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C T T A

IMPLEMENTING COMMUNICATIONS IN
DEVELOPMENT PROJECTS:
NEW DIRECTIONS

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IMPLEMENTING COMMUNICATION IN DEVELOPMENT PROJECTS: NEW DIRECTIONS

by

Howard E. Ray *

This is the second time I have been privileged to speak to this group about implementing communication in development projects. I would like to commend AUSUDIAP and ACE for highlighting the critically important topic of communication in these two meetings.

As Dr. Hutchcroft emphasized in the preceding paper, "communication is a 'given' in development. It is the catalyst that enables the other elements of the project to more nearly accomplish their goals" (Hutchcroft 1987). I would go further. I believe that incorporating well-designed, audience-oriented communication support programs into development projects offers perhaps the greatest single opportunity to improve project performance. But, we must do better than in the typical communication program of the past.

Most of my remarks today will focus on the use of communication in agricultural technology development and transfer projects and programs. More specifically, I will lead on from Dr. Hutchcroft's insightful presentation on science and organizational communication in technology generation and development to address some of the issues related to incorporating effective communication support into agricultural technology transfer programs.

Extension institutions and technology transfer programs exist in virtually every LDC. Yet, coverage of farm families is still limited, the quality of extension programs is still questionable, and the transfer of beneficial new and underutilized agricultural technologies continues to lag. Experience from successful projects in agriculture and other sectors indicates that this situation can be improved through incorporating appropriate multi-channel communication strategies into extension-type programs. I will cite just three such projects as illustrations.

The Masagana 99 rice promotion campaign in the Philippines energized the national rice-growing program and helped transform the Philippines, in just a few years, from a rice-importing to a rice-exporting nation. One of the key elements in Masagana 99 was a mass communication program using radio and print materials in combination with intensive training of extension agents (Merrick 1981).

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The Guatemalan Basic Village Education (BVE) Project experimented with different ways of using radio and printed materials to complement face-to-face communication with farmers individually and in groups. BVE demonstrated that:

- integrated communication support can bring about significant positive changes in farmers' knowledge, attitudes and behavior;
- no single communication channel combination is best for all situations; and
- radio can be localized, personalized and directed at specific audience segments.

Most BVE media treatments, under most circumstances, had potential to yield substantial economic returns to both the farmer and society (AED 1978).

In the health sector, social marketing techniques which included the use of mass media to complement personal contacts were used to promote the preparation and use of locally packaged oral rehydration salts (Litrosol) to help overcome dehydration in young children suffering from diarrhea. After two years of the campaign in Honduras, a random-sample survey of 750 households showed that over 60 percent of the women questioned had used Litrosol, and more than 90 percent of those could mix it properly. Widespread use of Litrosol appears to have substantially reduced diarrhea-related mortality. The proportion of deaths involving diarrhea among infants fell from 40 percent in the two years before the campaigns to 24 percent two years later (AED 1987; Meyer, Ray and Saunders 1987).

Thus, it has been well-demonstrated that technology transfer can be accelerated through implementing appropriate multi-channel communication programs in development projects, provided the necessary conditions for change can be satisfied.

REQUIREMENTS FOR CHANGE

I want to pause briefly at this point to comment on requirements for change, because communication support can be effective only to the extent that those requirements can be satisfied. Although recognized in theory, this is too often neglected in practice.

For the agricultural projects just cited, the first requirement was a supply of appropriate technologies to communicate; farmers also needed access to inputs, markets, incentive prices, etc. In the example from health, access to Litrosol was essential. The specific requirements obviously depend upon the characteristics of the desired change.

The "requirements for change" factor must be considered in designing and implementing appropriate communication strategies in development projects.

INFORMATION VS. COMMUNICATION

LDC extension institutions typically have information units; and mass media, audiovisual aids and printed materials are used extensively. The problem is that use of communication skills, media and methodologies remains ad hoc and fragmented. Too often, they are poorly integrated into the total extension program; and strategies for their mutually reinforcing use to support the program are still rare.

What is needed to transform present agricultural information activities in LDC extension into effective communication support programs for technology transfer?

NEW DIRECTIONS

At the 1985 joint AUSUDIAP/ACE conference, I discussed major elements to be considered in designing communication into agricultural technology transfer projects (Ray 1985), extracted largely from "Incorporating Communication Strategies into Agricultural Development Programs" (Ray 1985).

