply because it is prepared.

When time permits, the audience management session fits in very appropriately here. It has been used here or separately depending on the time available.

WILL YOU ACCEPT HELP TO MAKE YOUR JOB EASIER?

USE LOCAL LEADERS

• WHO is this local leader we refer to?

• WHERE is he located?

• WHAT can he do for you?

• HOW can you find him?

• HOW MANY do you need?

• HOW can you increase his effectiveness?

These questions are answered below:

WHO IS HE?

He is a local farmer on your beat that has some qualities other farmers may not have. He is the individual who is successful and stands out over other farmers as being one who adopts the proven practices you are promoting.

He is an achiever. He may be slightly wealthier than his neighbours, but this is only because of his own efforts in doing a better job of farming. He is respected by other farmers for his success. They often ask him for advice. He is a friendly person, thus he encourages their questions. Other farmers respect his advice. Furthermore, he is generous with his time. Although he is usually busy, he seems to find time to talk with his neighbours when they need help. The Agricultural Instructor often stops in to see him. He is always welcome at this farmer's shamba because they exchange information. The farmer has learned much from the A.I. and likewise the A.I. often gets valuable information from the farmer. This farmer is honest with everyone. His word is as good as gold. He has an open mind and if he thinks the A. I. has a better method of planting maize, he listens to the instructor and thinks about the new method. After thinking it over he usually uses a small part of his shamba to test out the results. This farmer is always on the look out for better, easier and more profitable farming methods.

Do you know this farmer? You must - for every A.I. has a few such people in his location. If you don't know him you should start looking for him. He is there for you to find. If he does not have all of the good qualities described, you will find some who possess many of these traits.

HOW CAN YOU LOCATE HIM?

If you have not seen him to date, open your eyes and ears and start looking when you are out on your beat, look for the best farm you can find along the way. If you see one and don't know the owner, ask people about him. You will soon begin to learn many things about him either good or bad. Listen for the good things and make an evaluation of his nature. He may be useful to you in some way in the future. If you find several farmers who have these qualities, classify them in your mind. Make a note on them and a brief description of his shamba. Some of these farmers may be the local leaders you are looking for.

WHAT CAN THE LOCAL LEADER DO FOR YOU?

Your biggest task is to get farmers to listen to new methods of farming. Although people appear to be listening, many times they actually are not. Perhaps they are evaluating you as a person. This is perhaps not true of the local leader, who is their friend. They already know him well. When he talks to them casually they listen because they believe him and depend on him as a result of successful past experience. After getting a farmer to listen to the methods you are promoting, when his neighbours see the local leader practicing your method they will be more apt to adopt them.

Agricultural instructors often need a site at which to give a demonstration for farmers. Your local leader, as described, will be the first to allow you the use of his shamba. He also informs other farmers of your coming demonstration. He is your publicity agent. You may wish to gather information about the number of cotton growers in a certain area. The answer: see your local leader. He can save you time. It has been said that many hands make work light. As a voluntary worker for you he can multiply your effect.

4-K clubs are growing in Kenya. Their success is dependent on voluntary leadership. Why not help select a local leader? He lives within your location.

HOW MANY LOCAL LEADERS ARE NEEDED?

You can begin to see that one local leader could not possibly begin to do all the jobs mentioned so far, so decide on what jobs are to be done and select the proper number of leaders. One local leader may be suited to leading youth; another may be a good cotton grower, yet another may be a good dairyman. You will need leaders in all of these fields. Women best influence other women. Why not have a lady leader? The home extension workers use them.

HOW CAN YOU INCREASE THE EFFECTIVENESS OF LOCAL LEADERS?

You can always make friends by listening to farmers' problems. Listen and then discuss their problems with them. You may learn a great deal from them. How better can you gain their confidence? There may be occasions when you wish to conduct a campaign. At such a time, a meeting with the local leaders would be a wise move. You can plan with them for the organizing and conducting of such projects. Keep them informed of your plan of action. You will be amazed at the assistance they can provide for the entire operation. When you find that you can use local leaders you will also see your work load lighten. Your prestige as an extension worker will grow. The strength and effectiveness of the Ministry of Agriculture will grow at the same time. More practices will be adopted. Consequently the farmers will be more prosperous. What is the cost of such service? There is a very small price. Give the leader recognition for his efforts. That is all he expects from you. It costs so little to say "Thank you" in front of the group.

You may have the idea that using local leaders has no pitfalls. It would be well to consider a few cautions to be taken before setting out unprepared.

CAUTIONS

Actions speak louder than words. Occasionally, you will be disappointed to find that what you thought was a local leader turned out to be a talker. You cannot win all the time. You must not be discouraged if you are mistaken once or twice ... there are others to be found. The politician type is not usually the leader you are looking for. You want neighbourhood leaders who have their neighbours' respect. You may find a man who has the makings of a leader, but who will not give of his time. Assure yourself that the man you select has the time.

Occasionally you will find a personality clash. For no particularly good reason you come upon a man who is antagonistic toward you. In other respects he is a good farmer, and a potential leader. You can find someone else who would better serve the purpose of a leader for you. Avoid this man and seek others.

