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Agricultural Extension

A Reference Manual

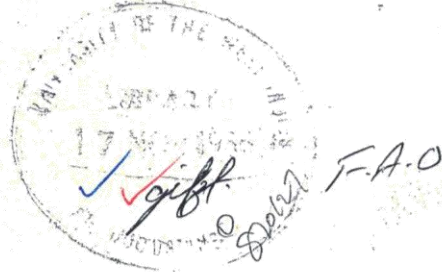
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Chapter 13

Evaluating Extension Programmes

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THE MEANING OF EVALUATION

Evaluation is an activity we engage in every day because we are always making judgements relating to the value or worth of things we do or experience. For example, we are constantly evaluating the food we eat, the jobs we do, the programmes we listen to on the radio, and so forth.

The following sequence of steps are usually involved in all evaluations.

1. Evaluations are usually prompted by the need to make a decision about the value or potential value of something. For example, if we are listening to a programme on the radio for entertainment, we may need to decide whether such a programme is likely to provide the type of entertainment we are looking for. Or, at the end of the programme we may want to decide whether we would listen to similar programmes in the future.

2. We define criteria as to what constitutes an entertaining programme for us (type of music, amount of a certain type, etc.).

3. We make observations or collect evidence relating to the criteria (what type of music is being played, and how often?).

4. We form judgements relating to the value or potential value of the programme (not valuable, or not likely to be valuable because the music we like is hardly being played).

In our day-to-day activities we may hardly be aware of these steps. However, in systematically evaluating extension programmes, explicit attention must be given to each step in the process.

Definition of Evaluation

Extension evaluation can be defined as a continuous and systematic process of assessing the value or potential value of extension programmes. This process includes developing criteria from the concerns of the relevant audiences for the evaluation, the collection of data relating to the criteria, and the provision of information that adequately addresses the concerns.

The definition attempts to be as broad as possible, and emphasizes the continuous and systematic nature of evaluation. With regard to the role of objectives in evaluation, a major concern is usually the extent to which the programme met some or all of its goals or objectives. However, different evaluation audiences may want to focus on different aspects. Additional concerns may also become prominent during the execution of the programme. Finally, extension evaluations conducted regularly during programme implementation will indicate the potential value of programmes.

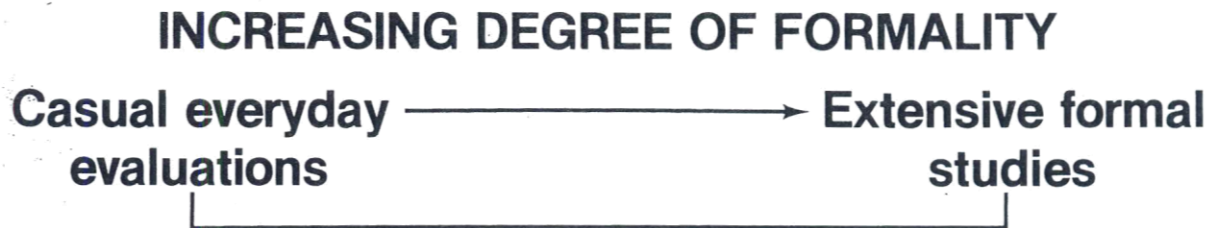
TYPES OF EVALUATION

Informal and Formal Evaluations

One of the earliest writers on extension evaluation (Frutchey, 1967) pointed out that there are several degrees of evaluation. This can be illustrated by means of a continuum

(Figure 13.1). At one end of the continuum there are "casual every day evaluations," or informal evaluations, and at the opposite end, "extensive formal studies".

Figure 13.1 Degrees of evaluation



Casual every day evaluations can be equated with first impressions of a particular experience. According to Frutchey (1967, p. 2), "They are the ones we ordinarily make without much consideration of the principles of evaluation in the decisions we make about simple problems". On the other hand, extensive formal studies involve the use of sophisticated research procedures and are often conducted by teams of evaluation specialists.

