

Field demonstrations of technology: new practices demonstrated to the farmers directly in the field. Demonstrations were held at planting time and at the second application of nitrogen. A group of farmers met in a field farmed by a group member; the technician demonstrated the new way to plant, fertilize, etc.; and all farmers then participated in the operation. Demonstrations were particularly useful in convincing farmers to use the technology correctly.

Interchange of farmer groups: farmers of one village invited farmers from other villages to visit their plantings during the crop growing season. Farmers from the different villages exchanged experiences about maize production and other farming and non-farming activities. The technician accompanied the farmers on a walking tour of several adjoining fields. Deficiencies and favorable aspects of each planting were pointed out and discussed. These group interchanges contributed to a better understanding of maize production and also generated discussion about many other activities.

Field demonstrations at harvest: included local demonstrations (attended by farmers from a few villages) and regional demonstrations (attended by farmers from the entire Project area). The effects of different combinations of production practices on yield were demonstrated, along with costs and returns obtainable from different technologies. The farmer owning the demonstration field assisted in presenting the results.

- (b) Farmers would be assisted in arranging for the inputs needed to use the new technology. Many farmers can purchase seed, fertilizers, insecticides, etc. with their own money, or they can obtain funds from a lending agency. Others, however, are able to use technology involving expensive inputs only if credit is made available. Technicians in the Puebla Project assisted in arranging for credit and fertilizers by:

Organization of farmers into groups: individual small farmers normally can not qualify for credit from a public or private bank. However, a properly organized group of small farmers can qualify. Thus, in addition to promoting the new technology, technicians encouraged farmers who needed credit to organize into groups. Information was provided about organizational requirements to obtain credit from different institutions.

Establishing relationships between groups and credit banks: organization of the farmers and instructions on how to present their request for credit were complemented by the technicians' initial accompaniment of the group to the bank to support their application for credit. Without such support, groups of small farmers often made numerous trips to the bank before completing arrangements for credit, or decided that the credit process was too troublesome.

Developing group capability: leaders of the groups were encouraged to accept responsibility as rapidly as possible for all activities of the groups, including transactions with the credit banks. The technician continued to provide the groups with information and ideas, but the decision-making was done by the groups. The Puebla Project experiences indicate that this effort by the technical team to develop the capability of the groups needs to be strengthened. It is clearly necessary to plan and carry out a systematic training program for the farmers, particularly the group leaders, that will assist them in obtaining the knowledge and skills they need in resolving their common problems more effectively.

- (c) Farmers would be assisted in resolving other problems that prevent them from using effectively the crop recommendations. Such problems may arise due to dissatisfaction with the requirements of the credit banks, the operating procedures of the crop insurance agency, the way their farmer organization is functioning, etc. These problems can often be eliminated, if fully understood and properly presented to the people with authority to resolve them. The Puebla technical assistance agents were in daily contact with the farmers, learning about their needs, limitations, and problems. This information, collected from farmers in many villages, was transmitted back to the other members of the Project team. The team studied the information and decided what action to take. Usually it was necessary to collect additional information from farmers, services agencies, or both before deciding on a course of action. The Project coordinator would then take the initiative in promoting the necessary action for bringing about change.

Evaluations

The specific responsibility for identifying problems and suggesting solutions is assigned to one member of the Project team, the evaluator. He takes the leadership in synthesizing the information that flows from the farmers through the technical assistance agents to the team. This leads to the identification of questions, often with respect to both farmers and institutions, that need further study and clarification. The evaluator plans and conducts studies to obtain the information needed.

After all the available information about a given problem has been assembled, the evaluator, assisted by the rest of the team, plans a strategy for working out a solution to the problem. This may involve action primarily by the technical assistance agents in providing new information to the farmers or assisting them with organizational changes. In other cases, it may be necessary for the team, usually represented by the coordinator, to interact directly with the representatives of one or more of the service agencies in finding a satisfactory way to modify operating procedures. These strategies represent a major source of new ideas for the