

The inheritance of some factors which restore pollen shedding to plants that contain the Texas source of cytoplasmic male sterility is being studied. Inbred line A293 gives complete pollen restoration in the F_1 in the crosses studied. The F_2 segregation is in the following table.

	Fertile	Sterile	Total
*(B164 ^T x A293) F_2	343	101	444
(A73 x A293) F_2	356	114	470
(Oh5 ^T x A293) F_2	328	111	439
(Os420 ^T x A293) F_2	280	80	360
Total	1307	406	1713

*The (B164^T x A293) F_2 data were obtained in 1953, the other data were from 1954.

The data indicate that a single factor is segregating, F_3 data of the (B164^T x A293) cross further substantiate the single factor hypothesis.

Crosses of (B164^T x A293) and translocation linkage testers were made to determine the location of the restoration factor. Crosses are also being made between the A293 source of restoration and other sources of restoration to see if they are identical.

Note: B164^T, A73^T, Oh5^T and Os420^T are all in a heterozygous condition in various stages of backcrossing.

A293 is an inbred line derived from the single cross (L317 x A344). A344 is a Minnesota "within line" selection of Ia. 153.

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