It has been said: "You can work a good horse to death". Don't overwork your leader. Use him, but don't abuse him. Divide the load between leaders wherever possible. These are a few of the precautions to be taken in the use of local leaders.

SUMMARY

In summarizing, plan your selection of local leaders. Study your location before jumping into the selection. Select them carefully. When you discover them develop them to be most useful for your purpose. Use them wisely but well. Encourage them and thank them for their assistance. Give them credit for your accomplishments. It costs you nothing. You will find your work easier, yet more effective. Your prestige will grow with the farmer's success.

Notes for the session on The Use of Local Leaders

It may be a starting belief among officers and agricultural instructors that local leaders do not exist in the community. The idea of the absence of leaders can be largely dispelled when the 4-K program is examined. Each club requires two adults to take part in organizing and assisting 4-K clubs in the communities. There are now over 1,200 such adult local leaders.

Chiefs and sub-chiefs have always been local leaders of a sort, although they may not always be the most important person to consult when trying to introduce a new farm practice.

Instructors and officers often have the mistaken belief that local leaders should be well educated. A great deal of leadership is a matter of attitude and understanding, and it is not necessarily connected with formal education. This approach may help clarify trainees' thinking on the matter of local leaders. In the session on "How Farm People Accept New Ideas" the business of innovators and early adopters helps explain what makes a local leader. When speaking of innovators trainees may be asked if they would class them as leaders. This idea is usually accepted quickly.

From this point on the talk on Local Leaders can be developed along the lines of the narrative. Flip charts with phrases describing the local leader can be effectively used. To provide variety the flip charts may be converted to 'strip-tease' charts by making pockets to hold the strips which cover the phrases. The strips are removed one at a time to reveal the key comments as the talk on the subject progresses.

WHAT IS MONEY?

Money has often been mistaken for something it is not. Many people believe that money is paper or coins that will buy the worldly goods they desire. Although in fact these coins and papers will purchase these goods, we need to look at the other side of the coin to know what money really is.

To begin with, man had no knowledge of the use of money. The earliest man needed no money since he exchanged nothing with his neighbors. As man began to find new foods, as he gradually had more of one thing than he needed, he was willing to dispose of the surplus. It may have been food, shells, gems, or he may have had a particular skill at making a better spear, or bow and arrow. This may have been because he had located a special kind of wood that grew in a particular part of the forest that others could not find. At any rate, his bows and arrows were the best.

His neighbors were quick to see that he could shoot farther and straighter than they themselves could. This made them want to possess one of the better bows. Perhaps they offered to trade some maize, fruit, meat or eggs for one. A business was born then and there. He found he could have all the food he wanted simply by trading bows and arrows for it. He taught his sons the secret of his trade and they were in business. Soon he learned that he could not use all of the food he was able to collect by trading bows. This created a problem that was new to him. He had the choice of either making bows part time or finding something else he could take in exchange for bows and arrows.

While walking through the forest one day he came upon a stranger wearing clothing made from a strange material he had never seen before. The clothes were a bright red colour and they immediately took his fancy. The stranger called his material: cloth. The stranger was equally interested in the bow-maker's weapon and they began to think of how to make an exchange. The problem was that the cloth maker wanted two bows for enough cloth to make a suit for the bow-maker. The bow-maker had only one bow with him and to make matters worse the cloth maker needed only one bow for his own use. Finally they parted because there seemed to be no way to come to terms for an exchange. On his way home the bow-maker met another stranger who also became fascinated with the bow-man's weapon. He wanted one, but had no food to exchange for it.

Around the neck the stranger wore a necklace of round, shiny, yellow objects which caught the eye of the bow-man. When asked what these were, the stranger replied that they were decorations made from a substance found at a distant mountain. He further said that they were very scarce. The bowman began to think: "How can I have these decorations?" It seems the stranger was willing to part with three of them, but he would not part with more than that number because it was so difficult to replace them. The trade was finally made for three decorations. Man has since given these a name, we know them as coins. Walking back to his cave, the bowman got a new idea. He thought: If I am willing to trade a bow for three coins perhaps the clothmaker would be willing to trade a cloth suit for one bow and three coins. Some days later the bowman and the cloth maker met again. The cloth maker noticed the coins immediately, and wished he could have a bow as well as the coins. After a lengthy discussion an agreement was reached whereby the bowman exchanged one bow and three coins for a cloth suit.

Returning to his small village everyone who saw him was excited and wanted a cloth suit as well as coins. The bowman seized upon an idea whereby he could have more coins as well as cloth. Before long regular exchanges were being made of bows for coins - coins for cloth, and bows for cloth. Thus, not only was a business born, but at the same time the coins were used as the medium of exchange for other things.

Now we can begin to see the other side of the coin mentioned earlier. It was hard work to carry a large bag of maize or a roll of cloth to a distant place to exchange for a bow. Coins were scarce because the metal was difficult to get, but the coins were easier to carry. These coins had value because they were scarce and because everyone was willing to trade food, skins, spears and other things to get them. When this happened a system of money was born.

