agricultural personnel and the low status of agriculture as a profession, provision of this number of technically trained people will place a great strain on the educational facilities of the Province.

Research and Development

It will not be sufficient to achieve a once-over increase in agricultural productivity; agriculture in the Indus Plain must be put on the road to continuous growth. The key to continuous growth is continuous research and the application of its results. The need for better data, additional facts, and new ideas is stressed in every chapter of this Report, but it is emphasized with special urgency in Chapter 8.

Most urgently we need increased understanding of the social dynamics of change in an impoverished agricultural community. Which devices for education and persuation are most effective under the conditions of West Pakistan? What kinds of desirable change do the farmers adopt readily, and what kinds do they resist? What factors influence the farmers' readiness and their resistance? Partial answers to these questions will come from the experimental design of the first Project Areas, but fuller understanding can be obtained only by highly specialized sociological research. Such research is also needed on the factors influencing population growth and the effectiveness of family planning programs. In the long run, these may have a more important impact on the well-being of Pakistan than the factors influencing agricultural productivity that have been our main concern.

Many other problems for research are listed throughout the report. In public health and nutrition, the first step should be obtain better data on human diets in both urban and rural communities, by region, income levels, age and sex. The incidence and economic effects of dysentry, malaria, and deficiency diseases need to be quantified, as do the health aspects of village water supplies.

Beside the program of breeding new plant varieties already referred to, agricultural surveys and research need to be conducted on water and fertilizer requirements for different crops on different soils; development, test, and evaluation of farm tools and later of small farm tractors; development of plant protection measures; and techniques of soil reclamation in the presence of high bicarbonate groundwater and high exchangeable sodium.

In engineering and hydrology, early emphasis should be placed on improving tubewell performance and reducing costs and on operational