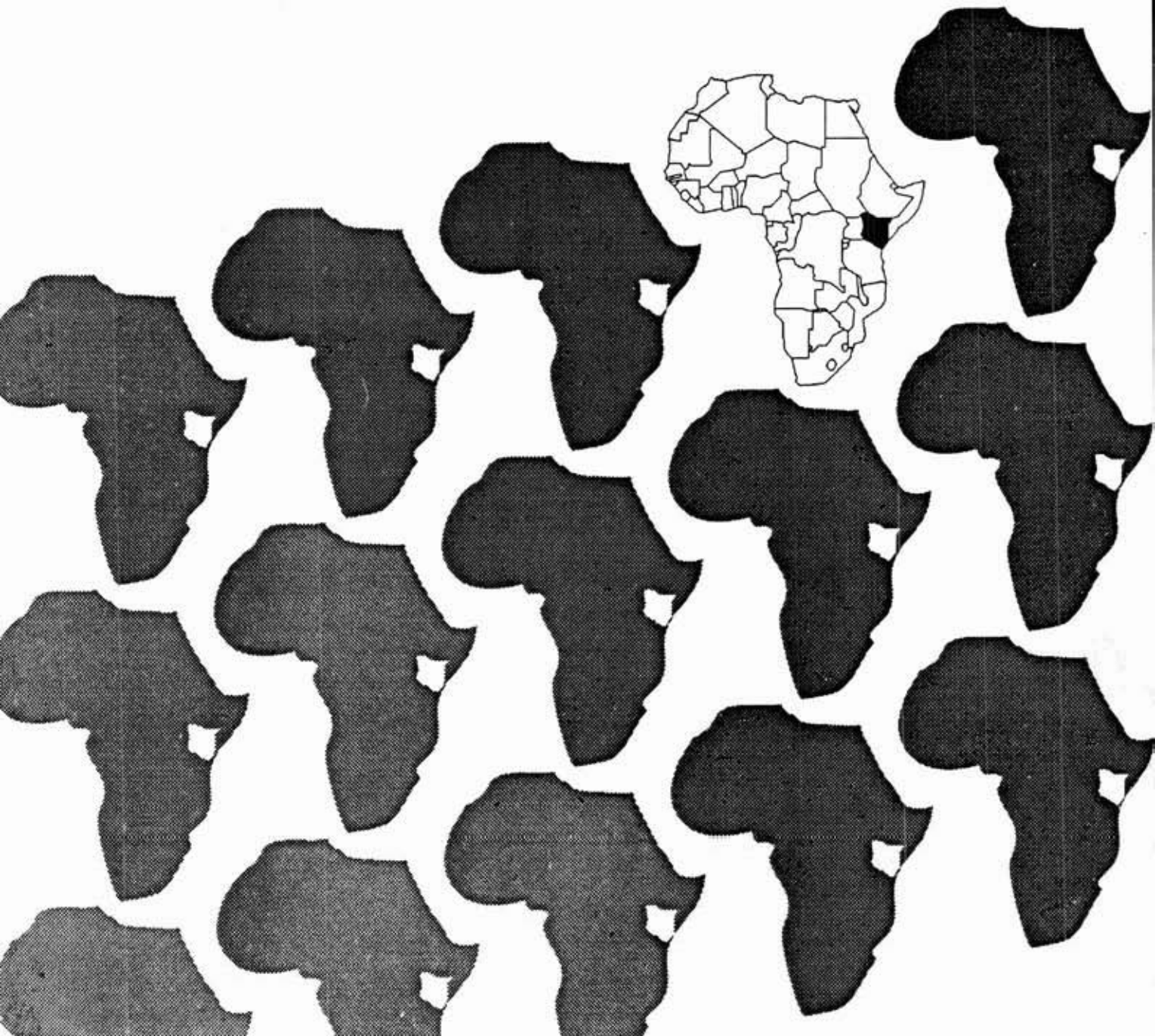


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Extension Communication Manual for Front-Line Agricultural Extension Staff



Extension Communication Manual for Front-Line Agricultural Extension Staff

By John Fox

1990



Prepared for the On-Farm Grain Storage Project

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**DPRA Incorporated
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To achieve the government's objective of food self-sufficiency, Kenya's farmers must increase food production and ensure its proper preservation in order to satisfy the rapidly increasing population. The On-Farm Grain Storage Project, sponsored by the Ministry of Agriculture, is introducing improved grain storage management technology to the small-scale farmers. One of the efforts of achieving this aim is through the reduction of losses to rodents, birds, moulds and insects. These losses, which could reach 25% or more, occur in farms from the time grain reaches maturity in the field until it is consumed.

The project was initiated in 1983 using the regular agricultural extension services to disseminate the technologies to the farmers. The field extension workers are expected to accomplish this by working with individuals, and sometimes by organizing field days attended by large groups of farmers.

Having only a minimum of training in extension communication skills, few reference materials, and practically no visual aids, some of the Agricultural Assistants have not been able to communicate the project's and other messages as effectively as the Ministry would like. The Ministry hopes, therefore, that through this extension communication manual, the effectiveness of the front-line extensions workers will be significantly increased.

This manual will also be useful at the Institutes of Agriculture, which are responsible for training the future frontline agricultural extension workers.

E. K. Kandie
Director of Agriculture

Preface

The On-Farm Grain Storage Project is pleased to make this extension communication manual available to Kenya's Ministry of Agriculture. It is hoped that this practical guide will serve Kenya's front-line agricultural extension staff for many years.

The front-line workers are general agriculturalists and they must deliver information to farmers on a wide range of subjects. Their effectiveness in this task depends both on their knowledge of their subjects and on their ability to communicate with farmers.

The author speaks directly to the front-line workers. And the suggested methods and techniques should have application in the communication of subjects across the full range of agricultural extension—not just post-harvest management. Likewise, the information contained in the manual should be of use to those educational institutions which train Kenya's agricultural extension staff. Also, the manual will have relevance for extension staff in other countries.

The author, John Fox, has nearly thirty years experience in adult education and extension communication. He has taught communication skills, conducted research programmes, produced simulations and games, video training tapes and previous handbooks on communication. He has over ten years of work experience with various professional groups in Kenya and other African countries. He spent two years teaching communication and adult education skills at the University of Nairobi's Adult Studies Centre, Kikuyu.

In preparation for this manual, John Fox accompanied front-line extension workers on their daily farm visits to gain close, first hand experience of their work routines and interactions with farmers—and he has attended numerous project field days in western Kenya.

The chapters follow a logical pattern. The first five explore the case for employing a discussion and action-based methodology in extension work; the following chapters show how this methodology can be applied in a variety of situations and formats.

The agricultural extension workers who read this manual will find guidelines and checklists for individual application. But the manual also contains material that can be adapted for role playing and discussions in training groups.

Dr. Walter G. Heid, Jr
Team Leader, DPRA
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Introduction

This manual is addressed to front-line agricultural extension workers—agricultural assistants primarily, but also to other divisional or district level staff who are engaged in face-to-face communication with farmers.

It is about communication skills—those skills which make all the difference between success or failure in the extension worker's efforts to encourage farmers to increase their production and improve their quality of life.

It has been written in support of the Kenya Ministry of Agriculture's campaign to reduce serious grain losses by advocating and demonstrating efficient post-harvest pest-control and storage techniques. So the examples of technical topics are drawn mainly from these fields. But the information and advice on communication processes contained in this manual will be relevant for the full range of agricultural extension messages—and it should also be applicable in countries other than Kenya.

The manual begins with a discussion of some fundamental factors influencing communication. It reviews the functions and responsibilities of the front-line workers and identifies the key communication competencies they need for effective job performance. It considers the position of the farmers themselves, explores the conditions under which they will be prepared to consider and accept changes in their habitual ways of doing things. It returns to the extension workers and analyzes the means by which they can influence the motivation and receptiveness of the farmers.

The manual then takes up in turn the main kinds of communication activity—visiting a farm, speaking in public, giving a demonstration, leading a group discussion—and identifies the factors which

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can lead to a successful performance on each of these different occasions.

The intention has been to make the writing as relevant and practical as possible, by giving illustrations based on actual field experience and by including checklists which relate directly to the various tasks of the extension worker's everyday work routine.

Although the word "he" is used throughout this manual for the sake of stylistic simplicity, the author and the project are well aware that in many cases, in Kenya and in other countries, the front-line extension worker may well be a woman and working with women farmers as well as with men. So, whenever the words like "he" appear, please assume "he/she" or "his/hers".