Today, I would like to concentrate on some new directions that hold promise for transforming agricultural information activities into solid and effective communication in support of agricultural technology transfer. They come from many projects and programs around the world, and from diverse disciplines. Time will permit me to mention only a few.

Social Marketing

Social marketing was first defined more than a decade ago as the design, implementation and control of programs calculated to influence the acceptability of social ideas and involving considerations of product planning, pricing, communications and marketing research. Today, social marketing techniques are widely used in the United States for a variety of socially beneficial causes; and have been used in the developing world to promote breastfeeding, health and nutrition, family planning, literacy and (to a limited extent) agricultural technology. Evidence indicates that combining some of the social marketing techniques learned from the health sector with some mass-marketing techniques used in earlier agricultural projects could greatly improve the performance of agricultural extension programs (Meyer, Ray and Saunders 1987).

With reference to communication and social marketing for health, Smith (1985) concluded that "Social marketing is also making a critical contribution. . .because it acts as a new organizing principle for our communication efforts. It forces us to go beyond simple slogans, promotion and advertising strategies and helps us focus on product design, distribution systems, consumer costs, and promotion in a single comprehensive strategy."

Behavioral Analysis

Behavioral analysis is the study of environmental events which maintain and change behavioral patterns. It assumes that behavior is shaped by its consequences and that behavior is amenable to change if the appropriate approach or behavioral technology is employed. Behaviorists stress the importance of understanding the full context in which a new behavior will occur; they seek to identify positive consequences which will follow the behavior and avoid negative results.

Perhaps the primary contribution of behavioral analysis to technology transfer has been its focus on the behavioral specifics of each new technology: What environmental events or antecedents trigger a given practice? What are the salient characteristics of the behavior itself which make it more or less difficult to perform? What consequences follow the behavior which reward or punish the individual?

In its application to agricultural technology transfer, the role of behavioral analysis is to probe the reasons why a practice continues; how a new practice might be introduced; and how such a practice can be configured, presented, and used to ensure its maintenance over time. Behavioral analysis can help planners select better messages to promote, and ensure effective learning when messages are selected (Smith, Porter and Ray 1987).

The Farming Systems Approach

The farming systems research and extension (FSR/E) approach stresses the need for interdisciplinarity, recognizing that farmers must integrate knowledge from various disciplines in allocating resources among their various enterprises. One of the distinguishing features of FSR/E is its need to operate at the community level. It involves an initial diagnosis to describe the farming system and identify farmers' problems, followed by research on high priority problems in farmers' fields as well as on experiment stations.

Although extension recommendations based only on geographical or ecological factors may not be appropriate for every farmer in an area, it is impractical to conduct research on all problems unique to individual farmers. Therefore, the FSR/E approach defines farmer groups or recommendation domains (in communication terms, the audience is segmented). Farmers, researchers and extension agents are involved at every stage of the approach; and effective communication is essential (Farming Systems Support Project 1986).

The FSR/E elements of interdisciplinarity, community-level focus, problem identification and diagnosis, farmer-researcher-extension agent involvement, and audience segmentation are equally relevant in implementing effective communication support in agricultural technology transfer and other development projects.

INTERPAKS Diagnostic Framework and Analytical Tools

Identifying and understanding communication links among agricultural researchers, extensionists and farmers; and among agricultural research, extension and farmer organizations is key to identifying constraints in the flow of technology. INTERPAKS' cooperative research project with AID/S&T has developed a diagnostic framework and analytical tools to help governments and donor agencies better understand agricultural technology systems and the research - extension - farmer interface. Simply put, INTERPAKS is seeking "to develop a 'roadmap' that shows where communication techniques can be used to strengthen that interface (Woods 1987).

INTERPAKS techniques are being applied in Ecuador to help develop linkages between INIAP, the agricultural research organization, public and private sector organizations and farmers; with the International Potato Center (CIP) in Peru to develop a methodology for tracing the flow of potato technology; and in Northwest Frontier Province, Pakistan, to identify how university-based agricultural research can be linked with the provincial extension service.

