

already received substantial additions of phosphorus fertilizer, initial application of 30 to 60 pounds of P_2O_5 per acre would seem in order. Subsequent additions of this size should be made every 2 or 3 years.

With a general improvement of practices, and especially with more water, farmers will undoubtedly find even greater use of fertilizer to be profitable. The probable economic benefits from increased fertilization will be discussed in greater detail in Chapter 5.

Recent and Planned Use of Nitrogen Fertilizers

In 1955-56, only 32,000 tons of ammonium sulfate, equivalent to 7,000 tons of nitrogen, were used in West Pakistan. This was applied on 340 thousand acres with an average dose of about 40 pounds of nitrogen to the acre. All of this fertilizer was imported. By 1959-60, nitrogen fertilizer consumption had increased to about 90,000 tons, and in 1960-61 to 160,000 tons (in terms of ammonium sulfate). The equivalent amounts of nitrogen were 20,000 and 34,000 tons, sufficient to fertilize 1.0 million and 1.7 million acres, respectively, with an average of 40 pounds of nitrogen.

Table 2. 4. 1 shows the amounts of fertilizers applied on different crops in West Pakistan over the five years from 1955-56 to 1959-60. Although we have not been able to find numerical data on the proportions of phosphate and nitrogen fertilizers used during these years, probably at least 90 per cent was nitrogen.

Over the five-year period, the fertilized area increased from 1 percent to 3 percent of the total cultivated acreage in West Pakistan. Fertilizer was not applied to all crops, but was used selectively on those where high returns could be anticipated. In 1959-60, 15 percent of the acreage planted to sugar, 7 percent of the maize, and at least 5 percent of fruit and vegetable lands were fertilized, while only about 3 percent of the rice, cotton, and wheat fields were covered.

More than half of the fertilizer used during 1959-60, and about three-fourths of that used in 1960-61, was imported, at costs in foreign exchange of close to \$2.5 and \$6 million. Most of the remaining 40-45,000 tons was produced in the ammonium sulfate plant at Daudkhel, at an estimated cost of about Rs 14 million, equivalent to \$3 million. Adding costs of distribution, the total expenditure for fertilizer in 1959-60 was about 30 million rupees, equivalent