AGRICULTURAL EXTENSION: A STATEMENT OF PRINCIPLES

In writing this guide for front-line workers, a number of basic assumptions have influenced what has been said about extension methods:

1. Extension becomes most effective when there is a three-way interactive communication between research agencies, the front-line field workers and the farmers.
2. Effective extension starts where the farmers are and seeks to build on their established knowledge and skills.
3. Effective extension utilizes the knowledge and skills of farmers.
4. Effective extension is addressed to the practice of farming and, therefore, it employs active, problem-centred and discussion-based methods of communication.

What Is Communication?

Kilonzo was quite new to the extension service. It was mid July, and he was visiting one of his contact farmers in a location some twenty kilometres from Kisumu by the shore of Lake Victoria.

A few weeks previously he had attended an orientation course for agricultural assistants (AA's) on post-harvest and grain management techniques—part of a programme in Western Kenya to get across extension messages related to reducing the losses being experienced by small-scale farmers in the handling of their maize crops.

It was harvest time; and one of the objectives of the campaign was to encourage farmers to harvest early, when the maize was mature enough—rather than leave it in the shamba to dry—where it would be susceptible to damage by insects, birds and rodents.

Armed with his leaflets explaining when and how to harvest, where and how to store the grain, Kilonzo felt confident that he had something to tell and teach his farmer. When they met, he came straight to the point. He produced his leaflets, explained the purpose of the new campaign and showed the farmer the illustration in the leaflet on how to test for when the maize is ready for harvesting. He looked around the compound and saw four traditional basket stores—all low to the ground and smeared with dung.

He showed the farmer a drawing of such a basket raised a metre above the ground, fitted with simple rat guards made from Kimbo tins and clean of mud or dung—so that the wind could blow through the woven structure and dry the grain more quickly.

The farmer looked and listened and nodded. He seemed to agree with all Kilonzo had said—and all that was printed in the leaflet. But then he asked a question:

“In the neighbouring locations a few farmers have been given a new kind of crib—bigger than these stores of mine and square and made of wood. Such a crib looks very fine in the compound. Why can't I be given one like that?”

What Is Communication?

Kilonzo explained that the cribs the farmer was talking about were for demonstration only, that he didn't need such a big store because his shamba was a small one; and that the traditional baskets he had in his compound could be adapted with very little expense. The farmer nodded and said no more.

Kilonzo left behind the leaflets with their drawings and their explanations, wished the farmer well for his harvest and his stores, and said he would return after two weeks.

Over the next few weeks he returned a number of times. Some of the maize had indeed been harvested early and put in the stores to dry. But the baskets were still close to the ground.

"What about raising them?" he asked.

"Yes, I will do that," said the farmer. "But I can't afford to do it yet. And what about that new crib—when can I have one too?"

Again, Kilonzo explained that the free cribs were only for demonstration purposes and enough had been already erected in the area.

"And why are your baskets still smeared with dung?" he asked.

"Well, you see, in this neighbourhood there has been a lot of stealing; and I'm afraid if people see I have grain in the stores then it will be stolen."

Kilonzo sympathized, scratched his head and walked off to see one of his favourite demonstration farmers, who had been given one of the new cribs and who seemed to be doing all that was asked of him—a very good example, if only the other farmers would learn from it!

Before you continue reading, just stop and think a while about this example.

How effective was Kilonzo in communicating his messages?

If you were his supervisor, what suggestions would you make to him?

Could there be reasons other than the fear of theft for the farmer continuing to smear his baskets?

THE MAIN CONSIDERATIONS

There is no easy way to learn to communicate effectively. There is no set formula that is going to work every time; no bag of tricks that can be bought like a set of spanners that will remove any nut. To communicate effectively is not easy because to communicate effectively we have to think clearly—and thinking clearly is never easy!

And what do we have to think clearly about? The problem is—there are so many things. When we communicate we are rather like a juggler who is trying to keep several balls in the air. If one is dropped, the whole act is spoiled.

What are the balls? What are the considerations that we have to keep, simultaneously, in mind?

This manual is an attempt to answer that question.

First, let us try to answer it in very general terms. In any act of communication there will be three main considerations:

- The Message
- The Medium
- The Occasion

Since we will be using these terms quite frequently, they ought to be explained.

The Message

A communicator communicates something—he has a subject or a message. In the illustration, Kilonzo's messages were about the harvesting and storing of maize. But he had other messages too. Perhaps he wanted to express his concern for the welfare of the farmer. When he scratched his head, he was sending a non-verbal message about his frustration that he seemed to be making so little impact.

The nature of the message will, to a certain extent, dictate the way it is sent—particularly the order in which the material is given. For instance, if you are explaining the way a storage crib is made, you will most likely structure what you say—and your demonstration—according to the chronological order of the process. You will begin at the beginning: explain what materials are needed and then go on to describe how the site is selected, how the post holes are dug—and so on. On the other hand, if you are trying to persuade a farmer of the advantages of harvesting early, you will want to put most stress on those items you think will have most effect. If, for instance, you know that he loses a lot of grain in the shamba because it is eaten by birds, you might begin by talking about the problem of the birds—and the savings he will make if he gets his maize quickly into store for drying.

What Is Communication?

If your message lends itself to visual illustration, then you will support what you are saying with a picture or a drawing—but this takes us to the next point.

The Medium

A communicator communicates in a language. But which language? Local or national language? I am communicating with you in English; I am making the assumption that you will be familiar enough with the vocabulary and grammar of English for you to pick up my meanings. But if I were to write in my own native dialect of English, only certain people from the county of Lincolnshire on the east coast of England would understand me.

If you can, then communicate in the language your farmers will most easily understand.

And which words? You and I might understand what a hectare is—but does the farmer you are talking with? If you want to describe a plot of two hectares, it might be better to talk of 100 by 200 paces. But what is a “pace”? A normal walking step or a deliberate stride? Better to show it. Even better to ask him to pace it out with you.

You may have heard the old Chinese proverb on learning—but in case you haven’t, here it is again:

“I hear and I forget
I see and I remember
I do and I understand.”

Another way of making a similar point is to quote some research findings on learning: that we learn about 10% from what we hear, 50% from what we see and 90% from a combination of seeing and hearing.

Returning to the story of Kilonzo—he had his leaflets on harvesting and storing maize; but perhaps he relied on them too much. Maybe he should have sat down to talk with his farmer, asked him if he had any problems—rather than pitching straight in with his glossy leaflets, as if they alone would convince.

If Kilonzo had been talking with a group of farmers, he would have needed a different medium: large posters or prepared drawings on a flipchart. If his extension officers at headquarters wanted to reach a mass of farmers with a particular message, then they would have the choice of using the mass media—the newspapers or the radio.

However, we are only touching on a topic that will be explored in some detail throughout the manual: what factors affect our choice of a medium to get across a message? At this stage it will be enough to make the point that one of our main considerations in communicating a message is the decision about what medium—or combination of media—we choose.

The Occasion

Every act of communication takes place in a special situation—the occasion. The occasion will involve three basic elements:

- the **sender** of the message;
- the **receiver** of the message;
- the **relationship** between the sender and receiver.

One of Kilonzo's messages was that if a storage basket is raised one metre above the ground and air can blow freely through it, the maize can be harvested early and left to dry effectively and safely in the crib.

How well Kilonzo could deliver that message would depend on a number of factors:

- Is he familiar enough with the subject to be convincing?
- Can he, for instance, work out how much grain and money the farmer would be losing by using his traditional methods of harvesting and drying?
- Can he give a realistic estimate of how much it would cost to raise the crib?
- When would the farmer reap the benefit of the expense?

In addition to the **matter** there is the **manner**:

- Can Kilonzo put his message across without criticizing or "putting down" the farmer?
- Does he have the confidence or the skill to start with a friendly chat and then let the conversation turn to the matters he wants to be raised?
- Can he let the farmer's problems and ideas be exposed before he offers his own solutions?

What Is Communication?

Much depends on Kilonzo's knowledge of the farmer: his ways of doing things, his reasons for doing these things. For instance, it may be that the farmer was concerned to hide what was inside the basket, more because he feared demands from relatives than attacks from thieves. But this is not something that the farmer would easily admit. Only if Kilonzo is familiar with local customs can he interpret why things are the way they are.

If Kilonzo wants to influence a farmer's way of doing things, he must work in terms of the needs and interests of that farmer. If what Kilonzo says does not appeal to those needs and interests, he will fail.

A lot depends, too, on attitudes:

Only if Kilonzo is enthusiastic about his job and believes in his extension messages, will he be convincing. Only if he can identify with his farmer's needs and aspirations, will he be able to build a successful relationship.

Take, for example, the issue of free cribs that comes up in the illustration. What the farmer says is natural and sensible. If other farmers have been given them, then he would be naive not to ask for one too. As well as stating the facts, perhaps Kilonzo should also have expressed his understanding of the farmer's position; and then gone on to talk through with him how he could have improved his own stores as cheaply as possible.

