

# 14 THE PUEBLA APPROACH - A SYNTHESIS

## INTRODUCTION

This chapter briefly describes the Puebla approach for rapidly increasing crop production on small rainfed farms, as it evolved from 1967 to 1973. No attempt has been made in Puebla to test a series of alternative ways for achieving Project goals. Rather, an initial approach was defined in terms of existing knowledge and modifications were made over the years as new information became available.

## ESSENTIAL ELEMENTS OF THE PUEBLA APPROACH

The experiences in the Puebla Project, supplemented by findings of similar programs elsewhere, indicate that such regional agricultural programs must function effectively in at least four major activities: (a) agronomic research, (b) technical assistance to farmers, (c) socio-economic evaluations, and (d) coordination of all activities touching directly on crop production. A team of specialists from related disciplines also should be available to advise Project technicians on a continuing basis. The regional agricultural program structure should have certain basic characteristics, including: (a) capable, highly motivated, well-trained staff; (b) incentives that make the work professionally rewarding to the staff; and (c) a budget that is adequate both in amount and ease of administration of funds. Each of these essential elements is discussed briefly in the following sections.

### Agronomic Research

Agronomic research serves the regional program in testing the performance of crop varieties, and in determining the appropriate packages of production practices for different conditions in the area. In general, the amount of research required is proportional to the ecological variability in the area. For example, more research will be required in rainfed areas where the frequency and intensity of drought are high and variable within and among years, than in areas with irrigation or very favorable rainfall.

Major steps in conducting agronomic research:

(a) Gather and evaluate materials and information related to the technology used by the farmers in the area.

(b) Analyze existing technology for modifications that are most likely to produce increases in production and net income, and list in order of priority the technological questions for investigation.

(c) Plan and carry out field trials based on above priorities, taking into account the ecological diversity of the area.

(d) Harvest the trials, analyze the data, and express the results as production functions, response curves, or treatment means.

(e) Estimate the risks farmers take in using different levels of costly inputs, using the information that is available on climatic variability and the fluctuation in prices.

(f) Develop recommendations for different levels of investment in inputs and for different ecological conditions, taking into account the expected risk in production and marketing.

Recommendations produced after 1 year of research are an approximation to those needed in the area. In regions with irrigation or very favorable rainfall, this first approximation may have an acceptable level of precision. For rainfed regions with greater ecological diversity, continued agronomic research for one or more years will usually be necessary.

### Technical Assistance to Farmers

When adequate crop production information is available, the regional agricultural program should develop a system to promote farmer use of the new technology, whereby:

(a) Farmers would be informed of the new recommendations, of the expected increases in yield and net income, and of the necessity for using all components of the technology precisely to obtain maximum results. Major communication media used for this purpose in Puebla were:

*Radio and pamphlets:* particularly useful in convincing the more advanced farmers to use the new technology. Television and newspapers were little used in Puebla as they reach a very small fraction of the rural population;

*Village meetings:* effective in reaching the less advanced farmers. The new recommendations were explained in detail. Movies were used to attract people to the meetings, to strengthen the presentation on technology, and to provide farmers with information on related areas of interest.