

It will be noted that only a minor portion of the increase arises from the simple increase of irrigation depths under current conditions. A third is attributed to the extension of the gross area planted, made possible by increased and more reliable supplies of water. Desalination of damaged land, increased use of nitrogen fertilizers, plant protection, and improved seeds are also important contributors.

The expansion of crop acreage posited in Table 5.11 can be achieved only with proper incentives and guidance for the farmers. The exact distribution of the land among crops is of secondary importance, though not a negligible matter. The important aspect of the table is that an additional ten percent of the arable land be brought under the plow by a reduction in fallow lands and culturable wastes, and especially that the intensity of cropping be increased. This will be made possible by more adequate supplies of water and, in the case of the fallow land, by the use of nitrogen fertilizers in addition to adequate water. Although, for purposes of computation, we have separated the effects of irrigation and fertilizer, these must be combined in actual practice.

Once the technical requisites have been provided, adequate incentives for improvement must be presented to the farmers. Examples of such incentives would be a reduction in the landlord's share of the second crop on double-cropped land and even of his share of the first crop on land newly brought into cultivation, for the first four or five years.

Possible total production increases in the Former Punjab and Former Bahawalpur.

In the above discussion we have outlined possible production increases for a million-acre area in the northern part of the Indus Plain, where effective rain is relatively high and evapotranspiration relatively low, and where the underground water has a comparatively low salt content. For the cropping pattern and intensity of Table 5.11, the depth of irrigation per net cultivated acre required on the average for the whole of the Former Punjab and Former Bahawalpur would be somewhat more than 3.5 acre feet. As shown in Chapter 7, water supplies during the first stages of contemplated development would allow this depth of irrigation on 16.4 million acres, just about the area cultivated at the present time.

On the average, during the decade from 1949-50 to 1958-59, the total cultivated area (land planted at least once during the year plus fallow land) in Former Bahawalpur and the canal-irrigated districts of the Former Punjab was slightly smaller than this amount-15.9 million acres (Table 1.6) while the