Combining the Elements

There must be a harmony between the message and the medium, between the sender and receiver. All the considerations and elements are intertwined. But, to explore the complexities of communication, we need to separate out certain aspects.

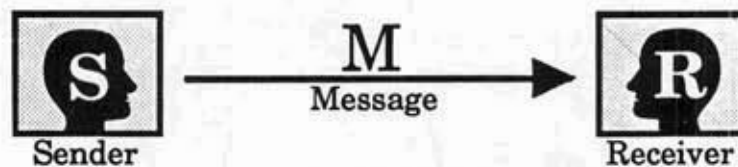
Since this manual grew out of a particular programme, and most of the illustrative material is taken from the messages of that programme, it might be helpful to have an outline of Kenya's On-Farm Grain Storage Project—if you are not already familiar with it. You will find a brief description in the Annex, page 133.

In the next chapter we consider the sender of messages—you. We will look at the roles and functions of front-line workers within the Training and Visit extension system that has been established in Kenya and a number of other countries. This will enable us to identify the occasions on which you are engaged in communication and to discuss the skills and competencies that are needed for a successful performance of your functions.

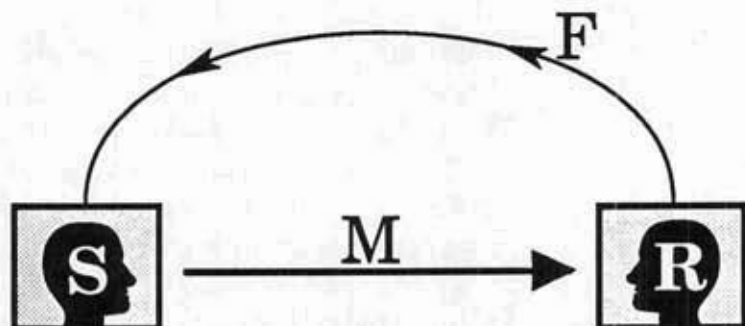
Then we turn to the receiver of your messages—the farmer. We will try to establish some key characteristics of farmers and their families, in order to analyze those factors which might affect their willingness to accept new ideas and different practices. We will then be in a position to explore the problems and potentials for building a productive relationship and opening up effective lines of communication.

But, before we take up and develop these themes in later chapters, let us look at communication in a visual way—by building up a diagram that will help you to understand something more about the structure and logic of this manual.

A COMMUNICATION MODEL



When communication occurs, there is a **Sender (S)**, a **Receiver (R)** and a **Message (M)**:



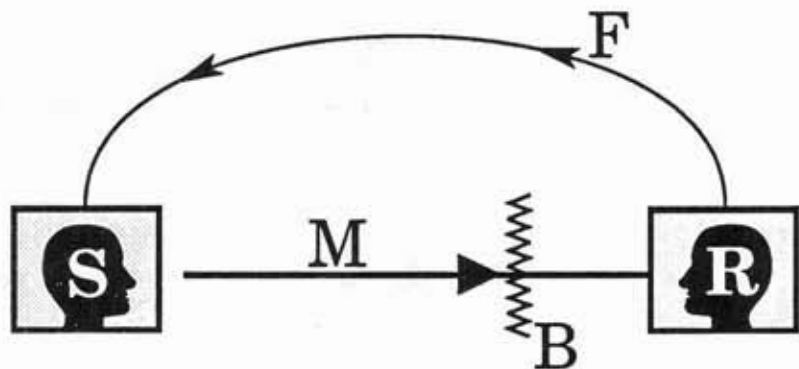
But how do we know that our message is being understood in the way that we want it to be understood? How do we know that our message is actually being received? Sometimes we only know—like Kilonzo—when we go back and discover that nothing has happened. But why wait and waste our time? We can learn something on every

What Is Communication?

communication occasion by becoming receivers ourselves and watching and listening to reactions to what we have just said or done. We have **Feedback (F)**.

Feedback is what comes back to us as a response to the messages we send. It may be in the form of a question, a comment or a shrug of the shoulders. Communication is most effective when it is a two-way process. And a number of sections in this manual will be discussing ways in which we can encourage and use feedback, whether in one-to-one or group occasions.

Yet, so often our communication is really **miscommunication**. Something, some **Blockage (B)**, gets in the way of our messages:



The squiggly line represents whatever it is that gets in the way of harmony and understanding. Sometimes it is right that the line is there in the middle—because the blockage will be some external factor like the noise of a tractor that literally blocks out the sound of our voice. Or the heat of the sun that distracts and saps energy and attention. But often it should be drawn as if in the head of either the sender or receiver or both. Then it might represent a blockage related to attitudes. Like the thought in the head of an elderly male farmer who is being addressed by a young female extension worker: “What does she know about farming? She’s the age mate of my grand-daughters. And all she knows is books!”

Or it might represent a simple misunderstanding of a word. You say “little” and you mean only a teaspoonful. I hear you say “little” but imagine a cupful. This could be an important difference if you are talking about a harmful chemical!

So as well as looking at techniques and procedures for such occasions as farm visiting, demonstrating and leading discussions, we shall need to look inside our own and other heads and explore a little psychology—a teaspoonful rather than a cupful—in order to understand more clearly those thoughts and feelings that can easily become blockages to communication.

THE CHARACTERISTICS OF GOOD COMMUNICATION

To summarize the ideas presented in this opening chapter—and to establish some basic principles which underlie all that is said throughout this manual—here is a list of characteristics:

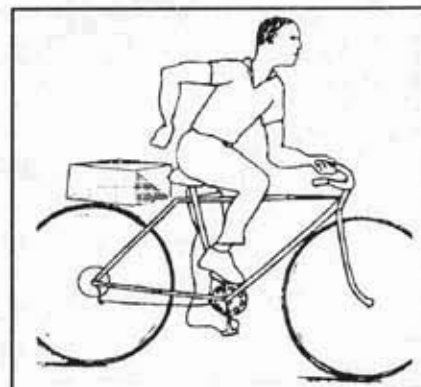
1. Good communication is the result of clear thinking.
2. Good communication has a specific purpose and carries specific messages.
3. Good communication is adapted to the occasion—to the needs and interests of those receiving it.
4. Good communication utilizes an appropriate medium.
5. Good communication is graphic—through words or pictures it creates clear, accurate images in the minds of those who are receiving it.
6. Good communication is based on good listening.

*What Is
Communication?*

Notes

WORKING WITHIN THE TRAINING AND VISIT SYSTEM

The Training and Visit system of extension (T&V) is now operating in more than forty developing countries in Africa, Asia, Europe, Central and South America. It is a system which emphasizes simplicity in both objectives and operation. It provides



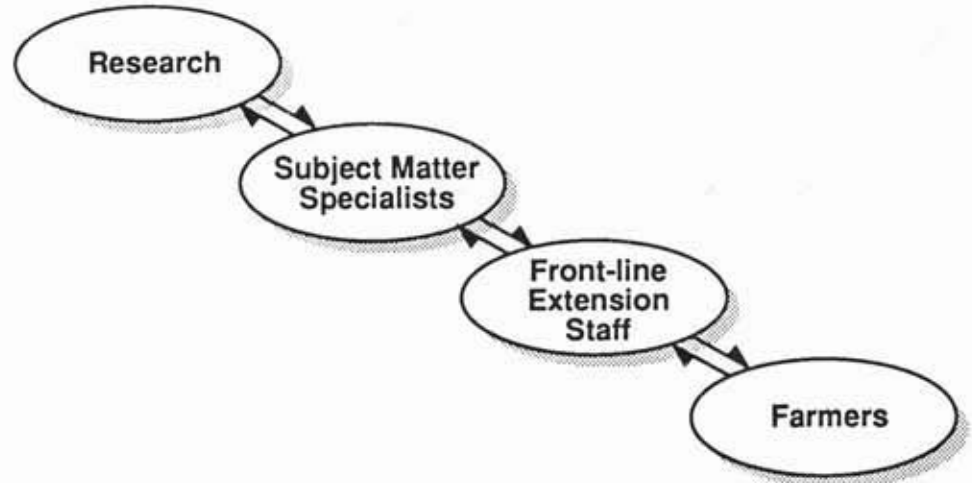
continuous feedback from farmers to extension agents and to research staff; it allows for continuous adjustment to the farmers' needs. It has spread rapidly around the world, because it is seen as an effective means of increasing farm production and because it is such a flexible tool at all levels of an agricultural ministry's operation.

Prior to 1983, when T&V was introduced in Kenya, the agricultural extension service provoked many complaints. It was seen as uncoordinated and haphazard. Front-line workers were accused of giving out too many, irrelevant and untimely messages. The connection between research and extension was tenuous and weak.