Informal evaluations are unsystematic; the criteria and evidence used in making judgements are implicit. They can, therefore, be biased and misleading. The more systematic the evaluation, the more likely will it contribute to making useful decisions about an extension programme. Thus, we should at all times attempt to make our evaluations more systematic and more formal. This is not to imply that the only good evaluations are those which approximate the extensive formal study. Such studies may only be justified where a major extension programme is involved.

Formative and Summative Evaluations

The terms formative and summative are associated with two important roles of evaluation. Taylor (1976, p. 355) provides the following definitions of these types of evaluations:

"Formative evaluation attempts to identify and remedy shortcomings during the developmental state of a program. Summative evaluation assesses the worth of the final version when it is offered as an alternative to other programs."

In the past, the emphasis has been on summative evaluations that were conducted after the completion of the programme to assess the accomplishments and whether intended objectives were achieved. Nowadays, more and more attention is being paid to formative evaluations that are conducted before programme completion, more particularly, during programme implementation. Such evaluations provide early feedback on programme weaknesses, which can then be used to modify or adjust the remaining stages of a programme.

Monitoring and Evaluation

Conceptually, monitoring and evaluation correspond in many respects to formative and summative evaluation. However, in extension, the former has been most extensively used in conjunction with a specific monitoring system developed for the Training and Visit System (Benor and Harrison, 1977). According to Cernea and Tepping (1977, p. ii), the system is designed "as a management tool to ensure the extension organization is operating efficiently, to enable management to take corrective action when necessary and to provide policy makers with appropriate information". Cernea and Tepping defined monitoring as follows (1977, p. 11);

"It is the gathering of information on utilization of project inputs, on unfolding of project activities, on timely generation of project outputs, and on circumstances that are critical to the effective implementation of the project."

Indicators used for monitoring are the number of contact farmers reached by the village extension worker (VEW), the number of visits made by the VEW, and so on.

With reference to evaluation, Cernea and Tepping distinguish between on-going evaluation and ex-post evaluation as follows:

On-going evaluation is an action-oriented analysis of project effects and impacts, compared to anticipations, to be carried out during implementation.

Ex-post evaluation would resume this effort several years after completion of the investment, to review comprehensively the experience and impact of a project as a basis for future policy formulation and project design.

Indicators used for evaluations include yields of major crops, and changes in cropping intensity and patterns.

Monitoring and evaluation will be discussed in greater detail later on in the chapter.

Reasons for Doing Formal Evaluations

The discussions in the previous sections have already touched on some important reasons for doing formal evaluations. An expanded discussion of these and other reasons is provided below.

1. Evaluations guide and direct future action. It is important that the merit or worth of programmes be determined as accurately as possible through formal evaluations which are less subject to the effects of personal biases.

2. Evaluations can help to improve on-going programmes. Information provided from evaluations conducted during programme implementation (formative, monitoring and on-going evaluations) can be used to modify or adjust subsequent stages of a programme.

3. Evaluations can provide the basis for planning future programmes. For example, summative evaluations can provide answers to questions relating to whether a programme should be continued, expanded or terminated. All evaluations should also describe the environment, resources and constraints that could affect a programme, and factors that contribute significantly to the success or failure of a programme should be identified. Such information will be of immense value in planning and conducting future programmes.

4. Formal evaluations are indispensable where accountability is an important concern. Sponsors of special extension projects for example, will be interested in whether funding has served the purposes for which it has been disbursed, and they may require that further funding be contingent upon formal evaluations conducted at certain points during the project. Agricultural extension organizations also have a responsibility to account for public funds: accountability for programmes should be an important concern, although the mandate may not be as explicit.

5. Formal evaluations can serve important public relations functions. Outside the immediate relevant audiences of administrative and technical staff directly connected with a programme, the information from evaluations can be presented to other persons and organizations who are linked to extension or concerned about its effectiveness.

6. Since formal evaluations necessitate a systematic approach to decision-making, they can contribute to the development of professional attitudes in the extension worker. Also, feedback information on programmes from evaluations can help to improve the morale of the extension staff.