PRODERITH in Mexico

Its special Rural Communication System is a prominent feature of the World Bank-assisted PRODERITH project in Mexico that works with groups to encourage rural people to participate actively in development. The Rural Communication System, which makes extensive use of portable video equipment, plays an important role in planning and decision-making processes, and assists in implementation.

During early stages of development in a particular area, video programs are used to introduce PRODERITH to the local community and to initiate a dialogue between the community and the project staff. Video programs, made largely in the field and edited at project headquarters, are used in group training sessions (supported by booklets and by discussion and practical work supervised by a subject matter specialist). Locally-made programs are also used to communicate the experience of one group of participants to another (International Extension College 1987).

BVE in Guatemala

The Guatemalan Basic Village Education (BVE) project was cited earlier. Although it did not have access to many of the social marketing and behavioral analysis techniques still evolving at that time, BVE provides a useful model of a comprehensive, cost-effective communication support system for extension (Meyer, Ray and Saunders 1987).

MMHP in Honduras and The Gambia

The Mass Media and Health Practices Project (AED 1987), for which some results were cited earlier, pioneered in using social

marketing principles and techniques in a developing country health project. Experience gained in MMHP is being used widely in health and other sector projects, including in the present AID-funded worldwide Communication for Child Survival (Healthcom) and Communication for Technology Transfer in Agriculture (CTTA) projects.

Communication for Technology Transfer in Agriculture (CTTA)

The AID-funded worldwide CTTA project*, of which I am Project Director, provides an opportunity to apply innovative approaches for effective use of communication to support agricultural extension programs in pilot communication projects in up to nine countries. The project objective is to develop, test and demonstrate integrated multi-channel communication strategies and methods that increase the impact of extension-type programs at costs affordable for sustained use by developing nations.

CTTA is taking advantage of experience gained in projects such as those just cited. Behavioral analysis and social marketing elements are also being incorporated in the pilot communication projects. Particular emphasis is placed on strengthening linkages among research, extension, input and service providers, policy-makers, and farmers; and CTTA will assist in institutionalizing the CTTA process and methods in countries with which it collaborates.

The communication process followed by CTTA is illustrated in Figure 1. It is an iterative process in which each stage feeds into and draws from all others. Concepts and techniques from social marketing, behavioral analysis and extension, and experience of other projects are used as appropriate in all stages. Briefly described, the process consists of:

Investigation

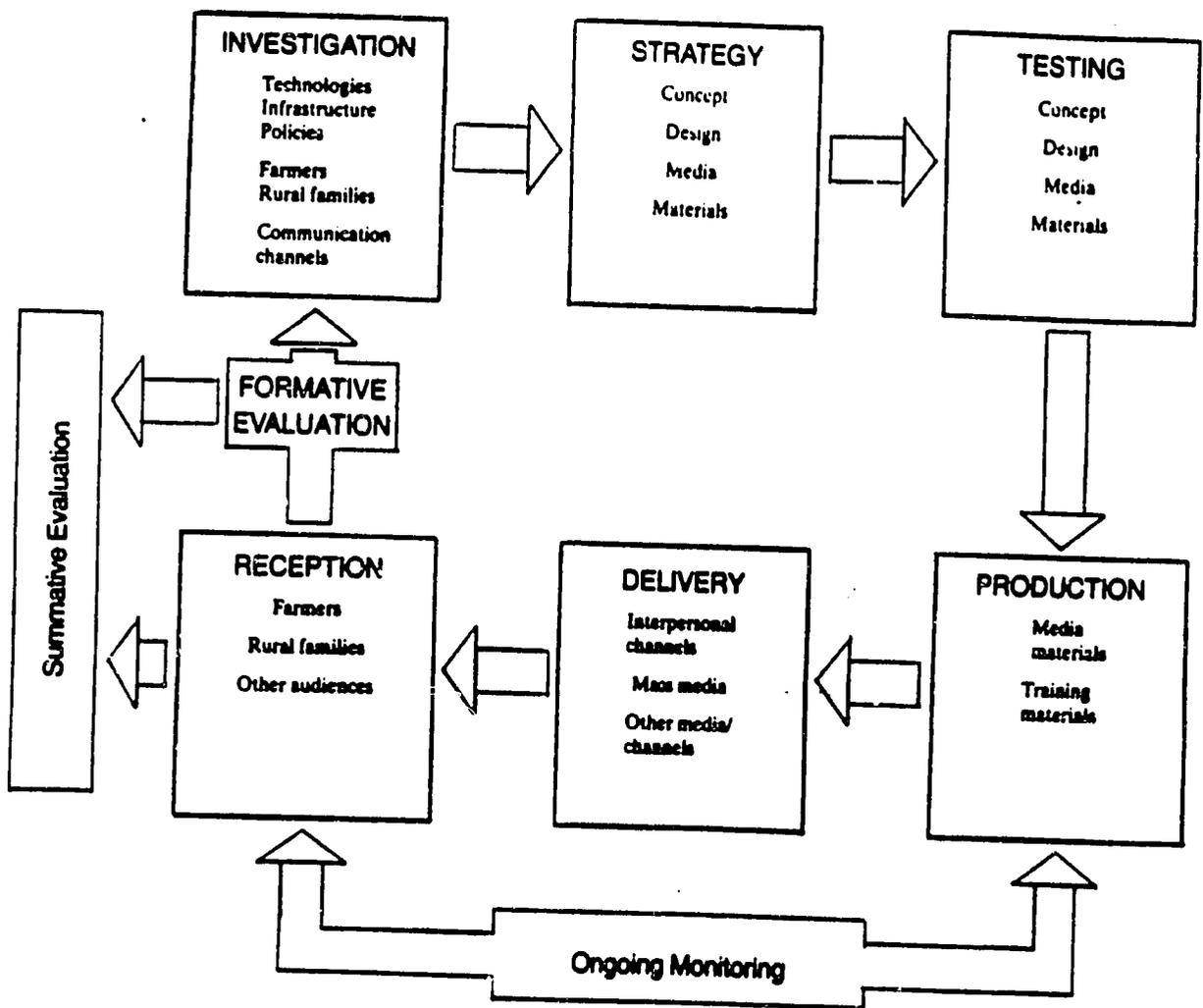
As I have already emphasized, a continuing supply of appropriate, locally-adapted agricultural technologies is essential to communication program success. Therefore, the first step is to determine the stage of readiness for diffusion of new and underutilized technologies--from the perspectives of research, agricultural infrastructure, and policies that provide incentives (or disincentives) for farmer adoption.

The potentially appropriate technologies are then assessed from farmers' perspectives--perceived dependability; economic benefit; risk; similarity to present practices; practicality, considering farmers' resource and other constraints; and possible negative consequences of not adopting.

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FIGURE 1

CTTA Communication Process



We also need knowledge and understanding of the farmers themselves. CTTA uses various research techniques, collectively termed developmental investigation, to learn more about farmers and rural families in the target region--their:

- cultural and social characteristics,
- vocabulary,
- receptivity to change,
- ways of receiving and using new information,
- practices and adoption levels,
- hidden constraints they may encounter in trying an innovation, and
- variability.

Design of the strategy and materials

The CTTA communication strategy (plan for action) is based on results from the technology assessment and developmental investigation. Designing the strategy involves:

- determining message content and defining the behavioral framework and objectives;
- defining and segmenting the target audience;
- selecting mutually reinforcing channels for delivering information; and
- developing a system for coordinated message development; pretesting; timely production and delivery of farmer-oriented information through the selected channels; formative evaluation; and feedback.

Testing the strategy concept and materials

Preliminary strategies, messages and media materials are field-tested to ascertain their effectiveness in transferring information to farmers.

Materials production

Key elements in producing informational and educational materials that serve the program and its audience are:

- detailed production schedules, rigorously followed;
- close coordination among those responsible for message development, materials planning and production, formative evaluation, and feedback;
- careful checks on content accuracy and production quality;
- systematic pretesting of representative materials; and
- prompt response to formative evaluation results and feedback.

Continual interaction with those involved in other areas of the technology development and transfer system, also critically important, is carefully nurtured and maintained.

Delivery

The multi-channel strategy includes timely delivery of information targeted to specific audience segments--as well as general information disseminated more broadly--through mass media, interpersonal communication and other appropriate channels.

Public sector channels such as extension agents and media programs are used to the maximum possible extent. Private sector channels are also used extensively--such as radio stations, newspapers, farmers' organizations, input supplier field agents and sales people, marketers, and local volunteers.