Two-Way Communication

With T&V, you—the front-line worker—become the vital link in a chain which ensures two-way communication between research institutions and farmers:

The Front Line Extension Worker



An important aspect of your professionalism is that, through regular training sessions, you are in close touch with relevant scientific developments and research. It is only in this way that specific recommendations can be formulated which will be useful to farmers in their specific situations. You must have the ability to identify production constraints in the field and, in association with your colleagues, develop appropriate measures to counter them. When this begins to happen, then you and your service build credibility for yourselves in the eyes of the farmers.

There may be occasions when nearby farmers can be invited to view research results at a laboratory or other experimental establishment. Also, there may be times when it is appropriate and convenient to invite a researcher to a Farmers' Training Centre or some other place to meet with a group of farmers. Most generally, however, the feedback or flow of information between farmers and researchers must pass through the front-line extension staff and Subject Matter Specialists (SMS's).

Concentration of Effort

Effective T&V ensures a concentration of effort. All extension staff carry out specific duties that complement and support the activities of staff at other levels. You yourself will be working only on agricultural-related concerns, only on those crops and practices that are relevant to a particular season in your locality. You will be working primarily—though not exclusively—through a small number of contact farmers who are experienced, skilled and respected enough to be taken as a model by other farmers.

Concentration should, also, be the key factor in your fortnightly training sessions. Attention should be focused on those constraints that have been identified in the field and on the major points generated through research which are of immediate concern to farmers.

Time-Bound Activities

Messages and skills should be taught to farmers in a regular, timely fashion, so that the farmers will be able to make immediate and best use of them. You are expected to visit your farmers regularly, on a fixed day each fortnight. Similarly, all other supervisory extension staff should be making timely and regular visits to the field. The SMS should be attending monthly workshops where they discuss particular farming conditions for specific areas. The recommendations that are formulated at these meetings are then passed on to you at your next two fortnightly training sessions. In this way, there is a continuous exchange of relevant information related to the farming activities of your locality.

Field Orientation

Farmers can only be served effectively if an extension service is in close contact with them. This contact needs to be regular, frequent, and on a schedule known to them.

As a front-line worker, you will have groups of farmers that you visit on a fixed day every two weeks. But all other extension staff, including the SMS's, should be spending a large part of their time in the field, also on regular scheduled visits. District-level Extension Officers, researchers and trainers, must also go to the field regularly if they are to understand the problems faced by farmers—and by you in your daily work routine.

It is to allow as much time as possible in the field that the administrative and report-writing tasks are kept to a minimum within the true T&V system. Nevertheless, the habit of keeping a daily diary of your contacts, and problems encountered in the field, will enable you to contribute more effectively in your training sessions and to provide material for any reports that you do have to write.

By spending most of your time in the field, you are putting yourself in a position to understand the farmers' production problems and to act as that important link between the farmers and research.

You will, of course, only be an effective link if you listen as much as you talk!

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Let us now go on to discuss what it takes for you to be as effective as possible as both a sender and receiver of messages within T&V—or within any structure for delivering extension messages to farmers.

A COMPETENCY ANALYSIS

As a front-line agricultural extension worker, whatever system of extension you are operating in, your experience can be categorized in three broad areas:

- **things you know;**
- **things you can do;**
- **things you think and feel about what you know and do.**

These broad categories of experience are often referred to simply as:

- **KNOWLEDGE**
- **SKILLS**
- **ATTITUDES**

For a successful work performance, you will need to have competencies in all three categories.

Each of the categories can be divided, on the one hand, into **technical** or **subject** competencies; and, on the other hand, into **communication** or **social** competencies.

From your initial training, your in-service training, and from your field experience, you acquire a good deal of knowledge and skill related to the practice of agriculture, the conditions and problems of agricultural production in particular localities. You acquire knowledge about the agency which employs you, about the schedules of your extension system and about the organizational networks in the community through which you work. You think and feel certain things about Agriculture and about Extension—you have an attitude towards your chosen area of activity. If, in the main, it is a positive one, then it is likely that you are motivated to continually up-date and improve your professional skills.

If, in any respect, your attitude is a negative one, then it will be important for you to reflect on how you might change those

circumstances or factors that produce the negative thoughts and feelings about what you are doing.

This manual is not concerned with the technical or “content” side of your work; it is concerned with you as a communicator. It is about ways in which you can get your technical knowledge across to farmers as effectively as possible. It is about the crucial communication or social skills of extension: your relationships with farmers, your ability to achieve a rapport with them and to help them with their care of crops and livestock.

So let us consider the actual competencies that are involved in the communication of your technical information.

But, first, it might be helpful to give an example from another field of activity. If I make a list of the competencies involved in being a writer, it comes out like this—and you might find some parallels with your own situation:

1. Knowledge of a particular language: its grammatical structures and vocabulary.
2. Knowledge of certain subjects, upon which the writing is based.
3. Knowledge of publication channels: what particular newspapers, journals or other agencies expect, in terms of subject matter and presentation.
4. Skill in researching for relevant information: from observing, interviewing or reading.
5. Skill in selecting the most relevant material for a particular occasion.
6. Skill in organizing that material to form a logical sequence of ideas.
7. Skill in choosing an appropriate vocabulary for particular readers.
8. Skill in using stylistic devices, like paragraphing or punctuation, to make the writing both clear and emphatic.
9. Skill in using illustrations or examples, to make the writing concrete and lively.
10. Ability to review what has been written in a self-critical way, in order to revise and modify it.

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11. Enthusiasm for the topic.
12. Empathy with the people and events that are treated in the writing.

As you will see, this is a rather crude analysis, since some of these twelve competencies could be broken down into other or sub-competencies. However, I think it will serve as an illustration of what is involved in constructing a competency list.

Now, I suggest you pause for a while, **before you continue reading**, and reflect on your own functions as an extension worker. Note down the communication competencies you identify as crucial in carrying out your functions effectively. Afterwards, you can compare your list with my attempt to do it for you.

This is an important exercise, because you can then use your competency list to assess your own training needs.

So, have a go at reviewing the kinds of things you do in relation to farmers and your position in the extension service. Perhaps it will help if you first make an actual list of your main functions: such as farm visiting, holding field day demonstrations, attending training sessions. Then go on to identify and list the necessary competencies, as in my example, in terms of knowledge, skills and attitudes.

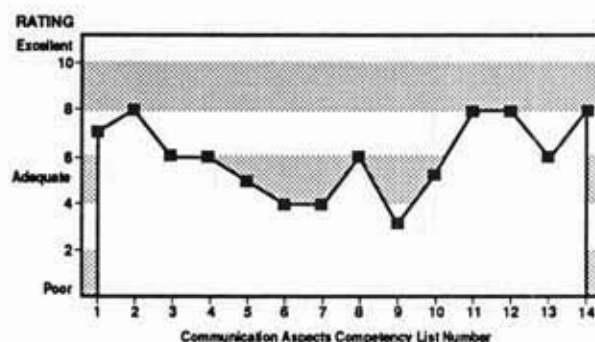
A COMPETENCY LIST FOR THE COMMUNICATION ASPECTS OF EXTENSION WORK

1. Knowledge of the organization in which the extension agent works: the network of colleagues, superiors and contacts.
2. Knowledge of the community in which he works: its social and economic characteristics.
3. Knowledge of individual farmers: their personalities, aspirations and problems.
4. Knowledge of resources: eg. credit facilities, fertilizers, equipment, both within and outside the community, that can be utilized in the promotion of efficient farming.
5. Skill in relating to people: the ability to express himself clearly and the ability to listen.
6. Skill in motivating and mobilizing people: the ability to encourage farmers to adopt and experiment with new methods.

7. Skill in working with people: establishing and facilitating meetings with farmers and participating in farmers' activities.
8. Skill in demonstrating farming methods and procedures: using techniques that are graphic and have impact.
9. Skill in making and using educational aids: making charts, handouts, using projection equipment etc.
10. Respect for the existing knowledge and skill of farmers.
11. Empathy with people living on low incomes in rural areas.
12. Patience and tolerance when recommendations are not readily taken up.
13. Readiness to listen to and learn from those he is teaching.
14. Readiness to review and revise methods and approaches.

How does my list compare with your own? Perhaps the differences are mainly to do with expression—the language used to describe each competency. But from a comparison of both lists it will be possible to construct one which covers the full range of your functions and responsibilities.

Now it is possible to use the competency list to make your own assessment of your strengths and weaknesses with regard to the communication aspects of your work. What you do is construct a graph, with the number of each competency along the horizontal axis and a rating scale along the vertical axis. Then you give yourself a rating for each of the competencies. As in the following example:



The Front Line Extension Worker

In this imaginary case, we have someone who is quite confident about his knowledge of the community in which he works, the technical side of his role, and about his attitudes to farmers—but he is less sure about some of the skills involved in getting across his message.

