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Corn growing

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Five different varieties of corn were grown under varying conditions on the Experiment Station grounds during the past season, with a view to testing varieties, fertilizers, green manuring, and different methods of cultivation. The varieties grown were Mammoth Cuban, Early Mastodon, Red Cob Ensilage, King of the Earliest, and Capital.

The Mammoth Cuban and Red Cob Ensilage varieties were planted April 29th, the Early Mastodon on May 6th, and the King of the Earliest on May 7th, all on fall plowed ground, thoroughly cultivated and harrowed before planting, and rolled immediately after, as the soil was very dry. Scarcely any rain fell for three weeks following and the growth during this time was quite slow. On May 7th we began plowing under five acres of winter rye, then about eight inches high, for corn. The plowing was finished on the 9th, and a harrow followed the plow each day to prevent excessive drying and evaporation. One-hundred and sixty-three loads of well-rotted barn yard manure were applied at the same time and cultivated and harrowed in. In this condition the ground was planted four inches deep with Capital corn (an improved Leaming variety), in drills about twelve inches between the kernels, with a single horse Champion drill planter, on May 12th and 13th. The ground was rolled immediately after planting and harrowed as soon as the corn began to come up, which was about ten days later. On May 13th, one acre adjoining the five acre plat was plowed, and on May 14th it was planted without manure. On the latter piece the rye had attained a height of about 14 inches. The plowing was all done at a depth of six inches, in order to cover the rye crop well and to insure its being far enough below the surface to prevent interfering with the cultivator. Both pieces were cultivated exactly the same during the entire season. All of the corn
ground, on account of the severe drouth of May, was cultivated shallow the first time with an Albion spring-tooth ten shovel cultivator and harrowed with an A shaped harrow that covered two-thirds of the space on each side of a row without coming in contact with the corn. Following this, deep cultivation was given with an ordinary cultivator until the last time over, when a seven-shovel adjustable single horse cultivator, set to just cover the space between the rows, was used. This cultivator ran shallow and left the ground between the rows level. Most of the corn the last time over (July 10 to 15), was too large to have been cultivated in the ordinary way.

The yield on the one acre of unmanured rye ground was 40.9 bushels per acre, and that on the five acres of manured rye ground was 59.2 bushels per acre. Of the other varieties on fall plowed ground without any manure very recently the Early Mastodon yielded 72.1 and the Mammoth Cuban 82.3 bushels per acre of good sound corn. The two last named varieties, grown on other parts of the farm, did not fully mature. Mammoth Red Cob ensilage corn is a very large growing variety, and was cut and put in shock September 10 when yet unripe and the yield was not obtained. The King of the Earliest is a small early maturing variety, with small solid ears, but only yielding thirty or thirty-five bushels per acre. Neither of these varieties is desirable for this locality.

It will be seen that the varieties on the unmanured fall plowed ground gave larger yields than either the variety with green manure or that with both green manure and barn-yard manure. The reason for this, however, we believe is apparent. The former was planted early, one piece in April, the soil was well cultivated, harrowed, and rolled, and the seed nicely germinated before the May drouth set in. The latter was planted in the midst of the drouth, which was very severe in this locality, and particularly so in this field, probably on account of the rye turned under at this time forming a separating layer and allowing the surface soil to dry out. This was especially noticeable in the later plowed piece, where the growth of rye was heaviest; here, too, the rye was slower in decomposing and interfered more with cultivation. The season's conditions were such that the test of green rye as a
fertilizer in this experiment can not be regarded as satisfactory, and will need to be repeated. It will be seen that the unmanured rye ground yielded 18.3 bushels less per acre than that having manure. This was perhaps not entirely due to the manure, but partly to the impaired mechanical condition of the soil, owing to the heavy growth of the rye turned under, as already stated.