NOTES

APPLICATION OF BORAX PRODUCES SEED SET IN ALFALFA

In an investigation of the extent of boron deficiency in North Carolina soils and crops, the writers have found many soils of the state to show generally low available boron content. The majority of soils examined ranged from 0.10 to 0.30 p.p.m. of available boron.

Growers of alfalfa in North Carolina have experienced for many years comparatively low yields due to both boron deficiency and poor initial stands with a steady diminution of the stand from year to year. The failure to maintain satisfactory stands can probably be associated in some measure with the low boron contents of the soils on which the crop is grown. These conditions have led to the abandonment of the growth of alfalfa by many farmers.

Fig. 1.—Seeding of alfalfa with boron. Left (0), four plants from no boron treatment, no seed; right (2), four plants from 20 pounds borax treatment, seeded.

An alfalfa planting in Caswell County on a Cecil fine sandy loam, having a pH of 6.6 and an available boron content of 0.19 p.p.m. prior to boron treatment, showed severe boron deficiency symptoms during the 1940 season. A 20-pound application of borax was made to a section of this field in the late winter of 1941. Due to the spring

The writers express their appreciation to J. E. Zimmerman, County Agricultural Agent, for his helpful cooperation in connection with this study; to the N. C. State Dept. of Agriculture for the germination data; and to the American Potash Institute for supporting the assistantship under which this work has been done.