But what about you? Have a go at constructing your own graph. Rate yourself in terms of each of the communication competencies that have been identified.

How does it come out?

For the first four “knowledge” components from my list, experience is perhaps the best teacher—but you may find some ideas in the next chapter which prompt you to reflect a little differently on the situation and attitudes of farmers. And the rest of the manual will be asking you to reflect more deeply on your own attitudes and skills as a communicator.

In 1985, Dr Judith Mbula, a social anthropologist, conducted—on behalf of the On-Farm Grain Storage Project—a survey of small-scale farming in western Kenya. This chapter draws on her research report to describe some characteristics of farmers in that area: their patterns of family life, their current farming practices and their views which have a bearing on their readiness to accept change. Though the 655 farmers contacted in her survey may not be representative of small-scale farmers across the whole of Kenya—and certainly not representative of farmers in other countries—nevertheless, some key points from Dr Mbula's research findings may help us to understand some of the factors that have to be taken into account when recommending new procedures. It should help us to identify some of the blockages that sometimes occur when we are trying to get our messages across.

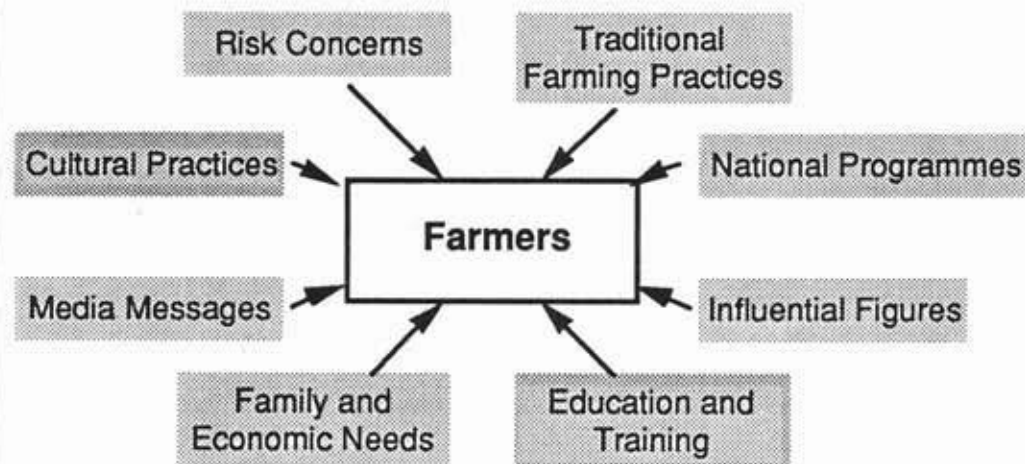
One of the most interesting aspects of Dr Mbula's study is that one of her main conclusions is markedly different from what is found in similar studies conducted in Asia and South America. Whereas most other studies point to a very pessimistic and resigned attitude among farmers, Dr Mbula found that the farmers in western Kenya do not have a "shauri ya Mungu"—in the hands of God—attitude, which means an acceptance of poverty and an inability to see any hope for improvement. Quite the contrary. Most of the farmers contacted by Dr Mbula's research team have a positive attitude towards life; they want to see it enhanced. They look to the future, put great store by the welfare of their children and have faith in the advantages that will come from their children's better educational opportunities. They are well informed about modern agricultural practices. Most attend barazas where development messages are

related. Many listen to farming programmes on the radio and many are readers of newspapers.

So, we must conclude, the reason for resistance to innovation in western Kenya is neither apathy nor ignorance. Therefore we have to look for other explanations when we find that our recommendations are not taken up as readily as we would wish.

PRESSURE POINTS

In very general terms, let us consider the range of factors that will or might have influence on a farmer's decision to change his way of doing something. We can do this by drawing a diagram that shows "pressure points"—as many aspects as possible that impinge on a person's behaviour:



Whenever a farmer is faced with a decision, some or most of these factors will have an influence—whether consciously or not.

So, let us take the issue of harvesting and storage of maize and draw on Dr Mbula's research to illustrate some of these factors in the diagram—and consider some of the broad implications for building a productive relationship with the farmers.

Traditional Practices

Prior to the On-Farm Grain Storage Project, in western Kenya farmers harvested their maize when it was dry. The cobs were transported to the compound by ox-cart, wheelbarrows, lorries—

or, more usually, carried on the head by women or children. The maize was stored on the cob until the farmer found time to shell and, occasionally, treat it. If it was not already dry, then cobs were spread on the ground each day to dry in the sun.

Many farmers stored grain in traditional wicker baskets made of lantana or papyrus reeds, with thick branch supports. Mud or cow dung was often used for smearing the base and sides of the basket. Traditionally, when the basket stands outside the house it has a grass thatched roof; when inside the house, it is left open. Some farmers store small amounts of grain in sealed clay pots; some now store in metal containers, such as oil drums or cooking oil tins.

The habit of storing grain inside the house developed because of the fear of theft; though another reason could be the reluctance to give it away to neighbours or relatives. Many farmers put their grain in gunny bags which are then kept inside the house—often lying in places where they can easily be contaminated by rats or domestic animals.

Farmers try to protect their grain from rats by using poison, setting traps or keeping cats. Very few in the survey group were raising their storage units off the ground and fitting simple metal rat-guards.

As for treating shelled grain for storage, the one traditional practice was to use wood ash to prevent damage by weevils and other insects. Some farmers were, at the time of Dr Mbula's study, using recommended Malathion or Actellic chemicals—though a few in the survey were found to be using such chemicals as DDT (which has been declared illegal in Kenya) or pyrethrum dust. A few farmers were using domestic aerosol insect sprays like "It" or "Doom", which can have harmful effects on human health and certainly should not be sprayed on foodstuffs.

What implications can be drawn from the information that Dr Mbula has provided?

As the extension worker in direct contact with farmers, you should study their existing practices—challenge those that are harmful or useless, but see whether some of the practices can be adapted rather than simply discarded. There is nothing wrong, for instance, with storing maize in the house, provided it is properly treated and kept clean.

National Programmes

The Kenya Government is concerned about the amount of grain lost through many of the traditional post-harvest management practices. On a national scale the losses are said to amount to about 25% of the potential harvest. It is the Government's objective that the country should remain self-sufficient in maize. It is important, not only that people have enough to eat, but that scarce foreign currency should not needlessly be spent on food imports. Programmes like the On-Farm Grain Storage Project are promoted in order to achieve such national objectives. This project has shown that it is possible to reduce grain losses to satisfactory proportions of under 5%.

So, through extension agents like yourself, local administration officials, media publicity, the Government seeks to reach farmers and persuade them to adopt improved post-harvest methods. But how readily will farmers appreciate national needs or identify with a national programme? If a farmer is producing enough for his own family's consumption, and even has a surplus for sale, then he is not likely to be much moved by a problem described in purely national terms. He will be inclined to act only if he is convinced that the problem is one which directly affects him and his family.

In fact, Dr Mbula's research showed that many farmers do not perceive grain losses as a major problem—or they have a different perception of grain loss. Some farmers said that much of the grain lost to humans is eaten by the chickens and goats—so it is not really lost at all. Others say that grain infested by weevils or mould is used for making local beer or fed to the animals—so, again, it is not lost.

Some farmers may be deceived by volume as opposed to weight. Only when the comparative weights of contaminated and uncontaminated grain are demonstrated may they realize what they are foregoing in weight and profit on the market—or in terms of healthier foodstuffs for their families or their animals. A farmer may only be convinced that he is losing a significant proportion of his harvested grain if his amount of poorly stored grain is compared with the larger amount saved by a demonstration farmer who has followed the recommended procedures.

You will make an impact on such farmers only when you can convince them that their perceptions are false or that there are other more important considerations that need to be taken into account. Sometimes it may help to take out a pencil and paper and calculate the farmer's losses in monetary terms.

Merely to quote national statistics or project goals will not be enough. Persuasion is effective only when a farmer identifies the problem as one that affects him directly.

Family or Economic Needs

If a farmer is exclusively concerned with subsistence agriculture, then he may well not easily be motivated to improve his farming methods—provided his production is meeting his family's needs for basic foodstuffs. It could be only when he aspires to earn a cash income—and sees opportunities for doing so from sales of farm produce—that he will be motivated to learn about improved agricultural practices. Or he may be motivated to improve his farming methods only when he faces increased cash demands—like school fees, medical bills or clothing for his growing family.

However, the problem becomes a complicated one when what is being recommended involves a cash outlay. Such is the case with the On-Farm Grain Storage Project. To build a modern, two-section crib costs around 3000 shillings; to build an improved basket structure to the recommended standard costs around 1,400 shillings. To convince the farmer that outlays of this kind are worthwhile might well involve taking out the pencil and paper again and doing some calculations with him. You will need to work out the likely money saved from storing in an improved structure and comparing that amount with the money needed for a new structure. Then it will be possible to work out the “payback period” before the outlays generate profits.

