

The plots were 6 rows wide and 60 feet long and each treatment was replicated four times. Budworms failed to develop in sufficient numbers to require treatment in the two plantings of March 16. Two applications of 1 quart of 25 percent DDT emulsion to 100 gallons of water were made on May 10 and 17 for budworm (*Laphygma frugiperda* (A. & S.)) control in the planting of March 31. Dust materials were applied in both series of plots with a rotary-type hand duster beginning May 8 for the March 16 planting and May 22 for the March 31 planting and continuing at three-day intervals for a total of four applications. Spray materials were applied by means of a power sprayer equipped with a six-row boom and fan-type spray nozzles. Spray applications began May 10 and continued at three-day intervals for a total of four applications.

Results presented in Table 3 are based on 50 ears of corn harvested from the center four rows of each plot. The harvested ears were shucked and separated into the following groups: (1) worm-free, (2) less than 1 inch of the tip injured, (3) ears showing more than 1 inch of tip injured and (4) with side injury attributed to attacks by the fall armyworm.

In both dust-treated series of plots 5 percent DDT dust gave best control of corn earworms. In the March 16 planting there were no significant differences between the 5 percent DDT, 1.5 percent gamma isomer benzene hexachloride and 1 percent parathion dusts, but the 5 percent DDT was highly significantly better than the other dust materials used in the March 31 planting. The 1 percent parathion dust-treated plots had the lowest percentage of sideworm injury in the March 16 planting, while the 5 percent DDT dust-treated plots had the lowest percentage of sideworm injury in the March 31 planting. In both plantings ears harvested from the plots treated with 1.5 percent gamma isomer dust mixed from the 25 percent gamma base had a slightly objectionable flavor. For this reason benzene hexachloride should not be used on sweet corn. No objectionable flavor was noted in ears from any of the other treatments.

Plots receiving mineral oil with 0.19 percent pyrethrins injected into the silks at the time the silks wilted were included with the spray plots. This material gave the largest percentage of worm-free ears of all the treatments. Of the spray treatments the 50 percent wettable methoxychlor at 4 pounds to 100 gallons of water gave the best earworm control. However, this material