BASIC STEPS IN EVALUATING EXTENSION PROGRAMMES ✓

The actual procedures used in evaluating extension programmes may vary considerably depending on the nature, scope and complexity of the programmes, and the resources available for conducting the evaluations. However, a series of steps can be identified which are basic to all formal evaluations. These are discussed below.

Develop An Evaluation Plan

A plan should be drawn up indicating what will be done, why it needs to be done, and how it will be done. The other steps that will be discussed subsequently will constitute the major components of the plan.

An evaluation plan is important for three major reasons. First of all, resources to conduct an evaluation are always limited, and adjustments will constantly have to be made between what is the best or ideal way to conduct such an exercise and what is possible, given the limitations existing in the situation. Planning will help to ensure that the exercise is conducted and completed within the existing constraints.

Secondly, planning will also help to focus the evaluation on questions that are of concern to relevant audiences. One issue that has arisen in the past is that the findings and recommendations of evaluations have only been used to a limited extent in making subsequent decisions about programmes. An evaluation plan will give the relevant audiences an opportunity to be involved so that the evaluation can address their questions and concerns. Planning will help identify which evidence would be considered "credible" by such audiences.

Thirdly, the existence of an evaluation plan will facilitate getting useful input from everyone concerned. Specialists, for example, will be better able to guide extension staff if a blueprint exists linking the intended procedures with the objectives of the evaluation.

Consider the Need for the Evaluation

"The major purpose of evaluations is to assist in program decisions. Formal evaluations are worth doing only if they have a chance of affecting such decisions" (Bennett, 1973 p. 21). An additional consideration is the significance of the need. A major extension effort involving large numbers of farmers and substantial resources will (with other things being equal) be more significant than smaller programmes centred around a few farmers. Significance can also be gauged by looking at the issues with which the evaluation is concerned, and assessing the likely impact of the evaluation on the resolution of these issues.

List the Reasons For Wanting to Evaluate the Programme

As mentioned before, there can be several reasons for evaluating a programme. The evaluator should decide which reasons are most important and focus the evaluation accordingly.

List the Audiences for the Evaluation Report

The potential audiences for the evaluation should be considered; they may consist of the evaluator, fellow extension staff, supervisors, advisory councils and other support groups, programme participants (men and women farmers, farm families, members of youth organizations), programme sponsors, and the general public. The evaluator will need to select the primary audience for a specific evaluation effort because different audiences will have different concerns about the programme.

State the Criteria for Evaluating the Programme

Criteria are the yardsticks used to measure the merit or worth of a programme. For example, a criterion for an extension programme may be the number of women farmers who adopt a particular practice. If an evaluation indicates that the specified number did, in fact, adopt the practice, the programme can be considered a success as far as this criterion is concerned. For example, where programme emphasis is on increasing the output of cash crops, an unintended outcome may be that land formerly used to grow food crops changes to cash cropping land. This has particular effects on women farmers who frequently grow food crops. Unintended outcomes such as these should be a part of the evaluation.

The main source of criteria should be the basic intent and objectives of a programme. If a programme was developed in response to a particular need, a major concern of the

evaluation should be whether the programme is meeting the need, or to what extent it met the need.

However, several problems may emerge in attempting to develop criteria from programme objectives. First, the objectives may not be explicitly stated. Steele (1972, p. 5) pointed out that in such cases "this guide to effectiveness has to be set retrospectively by asking the question, 'What results can be expected to have occurred given these particular participants, this programming situation, and this programming input?'"

Many times, too, objectives may be vague, consisting of very general statements of expected outcomes. Much difficulty will be encountered in attempting to translate such objectives into specific ones that can be identified, examined or measured.

Another problem is that even though objectives may be carefully developed and properly stated, the programme emphasis may shift as it progresses, and the statements of objectives may not adequately reflect these later shifts. Additionally, stated objectives may not be sufficiently inclusive to identify all the major results of a programme, because these are difficult to predict beforehand.