Often people are mistaken about the true nature of money. They cannot understand that money in itself is worth not what it says it is, but worth only what it will actually buy.

Let us look further into the nature of money. We know that money is printed on paper by almost every government in the world. What would happen if the government ran their printing presses day and night and turned out stacks of money and in turn gave every person a large bundle of paper notes? Some countries in fact have done just this. What followed was disastrous. Almost immediately the price of commodities started to rise. In one country it eventually required several thousand large notes just to buy one loaf of bread. It became obvious that this paper money was not money at all, but merely printed paper. When people realized this they quit using that money and went back to trading merchandise for merchandise. A system we call barter. They sold their jewelry made of gold, silver and precious stones, for these had value within their own country as well as in others.

Before the government that had printed the money realized what had happened it was bankrupt. It had no money at all but instead it had stacks of worthless paper in its treasury. It could not buy anything from other countries because no merchant wanted to exchange commodities for the worthless paper. To recover it was necessary for other countries to loan this government gold to strengthen its currency. Thus, we learn that coins or paper currency has value only insofar as it will purchase goods.

Money can be used for two purposes. When it is spent to buy commodities that are quickly used up, such as food or clothing, that money is gone. On the other hand, when the money is used to buy something that will bring back money, it is called capital. Capital is the collection of goods that promote the production of other goods. The value of these capital goods is measured in their ability to do this.

The tools and animals on a farm are capital goods if they are used to produce more than their initial cost. The farmer uses his money to purchase a new cow. He must also provide housing, feed, spray, inoculations to protect the cow. The animal in turn provides milk and calves, if she is properly managed, which are saleable for money. Over a period of time, the value of the sale of milk and calves exceeds the cost of the cow and its support. The money from continuing production can be used to purchase another cow or other productive goods which in turn will increase the farmer's money.

Money can be increased in another way by lending it to someone who is engaged in capital production. In this case the lender shares in the profit return. But loans are almost always guaranteed by the borrower's property or by his record of good productive performance. Would you loan £100 to a stranger to buy a cow? You do not know him, nor do you know what he can do with the cow. You would be more willing to loan the money to a farmer who already owns a cow and who has proved his ability to get a good milk supply from her. In addition you would want to have the farmer promise to pay back the loan plus a part of the profit from the sale of the milk. You would also want the farmer to promise to give you the first cow if he could not repay the loan in a certain amount of time. The cow is security for the loan.

Loans can be made only when the borrower shares the risk. If the farmer has offered the cow as security for the loan, he will do everything possible to protect his investment in the animal. If he has borrowed the total amount to buy a cow without anything of his own invested, he has nothing to lose if he fails. This is why lenders want security when they loan money. Loans or credit functions only when it is backed up with sound investment, good management and reasonable security.

As agriculture extension staff, you can help farmers understand how loans and credit work. Every farmer you help learn to establish credit and use it wisely will be strengthening the economy of the country and building employment.

One form of money that is frequently confusing to rural people is the check. A check is in fact an order to pay money to a specific person from funds deposited in the bank by the writer of the check. If you receive a check for sh 200/- you can only be sure it is not worthless when the bank has paid the money from the writer's deposit. For this reason checks are usually accepted as money only from people who are known to be reliable.

The person accepting the check acknowledges receipt of the money by signing his name on the back of the check. He may pass the check to another person as money, but by so doing he accepts the responsibility for the value of the check. Checks may be passed from one person to another for as long as the next person will accept it, but this system is not considered to be a good idea. Until the check is cleared by the bank and money actually paid, the writer of the check cannot tell where it is and this keeps his money on deposit tied up to guarantee the check. A check is money only when it is backed with money.

The following story will help to explain how the circulation of money works:

THE CHECK

Mr. Njoroge saw an excellent cow that he wanted to buy from Mr. Kiguru. He was asked Sh 800/- for it, which seemed to be quite reasonable. He wrote a check in the amount of Sh 800/- and gave it to Mr. Kiguru for the animal. Mr. Kiguru knew Mr. Njoroge so there was no question about the check.

Mr. Kiguru had it in mind to buy a transistor radio which his sons had been urging him to buy. Having received the money from the sale of his cow he felt prosperous and could think of no better time to buy a radio which was selling for Sh 750/-. When the deal had been closed with the radio salesman, Mr. Kiguru

endorsed Njoroge's check and gave it to the radio man who gave him Sh 50/- in change.

Now the radio man had been prosperous of late and thought to buy some clothes for himself and his two sons who were doing quite well at school. The next day he set off for Nairobi with his two sons and the check he had received for the sale of a radio. This check of course was the same one written by Njoroge for the cow and was endorsed on the back by Mr. Kiguru and the radio man. The cost of the clothing came to Sh 790/-. To pay for them he added his name to the other who had endorsed the check and turned it over to the clothier who gave him Sh 10/- in change for the difference.