Audience reception

The ultimate success of CTTA depends upon the extent to which farmer adoption of appropriate new or presently underutilized agricultural technologies increases as the result of effective communication support to extension and other technology transfer programs.

Formative evaluation

In CTTA, formative evaluation includes studies carried out as part of project implementation to determine if the messages disseminated to farmers have been timely, well-received, understood, and considered to be practical; and whether the various program elements are functioning as planned.

Summative evaluation

Summative evaluation proceeds concurrently with project implementation. Although the summative evaluation is independent of implementation, evaluation and implementation staff work in close coordination.

Ongoing monitoring

Communication programs must have the capacity and flexibility to respond promptly and appropriately to unanticipated situations.

CTTA uses systematic feedback and networking--with farmers, researchers, extensionists, policymakers, input suppliers, and other private and public sector institutions/organizations--to maintain the multi-directional flow of information essential for coordination and monitoring.

Training and support

Training and support, although not shown in Figure 1, are ongoing and concurrent functions. CTTA emphasizes training at all levels for both project staff and public and private sector staff who are channels for reaching the farmers with information

and reporting feedback from them.

I should mention that CTTA pilot communication projects are now operating in Honduras and Peru, and we anticipate startups soon in two additional countries. Pre-project activities are in progress in Africa. More information about this project is available in "Communicating with Farmers: Communication for Technology Transfer in Agriculture" (Ray 1987).

Several of the universities represented at this meeting, and people present, are contributing to the CTTA Project for which the Academy for Educational Development is prime contractor. Our major subcontractors are Cornell University and (for summative evaluation) Applied Communication Technology, Inc., a firm with close links to Stanford. We have collaborative arrangements with Iowa State, Virginia State and Wisconsin universities, and with Dordmus Porter Novelli, a social marketing firm. In addition, our project advisory board includes representatives from Missouri, Purdue, Minnesota, San Diego State, and Harvard. We also work closely with INTERPAKS at Illinois, and maintain links with several other universities.

THREE VITAL ELEMENTS

Synthesizing our experience in agricultural extension and health, three elements appear vital for success in communicating with farmers--farmer orientation, targeted change, and an integrated media network (Smith and Ray 1985). These elements are inherent in the CTTA communication process as well as in the other communication projects cited.

Farmer Orientation

The farmer must be an active participant whose needs, constraints, attitudes, and vocabulary determine the nature of the communication. In other words, communication is more than a link to the farmers; it links together farmers, researchers, extensionists and planners.

Behavioral analysis and social marketing have made major contributions to providing tools for understanding the farmers' perspectives. Concept testing, focus group interviews, behavioral trials and central intercept interviews--developed and/or refined by behaviorists and social marketers, and tested in various projects (particularly in the health field)--are specialized names for new kinds of sound village research techniques. They help identify hidden constraints a farmer may encounter in trying innovative techniques and technologies. They also help us to understand some not-so-obvious incentives that promote adoption; to select a vocabulary the farmers will understand; and to integrate the innovation into the farmers' own views of their problems and needs.

Targeted Change

Effective communication support must be synchronized with seasonal variation in farmers' needs. Also, for a new behavior to become routine, people need to do it repeatedly, and to receive support from many places and as close as possible to the time a person first tries it.

The latter presents a real problem in agriculture. For example, benefits from planting a new crop variety can be observed only as the growing season progresses and in the final yield. Drought, floods, unexpected increases in fertilizer prices, credit shortages, or a multitude of other factors can undermine the most carefully used technology. And the resources and management skills of farmers vary greatly, even within a community.

The information we give must take such variables into account, and be integrated into a comprehensive communication strategy that helps farmers deal with seasonal problems as they arise.

Media Network

Within the media network, each medium has particular strengths for reinforcing change objectives. To oversimplify, it appears that broadcast media are best at reaching many people quickly with fairly simple and straightforward ideas. Print media are best at providing reminders of information at the time it is used. Interpersonal contact--through extensionists, group meetings, community organizations, demonstrations, etc.--is the best way to teach and develop credibility.

Few projects can afford to use all these methods all the time. Therefore, we must select elements carefully from each of the media groups, and integrate them so they multiply each others' effectiveness. This is done through using what communication specialists call channel strategies.