As a result of these problems, many writers advise against focusing solely or too heavily on programme objectives in conducting evaluations. The evaluator should, therefore, discuss the issues and concerns to be addressed with the primary audiences. In addition, the resulting consequences, both intended and unintended, should be considered. Of course, the extent to which the programme met its objectives is quite likely to emerge as the significant concern, especially if programme planning procedures were adequate in the first place. However, during the process of discussion, refinements will have occurred. Objectives of special concern may be identified; also standards for judging the value of programmes may be raised or lowered based on experience obtained during the conduct of the programme. Other important concerns will also be given due consideration.

List the Resources that will be Available for the Evaluation

Evidence consists of information related to a particular criterion. In deciding on which type of evidence to use, adjustments will almost always have to be made between what is the best or ideal type to use and what it is possible to obtain.

There are various ways of classifying evidence that can be used in extension evaluations. Sabrosky (1967) distinguished two major types; evidence in terms of changes in the behaviour of people, and evidence in terms of opportunity. In the former case the major consideration is whether extension's audiences have changed their attitudes or practices as a result of the extension method or activity. In the latter case, Sabrosky pointed out;

"When it is difficult or impossible to measure progress at the level or original status or change in people themselves, it is desirable to measure work in terms of the learning situation we have set up. If no learning situations are set up (no written materials go out, no talks are given, no demonstrations are put on, no visits are made), we cannot expect the people to learn anything as a result of extension work" (p. 26).

What can be considered an expanded version of Sabrosky's classification of types of evidence has been given by Bennett (1977). He proposes seven levels of evidence for programme evaluations that can be arranged in a hierarchy. The levels of evidence, and examples of evidence at each level, are shown in Table 13.1. At each level what was planned or anticipated can be compared to what was actually achieved. For example at the "inputs" level, the actual time spent by extension staff on a programme, or aspect of a programme, can be compared with the amount of time such staff had planned to spend. In many extension programmes, such sophistication in planning may be rare; however, evidence obtained at each level can still be useful in aiding programme decisions.

Bennett (1977, p. 8) further proposed the following guidelines to assist in deciding which level of evidence to use.

1. "Evidence of program impact becomes stronger as the hierarchy is ascended." Levels 1 to 3 provide ways of measuring possible opportunities for education to occur. He also pointed out that, "Ascending to the fourth level, reactions, can provide somewhat better confirmation of whether given activities are helpful as intended. But such evidence

indicates less satisfactorily than evidence of KASA [Knowledge, Attitudes, Skills, Aspirations] changes the extent of progress towards ultimate program objective." The ideal assessment of impact would be obtained at the highest level in the hierarchy, in terms of whether the desired end results have been achieved, and the assessment of any significant side effects.

2. "The difficulty and cost of obtaining evidence on program accomplishments generally increases as the hierarchy is ascended" (Bennett, 1977, p. 9). Although evidence at the lower levels do not provide as strong an indication of impact as those at the higher levels, it is relatively more difficult and costly to obtain evidence at the higher levels.

3. "Evaluations are strengthened by assessing extension programs at several levels of the hierarchy including the inputs level" (Bennett, 1977, p. 9).

Table 13.1

Hierarchy of Evidence for Programme Evaluation

<u>Criteria Categories</u>	<u>Examples of Types of Evidence</u>
7. End Results	Attainment of ultimate objectives. Changes in the quality of life and standard of living of farmers.
6. Practice Change	Number of farmers adopting improved agricultural practices.
5. KASA Change	Changes in knowledge, attitudes, skills, and aspirations of target audience.
4. Reactions	Number of persons indicating whether extension program is useful.
3. People Involvement	Percentage of target audience participating in program (attending meetings, <u>etc.</u>).
2. Activities	Learning situations set up. Subject matter taught.
1. Inputs	Number of visits, meetings, <u>etc.</u>

Note: From Analyzing impacts of extension programs, by C.F. Bennett, 1977, Washington D.C.: Extension Service, U.S. Department of Agriculture.