The clothier had a large shop and sold many things besides radios. He had hardware, food, and in fact a general store of merchandise. One item he deals in is maize. He had heard reports that the price of maize was going to increase soon so he decided to make a trip to the country and buy a stock of maize. (He had known Mr. Njoroge, the original writer of the check for many years). He dropped in on him and learned to his satisfaction that Mr. Njoroge happened to have maize for sale. They made a deal whereby the clothier-merchant bought Sh 800/- worth of maize, the exact amount of the check he had received from the radio man.

We now recall that this cheque had passed from Mr. Njoroge, the writer, to Mr. Kiguru, the man who sold the cow, and from Mr. Kiguru to the radio man. We further recall that the radio man had endorsed the check and passed it to the clothier who now had it in his possession. The clothier now gave the original check to Mr. Njoroge (the check writer) in exchange for maize. Mr. Njoroge tore up the check since he had written it in the first place when he bought the cow from Mr. Kiguru. This exchange of money poses several questions:

a. Was money used to buy the following items?

1 cow	Sh 800/-
1 radio	Sh 750 + Sh. 50 change
Clothes worth	Sh 790 + Sh. 10 change
Maize worth	Sh 800
	<hr/>
	Sh 3140 + Sh. 60

b. How much money actually changed hands?

c. Does this exercise clarify or confuse the question - What is money?

d. Is money actually necessary?

Notes for use with What is Money?

The story of Njoroge buying a cow with a check is difficult for trainees to understand unless you explain that he would have had the money again had notes been used instead of the check. A look at the story about The Check will explain the situation. To keep trainees clear on the transactions that took place several visuals may be used:

Flannelgraph illustrations:

1. A cow

	Yes	No
3. Will each farmer who attends your demonstration be able to see your actions?		
•4. Have you assembled all of the materials you will be needing?		
5. Are you planning your demonstrations to relate to the farmer's experiences?		
6. Have you practiced your demonstration until you can do it to perfection?		
7. Have you developed your demonstration using a standard plan?		
8. Did you write down each step?		
9. Have you listed all of the key points?		
10. Are your instructions written in a simple, understandable manner?		
•11. Were signs and/or posters used to direct the farmers to your demonstration?		
III. <u>Plans made for the period a' the meeting.</u> (Plan before the meeting, check results after the meeting).		
1. Did you present your demonstration with enthusiasm?		
2. Did you act yourself?		
3. Did you talk <u>to</u> your audience?		
4. Was your demonstration explained to the farmers, step-by-step?		
5. Are you certain you were understood?		
6. Did you allow time for questions from the audience?		
7. Did you repeat steps when necessary?		
8. Did you assist the slower persons when they fell behind?		
9. Were faster persons used to assist you?		
10. Were the important steps summarized at the conclusion of your demonstration?		
11. Were final questions encouraged?		
12. Was reference material handed out at the conclusion of your demonstration?		
13. Were the farmers told where to get additional advice?		
14. Was there a list made of attending farmers?		
•15. Was your meeting held without conflict of other meetings?		
•16. Were photographs taken of activities at the meeting?		

APPENDIX

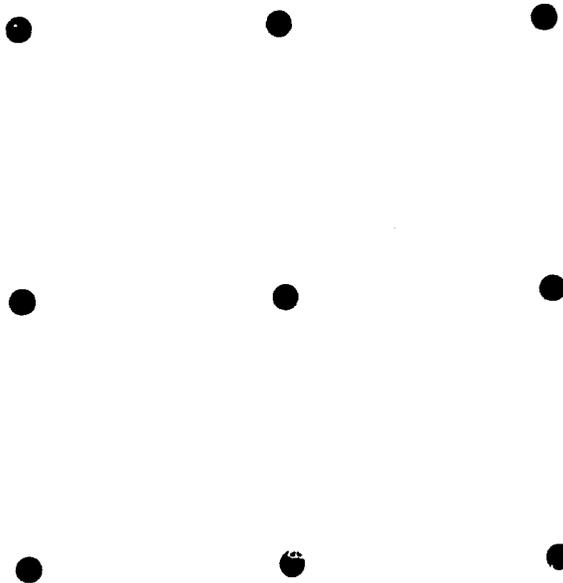
The Nine Dots

The Nine Dots puzzle goes well with the section on "How Farm People Accept New Ideas." People are generally prone to follow rules based on previous experience and apply them to new situations. When the old rules fail to provide solutions, frustration often follows.

It will be a rare occasion if trainees draw their lines beyond the pattern, "getting outside the limits of the Nine Dots" even though it is necessary to solve this puzzle. When the solution is shown after individual attempts, the point can be explained that it is sometimes necessary to go beyond the problem for a fresh look at a solution.

At later stages in the course program trainees who resist change in approaching problems can be reminded to "get outside the Nine Dots".

