2. Preferential pairing in trisomic inversion heterozygotes.

Stocks of tetraploids and trisomes which are heterozygous for many different inversions are being synthesized and tested.

Preliminary data have been collected for a series of trisomes 3 which are heterozygous for one of five different inversions and will be presented here.

TABLE 2

Gene Segregation of Five Different Trisomic 3 Inversion Heterozygotes used as the Pollen Parent

Inversion	Breakage Points	No. of Plants	No. of Gametes	% A	Interaction X^2 between plants
In 3a	3L.40-L.95	13	7543	22.0	11.98
In 3b	3L.25-L.75	5	2917	19.4	1.45
In 3c	3L.09-L.90+	3	2507	12.6	22.09**
In 3d	3S.72-L.42	3	5526	26.8	1.53
In 3h	3L.19-L.72	4	7532	14.4	27.28**

Additional data must be obtained before any conclusions or conjectures can be stated. It is apparent that different inversions give markedly different results.

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3. Preferential pairing in trisome 3 plants containing irradiated In 3a chromosomes.

In an attempt to produce and isolate chromosomes 3 with more than one inversion, pollen from homozygous In 3a plants was given 1000r and was placed on the silks of standard trisome 3 plants.

Forty-one of the trisome plants from this cross were backcrossed as the male to an $\frac{a}{a}$ tester. The In 3a chromosome carried $\frac{A}{-}$. The results are given in the table below.