

### Problems of heterogeneity

It is an obvious, but important, fact that a great deal of heterogeneity exists between regions, villages and farms in West Pakistan. The salinity content and texture of soils, the topography, and the average rainfall are but a few of the physical differences which occur within million-acre units. These factors vitally affect the most profitable production patterns as do economic differences resulting from locations of markets, availability of transportation, and storage. Finally, differences in farm size, systems of tenure and availability of inputs (including credit and technology) place varying limits on present opportunities for improvement.

Differences within and between regions, which are a common feature of agriculture everywhere, will make particular demands on the extension staff of West Pakistan. This heterogeneity means that it will be impossible to give general recommendations on cropping patterns and water use which are applicable to all farmers. Even in the case of fertilizer, dosage recommendations must be geared to areas much smaller than million-acre units. Since wrong advice to farmers has very serious consequences, it is necessary that a wide variety of operating-unit research be undertaken as a basis for giving recommendations. In addition, the extension staff must be trained to handle the diversity of problems which they will face.

### Administration

An essential part of our plan is a major shift in administrative structure. The reasons underlying this conclusion are indicated in detail in Chapter 4. Briefly, we believe that the difficulties of administration are grave enough to threaten the success of the plan, and will require as much attention as any of the technical problems.

On the administrative side, we believe it is essential to shift from an administrative structure based on function to one based on area. At present, responsibilities for management of irrigation water, supply and distribution of improved and new seeds, chemical fertilizers, application of pesticides, and provision of extension services and credit are widely distributed through existing government agencies. Within each project area, supervision of these and related activities should be transferred to the Project Director.

As outlined in detail in Chapter 4, we recommend that the Government of West Pakistan mobilize for agricultural development in the project areas around the powers already given to the Soil Reclamation Board.