So, one of the key factors in responding to the messages of a project will be the potential economic payoff to the individual farmer.

Risk Concerns

Of course, people have needs other than economic or “survival” ones. Among these will be the need for respect and status earned in the eyes of relatives, friends and neighbours. To be seen as successful in whatever we are doing, to be known as “progressive”, can be an important factor in adopting new methods that can improve our standing in the community. But when new methods involve risks, then the considerations related to improving status must be balanced against social or economic ones related to survival. Farmers the world over are amongst the most conservative and cautious of people. There is a good reason for this. They are dependent on the elements—and the elements in Africa can be particularly unreliable and harsh. If the rains do not come, then a total crop can be

wiped out. If the rains come too heavily, then the same devastating consequences can follow. Faced with such unpredictability, a farmer may well prefer to do the predictable—carry on with practices that have meant survival for his forefathers.

Sometimes there is good sense in his resistance to the new. Take, for example, the growing of hybrid maize in areas susceptible to flooding. If traditional maize is more likely to survive in a season of heavy rains, then he may well prefer to forego the extra yields from hybrid varieties in seasons of ordinary weather, rather than risk a crushing loss if floods occur. It is a question of not gambling against disaster.

One of the keys to your success is to know when a farmer's reasons are valid—when it is not possible or sensible for him to adopt your recommendations—or when it might be feasible for him to adopt only part of a recommended package.

Cultural Practices

If we take “culture” in its broadest sense of “patterns of living”, then clearly the more ingrained these patterns, the more they will be like deep grooves that act against any change of direction—like a bullock cart moving along a deeply furrowed track.

One seemingly unimportant practice in the project area was that the traditional stores were often smeared with dung. This serves a decorative purpose—but it could also be that the dung acted as a deterrent to insect infestations. A related point—when grain was left in the field to dry, there was no problem about storing it in airtight structures. But the project is recommending harvesting grain **before** it is dry—and then putting the cobs in structures that are loosely woven so that air can blow freely through them.

So, in getting across the messages of the project, we have to be clear about the logic: if you do A, then B is OK; but if you do C, then B is **not** OK. If farmers harvest when the grain is dry, then it is OK to put it in airtight structures; but if they harvest when the grain is still moist, then it is **not** OK to put it in airtight structures. To persuade farmers to harvest early, when there is still moisture in the grain, is to increase the risk of moulds and contamination—unless we also persuade them to use rapid drying practices.

It may be, however, that dung-smeared baskets serve another purpose: they hide the grain from prying eyes. As mentioned earlier, although Dr Mbula found that farmers were talking about

their fear of theft, it could be that many are more afraid of demands from relatives and neighbours when, visibly, they have grain in store.

Here we are considering a vital aspect of traditional culture: it is no shame to ask to be given; but it is a matter of great shame to refuse to give. A farmer may be reluctant to adopt the more "open" management procedures recommended by the project, if they increase the risk of requests for assistance. In fact, it seems that some farmers are preferring to sell off their grain after harvesting, so it can be converted into cash which is less conspicuous and therefore less vulnerable to such demands.

Perhaps, in such a case, you should recommend that the maize be dried quickly on the ground, shelled, treated and stored in a traditional basket, which has been raised off the ground and fitted with rat-guards—a compromise solution.

(Remember, if you recommend that the farmer removes the dung smear and pokes holes in the basket, allowing air flow to dry high moisture cob maize, then shelled maize can no longer be stored loose in the basket.)

Another important cultural factor relates to the relationship between husbands and wives and their traditional roles in "home economics". Whereas, according to custom, the woman has responsibility for harvesting and storing procedures, the man makes the financial decisions.

Therefore, if the project recommends something which involves a financial outlay, then it is clearly necessary to approach both. The wife may need to be convinced of the operational merits of the recommendation, but the husband will need to be convinced of its financial benefits.

Influential Figures

In Kenya, the Chief plays a key role at the location level. He is a representative of the Government and a leader of the community. Upholding the laws and transmitting directives or advice, he has a powerful influence on all those who live in a location under his authority.

Imagine a primary school which has been selected for an afforestation project. The school is going to establish a tree nursery, but the headmaster is concerned that, until the school compound is properly fenced, the cattle that are grazed across it will damage the

young trees. He can only try to persuade the people who live nearby to stop the practice. But the Chief can order them to stop.

Extension is about persuasion, not direction. It will be rare that you will want to call in a Chief to issue orders. Unless the matter is something to do with a communal issue like establishing the tree nursery, a soil conservation programme or strengthening the banks of a river that is liable to flood.

But the support of the Chief and other members of the local administration, like councillors, can be of great assistance in getting across the messages of a project. To have him with you at field demonstrations gives a credibility and authority to the occasion; he can also help at barazas in communicating the aims and purposes behind your work and relating them to national development policies.

Out of respect for authority and in recognition of leadership qualities, farmers will listen to those people in the community who carry these ranks or who become natural leaders through their example of endeavour and success. Effective front-line extension staff enlist the support of such influential figures.

Education and Training

The more a farmer is exposed to new ideas, the more varied his experience and the more developed his skills—the more likely he is to accept extension messages. Research shows that a farmer's educational background is an influencing factor in his readiness to adopt the recommendations of a project.

A closely allied factor is whether a farmer has another occupation. Here, two factors combine to affect the acceptance of innovation. Another job means that a person is better educated and of more varied experience—it also means that he has more cash at his disposal and he is more able to take risks. The research has shown that there is an enormous disparity in the income levels of small-scale farmers in the project area. Those with the higher levels are usually those with off-farm jobs.

In her research report, Dr Mbula tentatively presents a list of characteristics you might look for when selecting contact farmers:

- more educated;
- owns land in two or more locations;
- with an outside source of income;

- in contact with other government officers, such as education officers;
- frequently listens to radio farming programmes or frequently reads magazines;
- member of co-operative society;
- in possession of title deeds.

If Dr Mbula is right, you should pay particular attention to the degree of education and training a farmer has accumulated, to his financial and social status, when you are choosing a contact farmer.

However, remember that you are responsible for communicating your information to all farmers in your area. You cannot rely, in total, on selective contact farmers with education and financial status. Look hard for the social and other ties that bind the less affluent farmers and their families. Look for other commonalities, such as interests in children's schools, church bodies, and other groups.

Media Messages

A surprisingly high number of the farmers in the research sample were found to be listeners to the radio, readers of newspapers and magazines, and visitors to agricultural shows and exhibitions. A successful project uses such media sources to reinforce the face-to-face meetings with farmers.

To produce such educational and informative material is not your own responsibility; but you will need to be familiar with the kinds of information transmitted through these channels so that you can relate and time your own information and material to these mass media messages.

In the world of selling agricultural products, it is said that two factors are vital:

- Advertisements in the national press and broadcasting;
- The travelling salesman.

However good one of these factors may be, it cannot be really successful without the other. The salesman gains his credibility from the national advertising. But farmers often need the direct contact with a salesman before they actually buy a product. A similar pattern holds for extension projects. You are the salesman.

The front-line worker needs the additional support that comes from national level exposure of the project's objectives; but the farmers still need the direct dialogue with you to receive precise information and a demonstration of procedures—and to get your answers to their questions.

All the “pressure points” we have discussed can be seen as either positive or negative forces, which will have their influence on a farmer's attitude to adopting your recommendations. The negative ones are the kinds of blockage which were represented by the squiggly line in the communication model presented in the first chapter. Some of the pressure points, like media messages, are external factors; some, like the concern about risk-taking, are in the head.

Only when you are familiar with the range and effects of these pressure points can you begin to achieve a rapport with your farmers, which will enable you to work with them to promote change.