4. "Evaluation is strengthened to the extent the specific criteria for evaluation are defined prior to conduct of the Extension program" (Bennett, 1977, p. 11). The basic point here is that early clarification of programme objectives will assist in the subsequent conduct of evaluations. Evidence obtained prior to programme execution (e.g., level of knowledge, attitudes and skills of programme participants) will provide a benchmark against which progress (as a result of participating in a programme) can be judged.

5. "The harder the evidence for evaluation, the more an evaluation may be relied upon in program decision making" (Bennett, 1977, p. 12). Examples of hard and soft data are given in Table 13.2. Here again the decision as to which type of data to use rests on careful consideration of what is ideal and what is possible.

Designs for Evaluation Studies

A variety of designs can be used in collecting evidence for evaluation studies. Bennett (1977) provides a list of these in order of their potential ability to provide strong

Table 13.2

Examples of Hard and Soft Data in a Hierarchy of Evidence for Program Evaluation

	Examples	
	Hard Data	Soft Data
7. End Results	Trends in profit-loss statements, life expectancies, pollution, indexes, and satisfaction with health.	Casual perception of changes in quality of health, economy and environment.
6. Practice Change	Direct observation of use of recommended farm practices over a series of years.	Retrospective reports by farmers of their use of recommended farm practices.
5. KASA ¹ Change	Changes in scores on validated measures of knowledge, attitudes, skills and aspirations.	Opinions of extent of change in participants' knowledge, attitudes, skills and aspirations.
4. Reactions	Extent to which a random sample of viewers can be distracted from watching a demonstration.	Recording the views of only those who volunteer to express feelings about demonstration.
3. People Involvement	Use of social participation scales based on recorded observations of attendance, holding of leadership position, <u>etc.</u>	Casual observation of attendance and leadership by participants.
2. Activities	Pre-structured observation of activities and social processes, through participant observation, use of video and audio tapes, <u>etc.</u>	Staff recall of how activities were conducted and the extent to which they were completed.
1. Inputs	Special observation of staff time expenditures, as in "time and motion" study.	Staff's subjective report regarding time allocation.

Note: From Analyzing impacts of extension programs by C.F. Bennett, 1977, Washington, D.C.: Extension Service, U.S. Department of Agriculture.

¹KASA stands for Knowledge, Attitudes, Skills and Aspirations.

scientific evidence of the degree to which observed change is produced through extension programmes. A modified list of these designs is as follows:

1. The Field Experiment
2. Matched Set Design
3. "Before-After" Study
4. The Survey
5. The Case Study

The field experiment provides the strongest scientific evidence and the case study the weakest, for the purposes of evaluation; some evaluation studies may incorporate elements of several of the designs listed above. Generally, the first two designs are hardly used in the regular conduct of evaluations, because they are expensive and difficult to handle. The last three designs listed will be described briefly below.

"Before-after" study. In this type of study, observations are made before and after participation in an extension programme. The changes in the status of participants can be attributed to the programme after other competitive explanations (for example, unusual weather affecting crop yields, other programmes) have been logically ruled out.

The survey. This design is perhaps the one most often used in conducting extension evaluations. It does not require observations before a programme is implemented, and is generally easier to carry out and less expensive than the "before-after" design. However, according to Bennett (1977, p. 19) it "generally provides rather weak conclusions about the extent to which extension, rather than other forces, produces any observed differences between extension clientele and non-clientele."

Surveys can be used to collect data on people's perceptions and opinions about programme activities, and the results of programmes. Surveys can also seek information on the status of participants prior to their participation in a programme.

The survey design usually requires use of questionnaires sent through the mail, or administered through personal interviews. Sampling techniques are generally used to select the study population.

The case study. According to Bennett (1977, p. 20), "Case studies observe intensively one or only a few selected individuals, groups, or communities. Observation may involve examination of existing records, interviewing, or participant observation". Although the evidence provided by this design is not as strong as those from other designs, case studies can reveal information about a programme which is not accessible by other means. It is usually most effectively used as a supplement to other evaluation designs.

