THE CORRELATION BETWEEN TILLERING AND PRODUCTIVENESS IN SWEET CORN CROSSES

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The results obtained by removing the tillers from corn plants has been recently reviewed by Dungan to show that in nearly every case the loss of tillers results in a reduction of yield in both field corn and sweet corn. This investigator has also added the further significant proof that the tillers nourish the main stalk when all the leaves are removed from the main stalk but are left on the side branches.

Nearly all varieties of sweet corn tiller more or less abundantly and especially the earlier sorts. The eight-rowed type of flint corn that is so well adapted to a short cool season also has these side branches. In these types of corn selection of suckerless strains has been attempted but has nearly always failed to establish a desirable variety free from tillering.

From all this evidence we might conclude that tillers serve some useful purpose in the development of the corn plant if it were not for the repeated assertions of many corn growers and agronomists that these so-called “suckers” are of no value and take something away from the main stalk that should go into the formation of ears. They even practice and advocate the removal of these parasites! We might disregard the opinion of practical corn growers when we remember the definition of a “practical man as one who continues to practice the errors of his forefathers,” but can we so easily disregard the opinion of agronomists who have been trained in the methods of science, that is, to seek for facts without regard to logical appearances or preconceived theories?

The variety of sweet corn commonly grown in Connecticut for market purposes is Whipple’s Yellow. It originated in Connecticut and is characterized by the production of large ears ripening early. No other varieties in this section will produce such large ears in as short a time. The plants are medium in height. The ears are set low on the stalks and there are from one to three or more tillers on nearly every plant. These side branches vary in size from a few inches to the height of the main stalk. Under favorable growing conditions the larger of these tillers produce ears, but these are seldom marketable.

The tillers were removed from this variety by cutting as soon as they were well started, when the main stalk was about 2 feet high. Compared with the untreated plants in alternating rows there was a reduction of 18.9% in total weight of dry ears, 8.2% in number of ears, and 11.6% in average weight of individual ears in a 1-year test. The odds are 10,000:1 that these results are significant. This is a clear indication that tillers are a decided advantage to this variety of sweet corn.

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