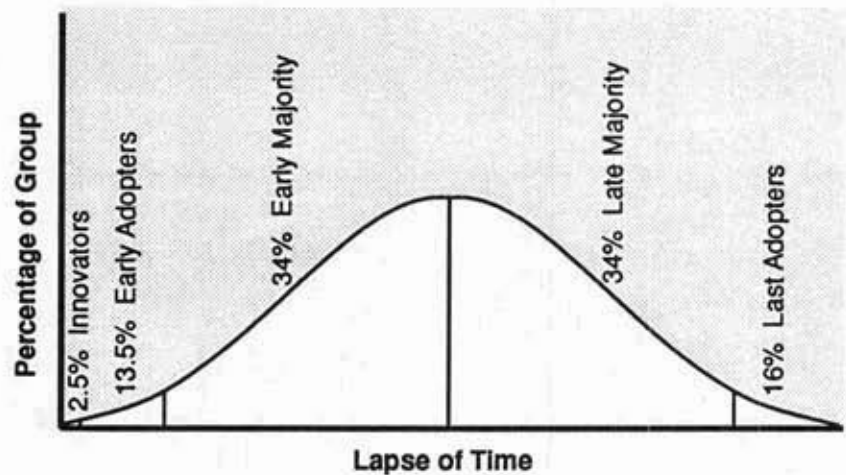
THE ADOPTION CURVE

This analysis of “pressure points” may help us to understand more clearly the way in which farmers—or any group of people—accept or reject new ideas and practices. It seems there is a common and recurring pattern involving five stages:

1. Awareness	when a person is first exposed to a new idea—by, maybe, reading a publicity leaflet or talking with a friend.
2. Interest	when he relates the idea to his own situation and his curiosity is aroused about its potential benefits.
3. Evaluation	when he begins to ask questions of himself, his neighbours or the extension worker; when he will be mindful of the potential risks and influenced by both the positive and the negative forces or “pressure points”.
4. Trial	when he shows his willingness to experiment with the idea on a small scale.
5. Adoption	when he takes on the idea into his regular farm practice and begins to argue its merits to other people.

The rate at which farmers move through these stages will vary from individual to individual; and it will depend on the range of factors discussed earlier in this chapter. Some farmers will be more exposed to new ideas through contact with media messages or with what we called “influential figures”. Some may be more ready to try something new because of their better education or financial security. Some may be reluctant to take any risks because of their financial insecurity or their loyalty to tradition.

However, do not be discouraged if some farmers simply cannot be convinced to accept your recommendations. This is normal. Typically, the adoption process is slow at first. Then, over time, you should see responses to your recommendations begin to develop a pattern which can be diagrammed as an “adoption curve”:



This is what usually happens with large groups of people under normal circumstances. The innovators are the small percentage of farmers who are quick to accept something new—and who become its advocates. They will tend to have those qualities identified by Dr. Mbula as the ideal people to select as contact farmers.

However, there are other general factors that affect a person's readiness to accept change. Factors that relate to how we all, as human beings—and as adults—actually learn new information, develop new skills and acquire new attitudes. This is the subject of the next chapter.

Farmers

Notes

As an extension worker your most important role is as an educator. The function of an educator is to promote learning. Learning is about change in behaviour, and helping to change the behaviour of farmers is your business. Therefore, to be an effective extension worker, educator and change agent, it is important to understand some of the key factors that affect learning.

The first part of this chapter reviews certain general points about learning; the second relates these considerations to the particular ways in which adults orientate themselves to learning. Both sections will refer back to what has just been said about farmers.

THE CRUCIAL CONDITIONS FOR LEARNING

This is not the place to go deeply into the psychology of learning—what happens inside our heads when we experience a change in the way we understand or do certain things. What is more important for our immediate purposes is to consider what factors make for successful learning—what conditions are usually present when learning takes place. These are the factors over which we as educators have some control. An understanding of them can improve our ability to promote effective learning.

Most of what can be gleaned from textbooks on the psychology of learning can be summarized into six conditions:

In order to learn, we must:

- be motivated to learn;
- ready to admit certain deficiencies in our current behaviour;

The Learning Process

- have a clear demonstration of what we are expected to learn;
- have opportunities to practise the new behaviour;
- receive reinforcement that what we are doing is correct;
- have available an appropriate set of learning materials.

Let us take up each one of these points in turn and relate them to what is known about the farmers you are working with—and to what you can do to make sure these conditions are present when you act as instructor, demonstrator or discussion group leader.

Motivation

Motivation can be seen as a force—either positive or negative, either encouraging or discouraging someone to engage in learning. So it relates to many of the issues we were discussing in the previous chapter: for example, the desire for an increased income can be a positive motivator; conformity to traditional practices can sometimes be a negative motivator.

These are the feelings and attitudes a farmer may bring with him when he attends one of your field days or when he visits your farm. But, of course, these feelings and attitudes will be affected by what you yourself do on these occasions. Your approach to a farmer will be either a positive or a negative influence.

If you present relevant information, if your delivery is coherent and emphatic, then the farmer's interest will be aroused and maintained. But if what is said is not relevant to his needs and if your delivery is too complicated or dull, then his enthusiasm can be blunted. A positively motivated farmer can be turned into a negatively motivated one by unimaginative or insensitive extension agents—and vice versa.

Receptivity

This factor relates to whether a person is ready to admit that he **needs** to learn—whether he is prepared to admit that there are certain gaps in his knowledge or deficiencies in his skills.

Usually, it is not a problem when someone is encountering completely new material. There is no loss of face involved. However, when someone is placed in the position of a learner in a field about which he already knows something, then there may well be internal

resistances to learning—a reluctance to admit to areas of ignorance or the need to change habitual ways of doing things.

Imagine, for example, the feelings of an experienced extension officer who attends a workshop on extension methods—or who is reading this manual on the subject! If he is being challenged to reconsider his own delivery methods, he may feel personally slighted and become defensive about the way he has grown accustomed to doing things.

So, this condition becomes extremely important when the learner has already accumulated experience and competencies related to what he is being asked to learn—or **unlearn**. This, of course, is the situation you face in your dealings with farmers. They possess experience and skills which can be drawn on in a positive way. But there will always be the possibility that some farmers will become defensive and resistant if their existing practices seem threatened and regarded as inapplicable.

In this respect, whether or not a farmer is prepared to accept extension messages will depend to a certain extent on the credibility of the sender of the message. Again, this refers back to what was said in the previous chapter about your own standing in the eyes of the farmer—and the extent to which you can enlist the support of other high status figures in the community. Here, too, reference to practices that neighbouring farmers are adopting will have a powerful influence

Presentation

It is unlikely that learning will be effective if it is not guided, if the learner is not sure about objectives—what the learning is designed to achieve—or if he does not have a clear picture of what he needs to know or be able to do.

Of prime importance is that your presentation of information is accurate. If, for instance, when you are dealing with the treatment of grain before storing, you get the recommended chemical dosage wrong, then the consequences could be serious.

The second general point is that what you say should be relevant to the occasion—the message should be a timely one (concerned with a particular farming activity that the farmers will soon be engaged in); and the message should be “tailored” to the needs and interests of the particular farmers you are addressing. There is, for example, no point in talking in detail about the treatment of grain for storage if the farmers have not even harvested. Or, it would be inappropriate to concentrate on large cribs if the farmers you are talking to grow

The Learning Process

relatively small amounts of grain for which an adapted traditional basket would be perfectly adequate.

Third, your presentation should be coherently organized—in other words, your messages should be easily understood by the farmers, whether in term of the language you use or the logical way in which you make your points. If you use a technical term with which the farmers are not familiar, then you should go on to explain it in everyday language. Percentages, for instance, may not mean a great deal—but “two bags out of every ten” is the kind of concrete language that farmers will easily grasp. Also, if your presentation of information is not well prepared, then there is a risk that what you say will be rambling and confusing.

Finally, the presentation should be made as lively as possible in order to arouse attention and interest. The more confident you are of your material, the more you are familiar with the community in which you are working, the greater your chance to talk fluently and enliven your delivery with humour that you know will be picked up and appreciated by your listeners.

All these points will be taken up again and expanded in the chapters that follow, which are concerned with various methods of communicating extension messages—various ways of promoting learning about agricultural topics and techniques.

Practice

Most of what you are trying to get across is to do with techniques, so the learning will have happened, not when you have talked or demonstrated, but only when the farmers can actually carry out the recommended tasks themselves. So the opportunity for practice becomes one of the most crucial conditions for learning. This is the major theme of the next chapter, where we shall consider different models of extension communication. We shall also be exploring the relative advantages and disadvantages of two-way as opposed to one-way methods of communication.

Sufficient to say at this point that, if we rely on only one-way methods—talking and showing—then there is a risk of information over-load. There is also the possibility that, without guided practice, little or nothing will be learnt. The use of the word “guided” here is significant; because it is possible for someone, without guidance or supervision, to go on practising the same mistake!

Reinforcement

This is a technical term used by educational psychologists; it refers to how our learning is affected by the way in which people react to our efforts to learn—or it refers to our own assessment of how successfully we are mastering a learning task.

Reinforcement can be seen as any kind of reward, which is known as “positive reinforcement”; or any kind of punishment, which is “negative reinforcement”. The range of reinforcers can be as wide as the satisfying experience of a car moving forward when first gear is successfully engaged, or the disappointment of the car stalling when the wrong gear goes in—to the smile or the frown on the face of the driving instructor!

