5. A sensitive assay for T mitochondria.

A manuscript on very sensitive assays for H. maydis race T toxin on T cytoplasm is now in press (Nature, Spring, 1974). These assays require little toxin and mitochondrial substrate, are easy and quick to perform, and do not require materials that are not readily unavailable (example, fertile pollen). They therefore should be of considerable use as assays of Texas cytoplasm and should facilitate identification, purification, and characterization of the pathotoxin.

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1. Linkage data for yellow dwarf 2 on chromosome 3.

In 1963 Dr. Irwin Greenblatt sent me seed of a yellow dwarf seedling mutant. Since a yellow-dwarf mutant has been previously located on chromosome 6, this mutant was called yellow dwarf 2 (yd2). The seedlings of this mutant are a medium yellow and less than half the height of normal seedlings.

F_2 progeny of crosses between yd2 and wxT3-9c (3L.09, 9L.12) gave indication of linkage with wx. Two point linkage tests were made with T3-9c, T3-9 (8447) (3S.44, 9L.14), T3-9 (020-5) (3 ctr., 9 ctr.), and T3-9g (3L.40, 9L.14). The results of these tests are shown in Table 1. Closest linkage is shown with T3-9g which has a breakpoint at 3L.40. This would suggest that the gene was located in the long arm of chromosome 3.

Crosses with TB-3a (L.1) resulted in the segregation of yellow dwarf seedlings in the F_1, thus confirming the location of the gene in the long arm of chromosome 3.