THE USE OF SMALL AMOUNTS OF NITROGEN FOR CORN
IN ADDITION TO PHOSPHORUS AND POTASSIUM

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This paper deals principally with a study in Indiana comparing phosphate-potash fertilizers with complete fertilizers for corn when relatively small amounts of nitrogen are used.

Normally about 100,000 tons of fertilizer are used annually for corn in Indiana. More than two-thirds of this is complete goods, and the trend has been toward the use of a larger proportion of complete fertilizers. This is despite the fact that the Experiment Station (10) has for years recommended phosphate-potash fertilizers for corn under most conditions.

The National Fertilizer Association (5) reports that in the middle-western states in general the trend has been toward complete fertilizers for corn, and in several states most of the fertilizer now used is complete.

In Indiana, most corn fertilizer is 2-12-6, or something similar, and it is used at rates which give 2 to 6 pounds of nitrogen per acre. Practically all the fertilizer is applied at planting time and it is drilled continuously in the corn rows or is dropped in or near the hills. Similar methods are used and similar amounts of nitrogen are applied in most of the corn belt wherever complete fertilizers are used. In general, these practices have been profitable.

The present study compares the prevalent practice of using complete fertilizers for corn with the use of similar fertilizers from which the nitrogen has been omitted and in which only the phosphorus and the potassium have been included. It should be very definitely kept in mind that, except where otherwise specifically stated, the results are for tests in which only small amounts of nitrogen, 2 to 6 pounds, were applied per acre, and in which the fertilizer was applied at planting and was drilled continuously in the rows or was dropped near the hills.

THE EXPERIMENTS

Complete fertilizer has been compared with phosphate-potash fertilizer for corn on several of the most important soil types in Indiana. The only important corn soils which have not been included are the prairie soils and the creek and river bottom soils. The fertilizer has been drilled in the rows or dropped near the hills at planting time in amounts which gave 2 to 6 pounds of nitrogen per acre.

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3Reference by number is to “Literature Cited”, p. 137.