THE NINE DOTS

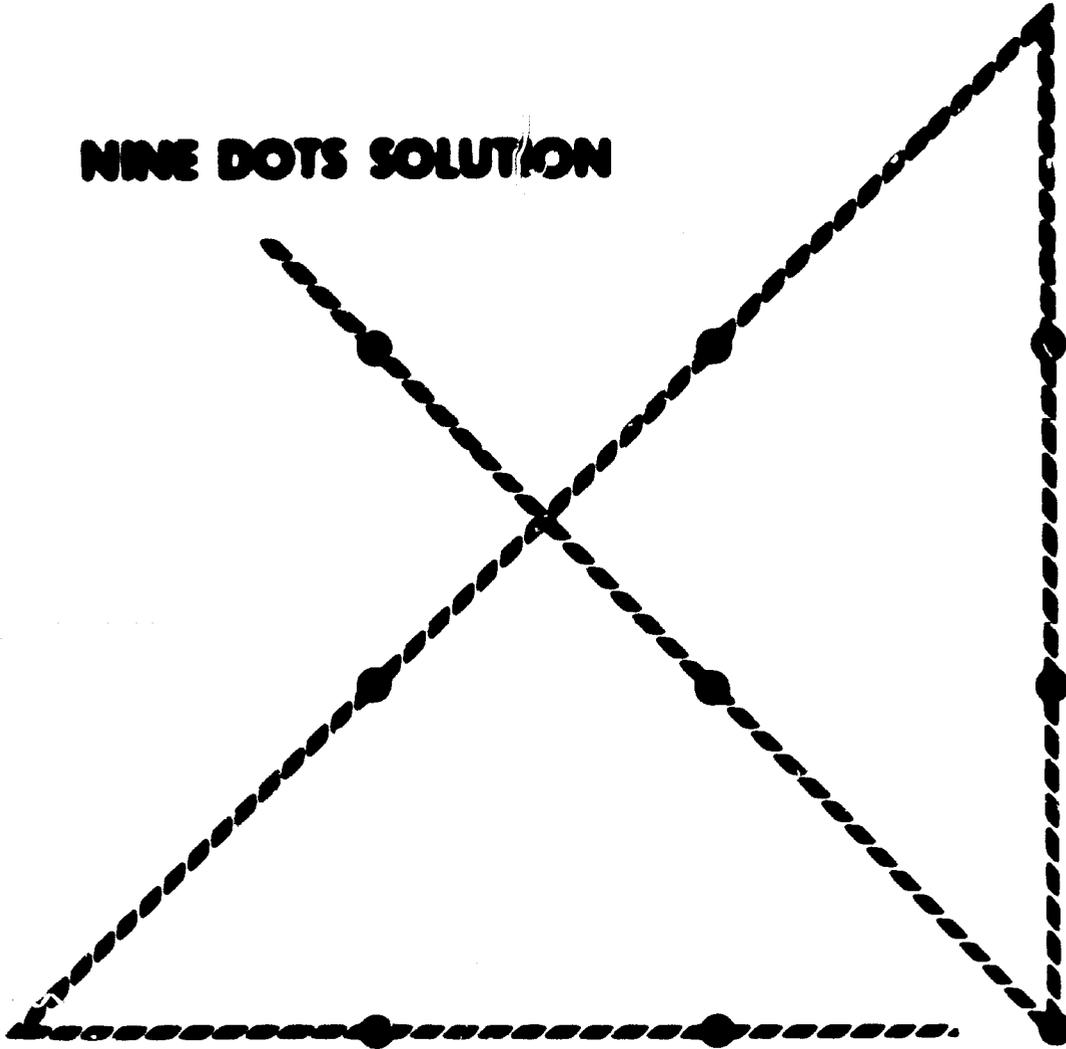


OBJECT OF EXERCISE:

In a series of four continuous straight lines, connect all nine dots.

(Note: To assure that lines are continuous, the pencil should not be lifted from the paper after starting. Each change of direction counts as another stroke. Only four strokes are permitted).

NINE DOTS SOLUTION



SOLUTION:

Does it follow the rules?

Why did so few people (or no one) find the solution?