Conduct the Evaluation

Analyze the Evidence

Various kinds of data analyses can be used ranging in complexity from percentages to statistical techniques. The important considerations are the expertise possessed by the evaluator, and whether the analyses can provide the information for answering the questions with which the evaluation is concerned. Good data analysis relies on emphasis on those aspects that are related to the particular issues addressed by the evaluation.

Report the Findings

The style and content of the evaluation report should be tailored to the audiences being addressed. A variety of reporting procedures may be used (written reports, audio-visuals, question-answer reports, etc.).

With regard to implications and recommendations, the evaluator should clearly state the reasons behind any recommendations made. As far as extension evaluations are concerned, only in a few cases will the audiences for the evaluation prefer to draw their own conclusions without any input from the evaluator. Audience expectations should be determined in advance in terms of which concerns may need more definitive judgements.

Apply and Use the Findings

The evaluation should not be regarded as complete until the findings have been used to improve the on-going programme, and/or in the planning of future programmes. In cases where the evaluators are extension workers evaluating their own programmes, there should be little difficulty about incorporating the findings into the programme. However, depending on the nature and extent of the changes, approval may have to be obtained from supervisors. Where the evaluators are not persons conducting the programme, the likelihood of evaluation findings being ignored is greater. However, if the initial steps in planning and conducting evaluations (identifying concerns of relevant audiences, etc.) have been adequately pursued, the task of applying and using evaluation findings is easier.

EXAMPLES OF EXTENSION EVALUATIONS

Monitoring and Evaluation

This section will briefly discuss the major features of a system for the monitoring and evaluation of extension projects under the Training and Visit System, as proposed by Cernea and Tepping (1977). The proposed system, though not applicable in its entirety outside of the T and V System, provides some useful insights into how some of the evaluation concepts could be applied.

The Training and Visit System

Before looking at the proposed procedures for monitoring and evaluation, it will be useful to review some of the basic features of the T and V System. This system, developed by Benor and Harrison (1977), has been introduced in extension projects assisted by the World Bank, in a number of countries. The following are some of the essential characteristics of this system.

1. The village extension workers (VEWs) are assigned purely educational responsibilities.
2. The total number of farm families to be visited by each VEW is clearly defined.
3. At each level in the extension organization, the span of control allows close guidance and supervision of the level below.
4. Extension programmes concentrate on the most important crops and on improving farming practices which have the greatest potential for increasing yields, and which do not generally involve large cash inputs.
5. Specific recommendations for improving farming practices are carried to selected contact farmers, who will assist in spreading the new practices to surrounding farmers.
6. The contact farmers are visited every fortnight at a set date and time.

Procedures for Monitoring and Evaluation

A synopsis of the recommended procedures for monitoring and evaluation is presented below. The basic steps are discussed in the order in which they were presented previously in the chapter (although this may not have been the way in which the proposed system was originally conceptualized).

The Need for Monitoring and Evaluation

With specific reference to India, the number of state extension organizations using the T and V System has expanded rapidly to include all states since it was first introduced in 1974. Large numbers of extension staff, as well as farmers, are involved. Obviously then, such a major programme needs to be critically examined from its earliest stages to ensure that extension's efforts are not being wasted and that important ends are being served.

This new extension approach depends to a large extent on the efficient organization and management of the extension services. Because of the rigid time-table for visits, training sessions, and so on, all the components of the system need to function smoothly. Thus, it is important to detect any malfunctioning or breakdown in the system quickly as possible through monitoring and evaluation.

Purposes of Monitoring and Evaluation

The major purpose of monitoring and evaluation is to provide the information management needs on how efficiently the extension organization is operating. If deficiencies occur in certain regions or districts, then corrective action can be taken quickly.

