

(Note that crossover data from hypoploids are shown as such and not equated to conventional map distances.)

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6. Two virescent mutants on the long arm of chromosome 8.

In 1964, a virescent trait segregated in a stock of Chapalote derived from Beckett Accession 552. In both field and sandbench, virescent seedlings typically greened first at leaf edge and tip, with the color grading smoothly from yellow or light green in the middle to green at the edge. In 1970,  $\pm/v$ -A552 plants were crossed by the A-B translocation set; virescent hypoploids segregated in the progeny of TB-8a.

Recently, among the mutants produced by Neuffer by EMS treatment, a virescent was uncovered by TB-8a in tests with the A-B translocation set. The phenotype is identical to that of  $v$ -A552 described above. Neither this mutant ( $v$ -E25) nor  $v$ -A552 is allelic to  $v_{16}$ . It is not unlikely that  $v$ -A552 and  $v$ -E25 are allelic, but test results are not yet available.

Because our  $v_{16}$  stocks are difficult to handle,  $v$ -A552 is being used in place of  $v_{16}$  as the tester for TB-8a.

In warm sandbench tests,  $v_{16}$  can rarely be separated from normal, while  $v$ -A552 can usually be classified easily. Conditions in an unheated sandbench favor ready classification of both virescents.

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7. A chlorophyll mutant associated with  $a_3$  located on chromosome 3.

For some years we have had a stock of  $a_3$  that carries a yellow-green or extreme golden type mutant. Crosses of  $a_3$  golden by the A-B translocation series have produced progeny in which  $a_3$  (recessive plant color) was uncovered by TB-3a and the golden mutant was uncovered by TB-3b. Our data confirm Earl Patterson's oral report to the Maize Genetics Conference in 1971 that  $a_3$  is beyond the breakpoint of TB-3a. It is therefore on 3L rather than on chromosome 10 as reported in Emerson, Beadle, and Fraser (1935). Since the golden factor is distal to TB-3b, it lies