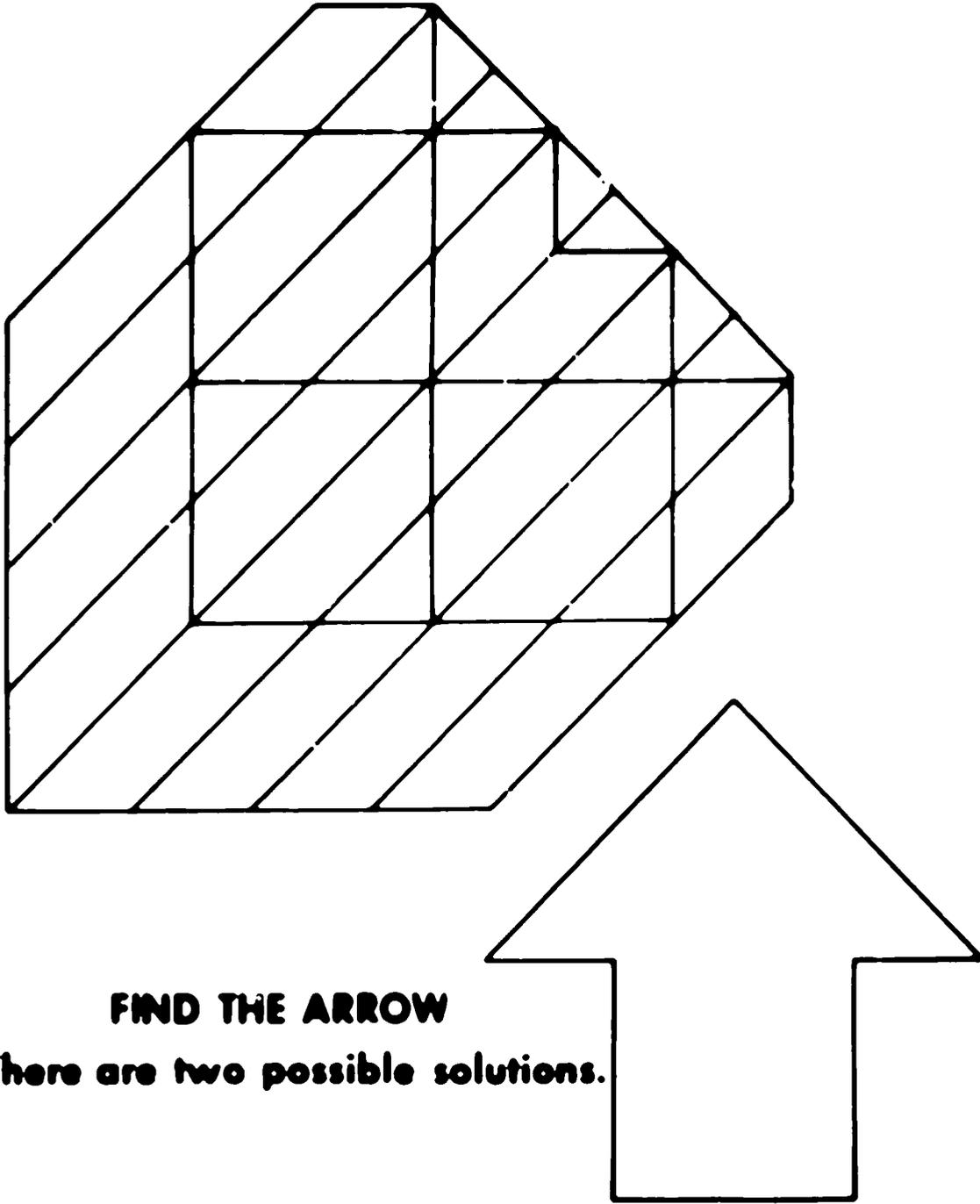
Did the rules say not to go outside the dots?

Why are people reluctant to go "outside the nine dots"?