The basic consideration in monitoring is whether scheduled visits are being made, appropriate recommendations are being given, farmers are adopting the improved practices, and the like. Evaluations at a later stage will indicate whether results are satisfactory, and whether corrective action needs to be taken. Since a major concern is whether staff are completing assigned tasks, the monitoring and evaluation exercises are therefore divorced from the responsibilities of such staff, and are conducted by a separate evaluation unit. There are, of course, advantages and disadvantages in having a separate unit for conducting evaluations, but these will not be discussed here.

Another important consideration is the question of accountability. The T and V System entails the disbursement of considerable funds and the deployment of large numbers of agricultural extension staff on purely educational duties. Justification of such an approach, especially in the initial stages, thus becomes a critical issue.

Audiences for the Evaluation

The primary audiences for the monitoring and evaluation exercise are the policy-makers and the management personnel in the extension organization.

Criteria and Standards for Evaluating the Programme

The criteria for monitoring and evaluating T and V System agricultural extension projects were developed from the goal or basic intents of such projects. Cernea and Tepping (1977, p. 7) stated the goals as follows.

"The new agricultural extension projects put a definite emphasis on reaching quickly the mass of small farmers, tenants and sharecroppers. Their goal is to increase the productivity of large numbers of small and marginal farmers, help them to meet their basic human needs and contribute to an overall increase in food production."

These increases in food production were to be attained by getting farmers to use low- and medium-cost labour-intensive technology in improving their productivity, rather than through major changes in the infra-structure for agricultural development.

The ultimate goal of these projects can be said to be the improvement of the social and economic welfare of the farmers, and economic wealth of the country. A series of intermediate goals can also be identified. For example, an initial goal is visiting the farmer with specific recommendations every fortnight; a subsequent goal is that an acceptable number of farmers adopt the recommended practices. Criteria for monitoring and evaluation are developed from these intermediate goals and consequently, a hierarchy of evidence is established.

The difficulty in using objectives strictly is also illustrated here. While specific objectives and standards can be set beforehand on initial goals (for example, number of visits) considerably more difficulty will be encountered in doing this for subsequent goals. For example, what will constitute an acceptable number for farmers adopting the recommended practices? This number may be affected by unforeseen circumstances (weather, etc.) outside those allowed for by the programme.

The specific criteria used and the evidence to be collected for monitoring and evaluation are outlined in a later section.

Resources Available for the Evaluation

The usual constraints of time and money also constitute a limitation in this case. Thus the emphasis in monitoring and evaluation is in obtaining the absolute minimum information that will aid the policymakers to make decisions about the programme.

Collection of Evidence

This section will list the criteria for monitoring and evaluation and indicate what evidence will be collected and how it will be collected relative to the criteria.

Monitoring

<u>Criteria</u>	<u>Data Collection Procedures</u>
(1) Degree of exposure to extension - Farmers reached directly - Farmers reached indirectly	Monitoring sample survey
(2) Quality of visits	Monitoring sample survey
(3) Farmers' evaluation of programme	Monitoring and harvest survey
(4) Adoption of farm practices	Monitoring sample survey Harvesting study
(5) Role behaviour (VEWs, AEOs)	Monitoring survey

The data collection procedures outlined above are intended to complement the reporting procedures built into the system. Monitoring data are obtained primarily from interviews with a sample of contact farmers with whom the VEWs work conducted during the pre-harvest stage. The questionnaire for the monitoring survey includes questions relating to the following (Cernea and Tepping, 1977):

1. Name of the VEW.
2. The frequency of visits by the VEW.
3. Attendance at group meetings.
4. Amount of land operated, and the proportion that is irrigated.
5. The practices recommended by the VEW, the area adopted, the area to be adopted, the extent of adoption, or reasons for non-adoption.
6. Whether any increased yields are expected on areas on which the recommended practices have been applied and, if so, how much.
7. The number of farmers they know who have learned the recommended practices from them.
8. A rating of the usefulness of the agricultural extension programme.
9. Any other comments or suggestions.

