THE RELATIVE YIELD OF A FIRST GENERATION CROSS BETWEEN TWO VARIETIES OF CORN BEFORE AND AFTER SELECTION

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In Bulletin 199 of the West Virginia Agricultural Experiment Station is discussed a first generation variety cross of corn, the yield from which exceeded that of either parent. The crossed seed was produced, as is usual in such cases, by interplanting the varieties and detasseling one of them. The crossed seed so obtained and the seed of the parent varieties were planted in adjacent plats to determine the relative yields. The plats were quadruplicated in all tests except one in which they were triplicated. There were three tests carried on from 1922 to 1924, inclusive, in different sections of the state.

The first generation cross referred to was Clarage x Longfellow. Clarage is a yellow dent corn that at Morgantown requires about 150 days to mature, whereas Longfellow is a flint corn that requires only 130 days to mature. Seed of Clarage was obtained from F. E. Eichelberger, Washington Court House, Ohio, and seed of Longfellow from R. Keeler, Bridgewater, Connecticut.

RELATIVE YIELD OF AN F1 VARIETAL CROSS BEFORE SELECTION

In Table 1 the yields of the first generation cross and of the parent varieties are shown. Further details may be obtained from the bulletin mentioned above. It is obvious that the yield from the first generation cross exceeded the average yield of either parent. In fact in only one of the nine tests did the higher-yielding parent produce more than the first generation cross, viz., in 1922 the four plats of Clarage grown in Randolph County gave an average yield of 57.8 bushels per acre and the same number of plats of Clarage x Longfellow gave an average yield of 51.5 bushels per acre.

From the data it seemed reasonable to conclude that here was an instance where a first generation cross between two varieties of corn possessed greater yielding ability than the higher-yielding parent. Not only did the first generation cross produce somewhat greater yields, but it matured earlier than Clarage, the later parent.

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