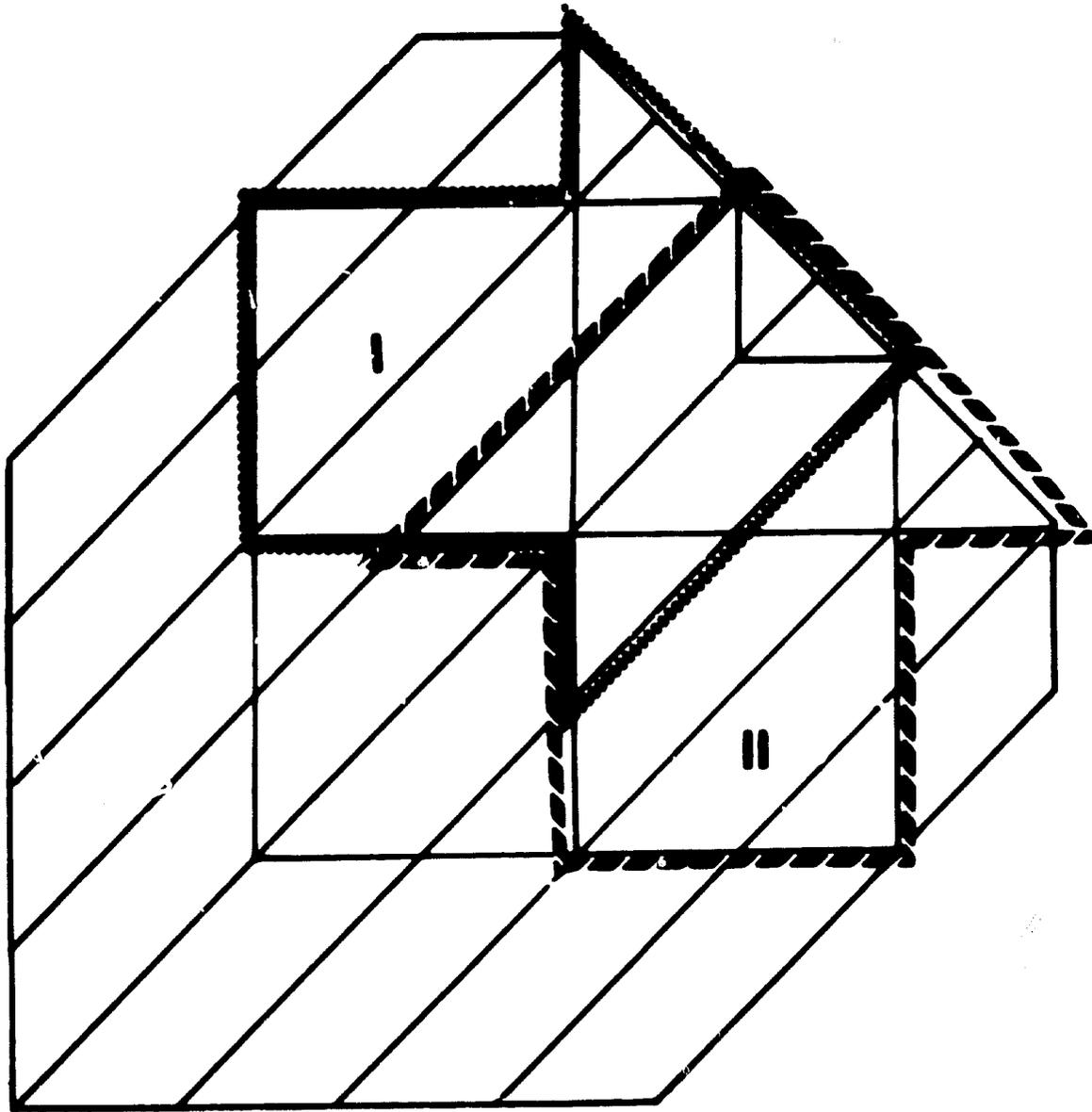
Find the Arrow

The real message in a talk or demonstration may often be unintentionally confused by the instructor when he includes unnecessary details or inappropriate material.

In this exercise participants are assured that there are two arrows like the sample in the large pattern. These arrows are seldom located because of the interference of the extraneous lines. The extra details hide the real message.



SOLUTION



Jig Saw Puzzle:

This game can be well demonstrated to a class of trainees by using a flannel-graph. A common image (such as the map of Kenya) is cut into a number of random pieces and prepared to adhere to the flannelboard. One piece is given to each of the same number of volunteers who are instructed to assemble the map on the flannelboard at the front of the room.

Little headway will usually be made until the group of volunteers organizes itself into a group with a leader. The initiative of individuals generally varies according to the task to be performed and the group in which they are working.

The demonstration can be related to the idea of the rate at which people adopt ideas and how the local leader who is probably an innovator or early adopter can be used to help promote improved practices.

Not-so-common Symbols.

Modern communication relies on a great many symbols that describe a function or an activity either with no words, simple initials or a very short phrase. A selection of these symbols reproduced on cards can be used to show trainees that symbols are valuable as short-cuts to information, but only after they have been learned. The symbol must first become associated with the real function before it will stand by itself to represent the real thing. If this association has not been made the use of the symbol provides no communication.

A short flash-card test of a series of symbols will quickly demonstrate this to the trainees.

Radio Blocks

The purpose of this gimmick is to demonstrate that instructions given and received only to the ear of an audience may not be entirely successful.

Select two volunteers from the group of trainees to act as the "radio announcer" and as the "radio audience." Give each one five similar blocks of wood (prepared in advance) approximately 1" x 2" x 4". Give the announcer a diagram of a pattern of the blocks, such as the one in the diagram below. The audience representative has no pattern. He will follow the verbal instructions of the announcer.

Place the participants back to back at tables. The announcer places his blocks on the pattern one by one and explains, using only words, what he has done.

