AN INDICATION THAT CORN TILLERS MAY NOURISH THE MAIN STALK UNDER SOME CONDITIONS

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The value of tillers on corn plants has been questioned by corn growers for many years. The early assumption was, and the general belief now is, that tillers are parasitic on the stalk from which they arise and, therefore, are detrimental to yield. In small grains a large proportion of the tillers produce grain and free tillering is looked upon with favor. In corn such a small proportion of tillers produce grain and those that do frequently bear such small, late-maturing ears that tillering is considered undesirable. So widespread is this attitude toward these structures on corn that the popular name "suckers" is used with the feeling that the term is appropriate.

A number of field experiments have been conducted to test the profitableness of removing tillers from corn. These for the most part show not only no increased yields for tiller removal, but often an actual reduction in quantity of grain produced. For instance, Lyon (4), from tests conducted during two years, found that removal of tillers reduced the average yield of field corn 17 bushels per acre. Ricks (8) decreased yields of corn by "suckering" 8.3 bushels per acre in 1910, and 2.0 bushels in 1912. Williams (13) and Williams and Etheridge (14) obtained slightly reduced yields of grain by tiller removal.

Montgomery (6) in tests covering a three-year period (1906–1908) found that the injury caused by the removal of tillers varied with the number of stalks in the hill. Tillers pulled from one-stalk hills reduced the average yield 14.0 bushels per acre; from two-stalk hills, 9.7 bushels; from three-stalk hills, 5.2 bushels; from four-stalk hills, 1.8 bushels; and from five-stalk hills, 4.1 bushels. McClelland (5) found that removing suckers produced no detrimental results when yields were below 35 bushels per acre, but when yields were above 45 bushels removal reduced the yields.

A number of similar tests have also been made with sweet corn. DeBaun (7) found that non-suckered sweet corn gave the heaviest yield, and that the yield was reduced in proportion to the lateness of suckering. He did find, however, when the tillers were removed early in the growth of the plants, that the ears were ready for market.

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3Reference by number is to "Literature Cited," p. 669.