If you consider the way in which very young children behave, you will recognize how important reinforcement is as a factor in learning. When very young, our behaviour was “shaped” by the way in which our parents rewarded or gave “permission” to certain kinds of behaviour. Even when much older, we still tend to seek out those situations which give us pleasure and avoid those which cause us pain. Thus, positive reinforcement is usually a more powerful force for learning than negative reinforcement.

If farmers enjoy your field days because they find you supportive and encouraging of their efforts, then their motivation to attend will be heightened. But if they meet only criticism, then they will tend to stay away—unless their motivation to learn is extremely high and the rewards to be gained from learning are so great they will put up with a discouraging, negative style of presentation.

When someone is practising a skill, there is the second kind of reinforcement operating. The reinforcement is “built-in” to the process, in the sense that reward comes from the experience of succeeding. Conversely, negative reinforcement occurs if the task is not being carried out successfully.

This again indicates the importance of practice in mastering techniques. It also points up an important factor in instruction. When setting tasks for the farmers to perform, it is vital to make sure that they are not too complex or difficult; otherwise they will only experience the frustrations of failure and they will be discouraged.

The key factor in reinforcement is **feedback**. This either comes from you as the trainer, commenting on what a farmer is doing, or it is the result of the farmer “knowing for himself” that he is right—

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when things fit neatly into place or the results of a procedure are good ones. The best reinforcer in the On-Farm Grain Storage Project is when a farmer sees how many bags of maize he has saved by following the recommendations! But many farmers will need a lot of persuasion, guidance and encouragement along the way to that final stage.

Materials

These are the learning resources at your disposal. In school they would be such things as textbooks, maps, chalk, pens and pencils. You have the equivalent in any pamphlets, handouts or charts which carry the messages of a particular project or topic. Usually, you have no control over the production of these; your role is to use them in your work to maximum effect. But, in an effective extension organization, your experience of using such resources will be utilized; and any feedback should be taken into account in modifying the content and the design.

Second, you will want to use other training or demonstration aids to increase the graphic quality of your presentations. As was said in Chapter One, visual impact is an important factor in learning. And Chapter Eleven reviews the characteristics and applications of the main types of aids that you might have available—or even make yourself.

But you have at your disposal the most powerful of learning materials—the actual products and structures of farming. Better to show the farmers a contaminated maize cob than a picture of one. Better to show them an improved grain store than a model of one.

Finally, there are the farmers themselves—they are your most important resource for learning. One of the most crucial aspects of your job, the most vital of your skills, is the ability to tap the experience of the farmers so that their learning is integrated into what they already know and can do. Furthermore, part of your role as an educator is to make it possible for the progressive, successful farmers in your area to become the teachers of their neighbours—without arousing feelings of jealousy or even resentment.

But this takes us into the next topic: the way in which the very maturity of farmers affects their ability to learn.

ADULTS AS LEARNERS

An Illustration

A group of extension staff were attending a workshop on extension methods. The topic was "Adult Learning". Instead of giving them a lecture on the subject, the workshop leader asked the participants to engage in a short exercise.

He divided them into three groups. The first group was going to explore the concept "student"; the second, "teacher"; and the third group, "adult". He asked each individual to find an object—any object—which had qualities, characteristics, which could be associated with either "student", "teacher" or "adult". They had ten minutes for the search. The object had to be one they could carry back to the group.

When all the participants were back in the circle, they each in turn showed what they had found; and they "explained" it to the rest of the group.

Leader: "Kamau, I see that you have a plant of some kind—tell us about it."

Kamau: "Well, I have just up-rooted this from the shamba outside. And in this heat it will soon wither—as you see, it is beginning to droop already. I chose this, because I think a student is very much like a young plant. In order to learn—to grow in knowledge and skills—it needs careful treatment. It needs to be placed in the right kind of environment. It needs the feeding that comes from the soil and watering. It needs the attention of an expert gardener/teacher."

While Kamau is talking, the leader writes up on the board the image, "Young plant". Alongside it, he writes up the key qualities associated with this concept of "student":

"Needs careful treatment in order to learn; needs the right environment and the nourishment of a knowledgeable teacher."

Leader: "And now Pamela. I can't quite see what you have there. But you were one of the group looking for "teachers". So, what do you have to show us?"

Pamela: "If I switch him on, perhaps you will see him better. You see? He is a torch."

Leader: "And why did you choose a torch to represent "teacher"?"

Pamela: "It's the job of the teacher to throw light on things. Illumination—that's what learning is all about. But a

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teacher needs to be plugged in to some power source. That's what the battery stands for. A teacher must get his power or his knowledge from somewhere. It might be from books or it might be from his experience in a particular field. But batteries need recharging every so often—I guess that is why we are attending this workshop!"

The image of the torch goes up on the board—and the qualities attributed to it and related to the role of a teacher:

"Giver of light; source of illumination; knowledgeable, experienced, skilled; sometimes in need of recharging."

Leader: "Let's take one of the "adults" now. What have you got for us, Okoth?"

Okoth: "Actually, I found the task very easy! I didn't have to move from the room to find my object. In fact, it was here in my pocket. "Responsibility" is what I want to illustrate. And I don't think I could do better than my bunch of keys. They indicate that I, as an adult, am able and licensed to ride a motorcycle. That I am mature enough to have a house—and the care of a family. There are, you see, a number of keys on this ring—all saying that I have already opened and walked through a number of different doors. Responsibility, experience, knowledge, skill—this is what it means to be an adult."

One by one the images are collected, until the three clusters of them and their associated qualities are arrayed across the board:

For Student:

- *a small plant, needing nourishment;*
- *an empty glass, waiting to be filled;*
- *a blackboard, which is being written on.*

For Teacher:

- *a torch, that throws light on things;*
- *a portable radio, that sends messages;*
- *a book, that is a source of knowledge.*

For Adult:

- *two bunches of keys, representing responsibilities, knowledge and experience;*
- *a cheque book, representing the same things.*

Pause for awhile and think about the implications of these images and what they indicate about the respective roles of teachers, students and adults:

What assumptions are being made about the processes of teaching and learning?

How compatible are the roles of “teacher” and “student”—as perceived by this group of extension officers?

How compatible are the roles of “adult” and “student”?

What is likely to happen when the “adult” becomes a “student”?

All the images related to students by the extension officers were of someone who is essentially passive: someone who is waiting to be nurtured by a teacher and filled with knowledge.

All the images for teacher were active and potent ones: someone who brings light, someone who is knowledgeable and experienced, someone in control of the learning process.

All the images of adult were also of someone who is active and potent: mature, experienced and knowledgeable—and also accustomed to being in control over certain aspects of his life.

The images and qualities arrayed across the board added up to a very traditional—and rather limited—picture of what learning and teaching are about. The workshop participants saw education as essentially a process of one who knows, transmitting his knowledge to one who does not know. In terms of traditional attitudes to schooling, there is a compatibility between the group’s images of student and teacher. The student is a receptacle waiting patiently to be filled, a plant waiting for the nourishment needed for its growth. The teacher is both **an** authority and **in** authority. This model of education is one of dependency.

However, there is not a compatibility between the images for student and those for adult. The participants associated adult with qualities to do with experience, maturity, knowledge and responsibility. Not a problem when the adult becomes a teacher—but a possible source of tension when the adult becomes a student. If the educational process is as the workshop participants saw it, then the adult is being asked to return to a childlike situation when he is put in the role of a learner.

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If the adult learner is treated in a childlike way, then, unless he is prepared to set aside his experience—his being accustomed to making decisions for himself—there could well be problems for the person who tries to become his teacher. Especially if that person is younger, and in certain respects less experienced, than the one he is “teaching”.

So much of our thinking about education and training is based on our experience of when we received most of it—when we were young. So often the failures of adult education projects can be ascribed to the way in which the methods of promoting learning are those more suitable for young children in school. The methods do not match the maturity and experience and sense of responsibility of the learners.

Therefore, it might be useful if we reflect for a while on the key differences between the child and the adult learner. When we have done that, we can go on to consider which educational methods best suit the situation of the adult learner when, in our extension methods, we put him in the situation of being a learner.

There are three fundamental ways in which adult learners differ from children. They differ in terms of their:

- **SELF-CONCEPT**
- **EXPERIENCE**
- **ORIENTATION TO LEARNING**

Let us look at these three characteristics in turn:

Self-concept

We can say that a person passes into adulthood when he becomes psychologically independent—when he becomes self-directing. The self-concept of a child—the way he sees himself—is of being a dependent being. He is dependent on his parents first and other adults later, for protection, food and for receiving the “rules” by which we live in any particular society. But as children move towards adulthood, they become increasingly aware of being capable of making decisions for themselves—whether riding a motorcycle, building a home or planning what crops to plant.

And adults experience the need for others to see them as capable of self-direction. We resent being put into situations that violate our self-concept of maturity—such as being treated with a lack of respect, being talked down to, being treated like children.

