

INTRODUCTION

World agriculture faces two problems of great urgency: the threat of an absolute shortage of food on a global scale, and the fact of continuing low incomes and malnutrition among most of the rural population.

The Puebla Project is an experiment designed to tackle both problems simultaneously by obtaining a large increase in yield of a basic food crop – in this case maize – among small farmers producing at subsistence levels with traditional methods.

Much of the world's food is now produced on small farms, where families produce mainly for human and animal consumption on the farm and have little or no surplus to sell. These families have usually been among the last to discard their traditional farming methods and few of them are quick to reap the benefits of new technology. On a world-wide basis, however, they represent a vast potential for national development.

This potential is recognized by the governments of most developing countries; but, because of limited resources and lack of knowledge about how to reach these millions of smaller farmers, the national programs to increase crop yields have usually been aimed at a relatively small number of commercial farmers. Yet attention to these families of the traditional sector is crucial for at least three reasons: (a) their farms represent an important part of the arable land in many countries; thus, yields must be increased to satisfy total food requirements, (b) in many nations most of the human resources are employed in traditional agriculture and improved agriculture is a readily available source of increased capital from within, and (c) traditional farmers make up a large portion of the population of many countries and continuous improvement in their farming techniques is essential for over-all social development.

These considerations define the need for more efficient means of providing traditional farmers with better production methods. And it is this need that focused the two initial objectives of the Puebla Project: (a) *to develop, field test, and refine a strategy for rapidly increasing yields of a basic food crop on small land holdings; and (b) to train technicians from other regions in the elements and successful use of this strategy.*

PHILOSOPHY AND ORGANIZATION

The conceptual framework of the Puebla Project was derived from several interrelated agricultural and social science disciplines, as well as from the working knowledge and field experience of the team members. It was conceived as an integrated plan of attack on the many problems limiting farmer use of adequate production technology. It was assumed that the following factors of change would need to be available in the Project area: (a) high-yielding maize varieties, (b) information on efficient production practices, (c) effective communication of agronomic information to farmers and agricultural leaders, (d) adequate supplies of agronomic inputs at easily accessible points when they are needed, (e) crop insurance, (f) favorable relationships between input costs and crop values, (g) adequate production credit at a reasonable rate of interest, and (h) accessible markets with a stable price for maize.

When the Project began, several agricultural institutions responsible for providing inputs, credit, crop insurance and markets for maize producers were already operating in Puebla. Also, the relationships between the costs of production inputs and the price of maize were thought to be satisfactory. However, only very limited results were available from trials of maize varieties and production practices, and only one extension agent was working the area.