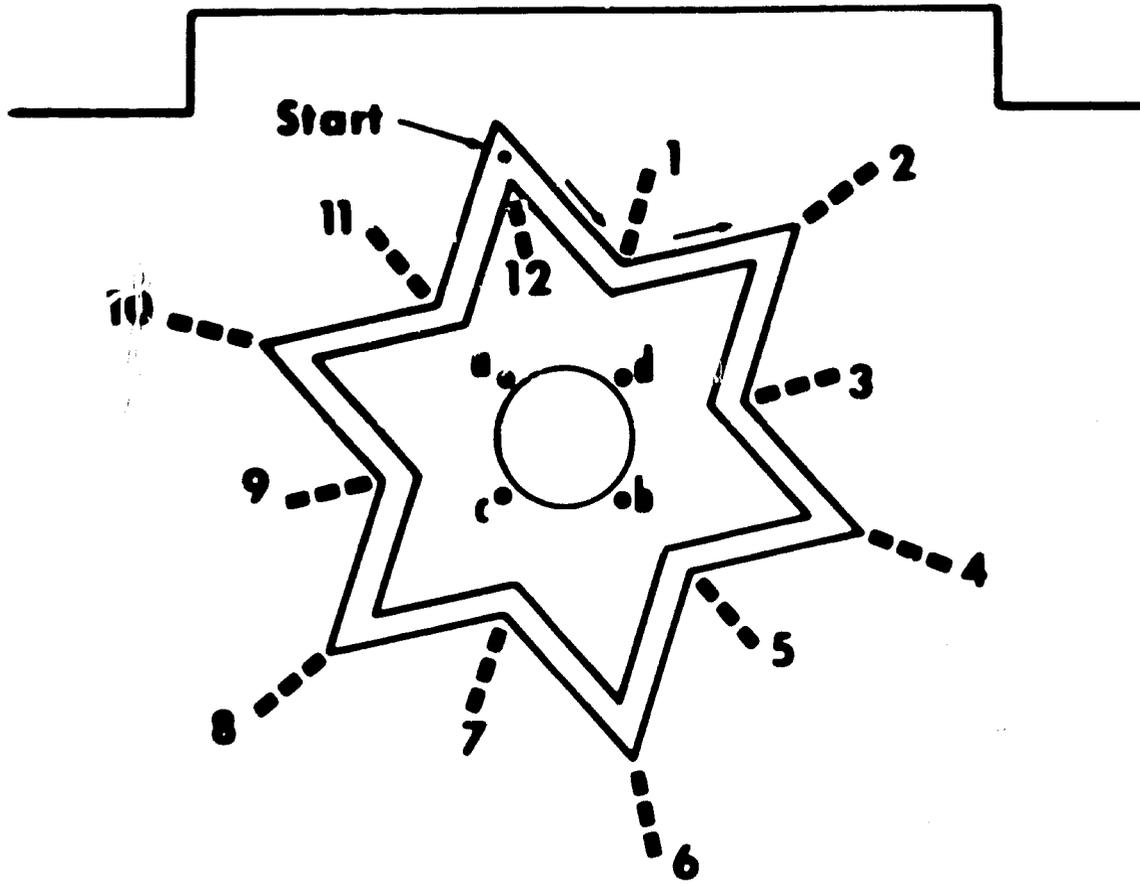
The "audience" tries to place his blocks to duplicate the pattern from the "radio instructions." He may not ask questions since the "announcer is in the studio many miles away."

It is virtually certain that the audience will not duplicate the pattern. It is more likely that his pattern will not even closely resemble the original.

A discussion with the whole group on why this was so should lead to the conclusion that hearing alone is not enough to learn a skill.

- Why did the audience fail?
- What was lacking?
- How could the announcer improve the instruction?

MIRROR



SCORE _____

The Mirror Exercise

Materials needed:

- 1) Star diagrams
- 2) A number of small pocket mirrors
- 3) Pencils
- 4) A watch or other second timer

Select from volunteers a number of participants to match the number of mirrors you have, but not more than half the number of trainees. You need the other half to help with this game. Give each volunteer a sheet of paper with the star diagram. They are instructed to place their pencils at the starting point and trace a line between the two printed lines following the numbers 1, 2, 3, etc. The pencil line should not touch the printed lines. (Instructor should demonstrate)

Any questions? Simple enough, isn't it?

There will be one additional instruction. (Instructor gives each participant a small mirror) You will be required to do this by looking only into the mirror at the reflected image. Therefore we will ask one other person to stand behind each participant and obstruct his direct view of the diagram with a book or sheet of paper. Place your pencil at the starting point and make sure you can see it in the mirror. You have 45 seconds to go as far as you can. If you get completely around, stop and wait for the rest.

• Everybody ready?

• Go!

Record the results of each participant for distance accomplished and the number of line-touch errors.

Repeat the exercise with the same participants and again record the results. Repeat again if time permits and record the results. Have each participant compare his results. Discuss what happened.

1. Why did the results improve?
2. How was learning accomplished?
3. What was the participant's sensation during the first trial? (frustration, panic, etc.)
4. How does this exercise apply to asking a farmer to change his old method of operation?
5. Why does he often give up with the first attempt?
6. Why is encouragement (follow-up) important in learning a new system of operations?

NAME _____
Date _____

TEST ON FOLLOWING INSTRUCTIONS.

1. Read carefully ALL of the following directions before doing anything.
2. Print your name, last first, on the top line following the "Name".
3. Draw a circle around the word "ALL" in the direction number 1.
4. Underline the word "name" in the direction number 2.
5. In direction number 4, draw a circle around the word "underline" and in sentence number 1, cross out the word "anything".
6. Now, draw a circle around the title of this paper.
7. Circle the numbers of sentences 1, 2, 3, 4, and 5 and put an X over number 6.
8. In the sentence number 7, circle the even numbers, and underline the odd numbers. Put a circle around the number 4 in the fifth sentence.
9. Write "I can follow directions" above the title of this test. Start directly above the word "Test"
10. Underline the sentence you have just written.
11. Draw a square about 1/2 inch to the side of the upper left hand corner of this paper. Draw a circle around the square.
12. Cross out the numbers 8 through 12. Now circle the same numbers.
13. Put an X in the square inside the circle in the upper left hand corner.
14. In the space under the last direction on this paper, copy neatly, in writing, direction number one.
15. Now that you have read all of the directions as stated in direction number one, follow direction number two only. Do not follow any of the other directions, omit them entirely.
16. Please do not give this test away by any comment or exclamation. If you have read this far, just pretend that you are still writing. Let's see how many people follow directions correctly.