Channel strategies are situation-specific and grow from an understanding of a particular area and a particular program. They are based on pre-program (and continuing) research into questions akin to those of marketing research in developed countries, such as:

- "Who listens to what?"
- "Who reads? Who can read?"
- "What are costs of using each media channel?"
- "How complicated is the information we have to give?"
- "How accustomed to (or tired of) radio or print messages is our audience?"
- "Whom does our audience trust for advice on a given topic?"

THE CANS AND CANNOTS OF COMMUNICATION SUPPORT

Communication can effectively increase program participation

if organized successfully around the "three vital elements" in applying the communication process illustrated in Figure 1. It can provide information to reduce risk and improve efficiency in using services. Effective communication both within each program or project component (as presented for the research component by Dr. Hutchcroft), and networking among all institutions and agencies involved in the technology development and transfer process are critically important in this regard. Finally, effective communication can lead to increased adoption of new practices.

It is my belief that all of these can be accomplished through building on indigenous information systems and available skills and facilities, and by integrating them into public and private sector extension efforts.

At the same time, communication is not a panacea. For example, a communication support program cannot provide needed goods, or services other than information. Neither can it provide access to markets or set prices. Even here, however, effective communication may influence such factors through collecting and channeling reliable feedback from the field to research, input and service providers, policymakers, etc.

WHAT IS NEEDED TO GET COMMUNICATION MOVING?

It is all well and good to talk about the value of implementing communication in development projects, and about the requirements for and role of communication. All of this will come to naught, however, unless something happens. What is needed to get communication moving?

Many reasons can be given for lack of progress in communication in development projects and programs to date, including lack of resources, staff mobility, communication infrastructure, skilled communicators in the country, etc. Although each has some validity, seldom do they place an absolute constraint on implementing effective communication support. On the contrary, such reasons may offer the strongest possible justification for strengthening communication efforts.

The first requirement for adding communication and dissemination to new and/or ongoing development projects is understanding the potential benefits to be gained. The benefits must be understood by both the host country institutions responsible for technology development and transfer, and by the donor agency.

The second requirement is commitment of project planners and implementors to allocate resources to communication. This will come only if the proposed communication support is affordable to the project.

I am optimistic about getting communication moving in agricultural development projects, and would like to cite a few examples from our own experience that have given rise to my optimism.

First, we have observed increasing AID and other donor interest in communication. There is widespread concern that agricultural technology transfer is lagging behind, and recognition that more effective communication support may be essential for improving this situation.

Second, most host country governments in the Latin American, Asian, Near Eastern and African countries with which we have had contact have expressed support for incorporating effective communication into their technology development and transfer programs.

I would like to cite experience in three countries to illustrate why I think communication is beginning to move:

- The Honduran Ministry of Natural Resources requested assistance from USAID/Honduras in analyzing their agricultural communication situation and developing recommendations for its improvement. That analysis, made in early 1984, led to selection of Honduras as the primary site for CTTA, and a pilot communication project is now in progress.
- In Indonesia, a midterm evaluation of the AID-supported Secondary Foodcrops Development Project led to plans to incorporate a significant communication component in the project.
- In Jordan, CTTA was asked to assess the feasibility of a CTTA pilot communication project. That study has just been completed by a CTTA team comprised of Dr. Eric Abbott (Iowa State), Dr. John Woods (INTERPAKS, Illinois) and Dr. George Abawi (Cornell); and their recommendations are now being reviewed in Jordan.

The interest in implementing communication in development projects is real and growing. Therefore, I would like to conclude my remarks by offering some guidelines for developing projects or project components that use multi-channel communication appropriately and effectively in support of technology transfer:

- Verify that necessary conditions for change are met.
- Specify clear behavioral objectives.
- Determine the characteristics of the target population to ensure that messages, channels and presentations are appropriate and acceptable to the receivers.
- Use mass media to complement staff efforts in the field, thus increasing staff effectiveness and coverage.
- Obtain frequent, reliable feedback from the target population to guide program changes and the ongoing development of media messages.

- Localize messages and media presentations.
- Provide continuing job-oriented training and staff development opportunities.
- Set priorities. Seldom can the communication system meet all the demands that are placed upon it.
- Think in terms of a comprehensive communication support program in which all channels--media and face-to-face--are mutually reinforcing.

Of all these guidelines, perhaps the most important are those that pertain to knowing the farmers and continually adjusting the program to their needs and constraints.

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