

Using the same yields, prices and livestock relationships as in the Models of Table 5.14, the total value of production crops plus milk and livestock production is Rs 6.3 crore, an increase of 117 percent above the values obtained at present, summarized in Table 5.13. The value per commanded acre has risen from Rs 113 to Rs 244.

The total volume of tubewell water applied to the fields would be 123,000 acre feet, or about half a foot per cultivated acre. Pumping would be done during the months of January, March, April, May, June and October. The total capacity of the wells would be set by the maximum pumping rate during April of 25,000 acre feet, or $420(1.2) = 500$ cusecus - say 100 wells of 5 cusecs capacity. On the average during the year, the wells would be operated at 41 percent capacity. Assuming that the cost of tubewell water is \$ 6 (Rs 29) per-acre foot (50 percent higher than in the Former Punjab - see Chapter 7), the total cost of the tubewell water would be Rs 0.35 crore. A benefit cost ratio for tubewell water can be calculated by subtracting the total value of production obtained in Model IA from the total value in Table 5.19. Dividing this quantity by the estimated cost of the tubewell water, the benefit-cost ratio is 5.4.

It can be assumed that application of nitrogen and phosphate fertilizers, plant protection, improved seeds and better farming practices would have the same effects in Khairpur as those we have calculated in an earlier section of this chapter for the Former Punjab and Former Bahawalpur. The principle of interaction between all the factors of production would apply with equal efficacy.

With the present inadequacy of information about water supplies and soil conditions it is impossible to generalize these computations from Khairpur, for any major part of Former Sind. However, we believe there is sufficient evidence to conclude that a gradual shift from a subsistence to a market agricultural economy including development of a livestock industry, intensification and concentration of agriculture in productive areas to permit better water management, and development of supplementary water which can be used at the time when it is needed, are three essential components for an economically sound development of agriculture in Former Sind.