

Leaching by itself had very little effect on yield, but when adequate nitrogen was added, desalination of soil with an original salt content of 0.4 percent resulted in a 140 percent increase in the crop. In Table 2.9, the interaction of the amounts and times of irrigation, and the fertility, or nitrogen content, of the soil, is shown for cotton, sorghum, wheat, and oats. The marked improvements from combining these two factors over using each singly are clearly evident.

Table 2.10 summarizes unpublished experiments conducted by C. A. Larson at the Lyallpur Agricultural College on the interactions between low and high yielding varieties of maize and wheat and different amounts of fertilizer and irrigation water. With both wheat varieties, the highest increases in yield were obtained when 90 pounds of nitrogen and 60 pounds of  $P_2O_5$  per acre were combined with relatively large amounts of irrigation water. But with the low yield variety, this increase was only 14 percent above the control and only 4 percent above the increase without fertilizer. With the higher yielding variety, there was a steady increase, as more water and more fertilizer were applied. With 90 pounds of nitrogen and 60 pounds of phosphate per acre, and irrigation at 75 percent moisture tension, the yield increase was 1,200 pounds per acre, or 67 percent above the control value. In the experiment with maize, the highest yield of one variety, obtained with 90 pounds of nitrogen per acre, and irrigation at 75 percent moisture tension, was 3,540 pounds above the control, while with a second variety, the maximum yield increase, using both nitrogen and phosphate fertilizers, was only about 2,080 pounds. The best yield obtained with the improved variety was nearly 6 times the average yield of maize in the irrigated lands of West Pakistan.

#### Schedule for Increasing Production

To the extent possible, the implementation of plans for increasing agricultural production should be scheduled so as to permit the logical development of the Province's agricultural economy, the satisfying of the most urgent needs first, the adoption of those practices which can be put into effect immediately and will give the quickest and highest returns on investment. The most urgent need is to increase the production of food and fiber for direct human consumption. This can be accomplished most quickly by increasing the yield per acre of food and fiber crops on land now under cultivation. Greater use of commercial fertilizers combined with more and better managed water deserve highest priority, even though it may take some