

seed; white and yellow seedlings appeared in the succeeding seed generation. Ferrous sulfate or any of the micronutrients (B, Mn, Zn, Cu, Mo) alone as sprays did not produce results equivalent to the combination.

Unclassified chlorophyll-deficient mutants are requested for comparison with the above. No reports seem to be available on ys_2 which would be desirable to compare with the iron-deficiency mutants.

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1. Restorer factors in Philippine corn inbreds.

In an effort to eliminate detasseling in the production of F_1 double crosses, it was necessary to survey the ability of Philippine inbreds to restore pollen shedding in plants with Texas-type cytoplasm. Standard and promising flint inbreds extracted from College Yellow Flint and Cuban Yellow Flint and promising sweet corn inbreds extracted from Hawaii Yellow Sweet, Philippine Yellow Sweet, Maize Chiripo Dulce and Colombia Yellow Sweet were included in the test. Regardless of whether inbreds from individual varietal sources were treated separately or in bulk, equal frequencies of restored and unrestored plants were observed among the F_1 crosses of the flint corn lines to Texas-type cytoplasm sources. This strongly indicates that the two flint varieties used as inbred sources were originally heterozygous for the restorer factors.

Among the sweet corn inbreds only one line extracted from Philippine Yellow Sweet showed a partial capacity of pollen restoration (1:1 ratio of sterile to fertile plants in the F_1 and BC_1). The rest were non-restorers.

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2. The susceptibility of cytoplasmic male sterile lines of corn to *Helminthosporium maydis*.

Twelve standard Philippine inbred lines of corn which were sterilized through the incorporation of cytoplasmic male sterility derived from $F_{14}T$, an introduced inbred line from Florida, U.S.A., were compared to their respective normal counterparts for their reaction to *Helminthosporium maydis* at College, Laguna, in 1961 wet season. In all cases, the cyto-sterile inbred versions obtained after four to seven backcrossings were found to be much more susceptible to the disease than their normal inbred counterparts.

Male-cyto-sterile lines representing four single crosses and five double-crosses with one of these cyto-sterile inbreds as seed parent, consistently showed extreme susceptibility to the same disease whereas the normal counterpart manifested conditions of slight to moderate infection only.

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