Table 13.4

Evaluation

<u>Criteria</u>	<u>Data Collection Procedures</u>
Yields of major crops	Harvest survey
Changes in cropping intensity and patterns	Harvest survey
Area under high yielding varieties	Reporting
Spread of key practices	Monitoring and harvest surveys

The evaluation data are obtained from sample surveys of the total farming population, conducted during the harvest stage. Crop-cutting is used to estimate yields of farmers included in the sample. The questionnaire for the evaluation survey includes questions relating to the following:

1. Gender of the respondent, whether or not the respondent is a contact farmer or was a contact farmer at any time.
2. Name of the VEW.
3. The frequency of visits by the VEW.
4. Attendance at group meetings.
5. Amount of land operated, and the proportion that is irrigated.
6. The practices recommended by the VEW, the area adopted, the extent of adoption, or reason for non-adoption.
7. New practices used on the plot selected for the crop-cutting, and sources of information about the practice.
8. Estimated difference between present yield and what would have been obtained without following the recommended practices.
9. Total area planted in the crop, and the proportion under newly recommended practices.
10. A rating of the usefulness of the agricultural extension programme.

In linking the concepts previously discussed to the proposed procedures for monitoring and evaluation, the following points should be noted.

1. As previously mentioned, monitoring corresponds quite closely to formative evaluation, carried out during programme implementation to diagnose possible weaknesses. Thus, the information sought relates to the number and quality of visits and so on. The farmers' early reactions to the programme will also indicate whether or not the programme is on the right track, and what kinds of adjustments should be made to the programme. Evaluation examines the results of the programme (changes in yields, etc.), and this is obviously a summative type of evaluation.

2. The evidence collected for monitoring and evaluation corresponds to various levels in the hierarchy of evidence. Monitoring focuses primarily on the inputs and activities level. It also examines evidence relating to "people involvement" and "reactions".

Evaluation takes a closer look at "people involvement" and "reactions" in particular, women farmers and contact farmers. The focus, however, is on "KASA Change" and "Practice Change" (see Table 13.2).

3. The proposed procedures also incorporate both hard and soft data (see Table 13.2). At the "practice change" level, crop-cutting provides harder evidence of changes in yield than estimates of changes. Subjective ratings of the usefulness of the programme are, of course, soft data. Evidence relating to inputs and activities are not entirely soft since they are not based on staff reports, but on farmers' reports of the VEWs' visits. On the otherhand, such evidence cannot be regarded as being completely hard since it is not derived from direct observation of staff's activities.

4. The overall design is the sample survey. The main advantage here is that such a design allows the collection of "credible" and "acceptable" information, which can be quickly fed to the primary audiences for the evaluation (the policy makers).

With regard to benchline data, Cérnea and Tepping (1977) recommend that information from the initial surveys be used as benchline information. Retrospective reports by farmers, about which practices are based on technical advice from the extension organization also provide evidence (primarily soft evidence) of the programme's impact.

Competitive explanations for changes must also be taken into account. However, since the programmes are closely monitored from their inception, the relationship between the results, and the extent to which such results are directly due to the extension programmes can be more clearly established.

5. Processing the data obtained involves a quick summary of the data by the field investigator; this is immediately sent to the District Extension Officer. The summary, together with the completed questionnaires, are then sent to the state evaluation unit for further processing and analysis. In the case of evaluations, the field investigator also enters preliminary data on the produce from crop-cutting. Data on the produce is also sent to the state evaluation unit.

6. Cernea and Tepping (1977, p. 59) also recommend special in-depth studies "to complement and/or deepen the information generated by the large-scale sample surveys". These include the following.

- a. Study in the selection of contact farmers.
- b. Sociological village case studies on the impact of extension programmes.
- c. Study of the village extension workers and the agricultural extension officers.
- d. Study on the quality of training sessions.

Conclusion

This chapter has presented some important evaluation concepts, identified basic steps in planning and conducting extension evaluations, and illustrated how these steps could be carried out, using specific examples. The point that has been emphasized throughout is that evaluations should be tailored to specific situations. In the extension setting, some form of evaluation effort is always possible and desirable. Evaluation studies, at whatever level they are planned and conducted, should be regarded as an integral part of the extension process.

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