

repeated. They provided convincing evidence, however, that the T<sup>2</sup> chromosome carries an Sk allele in its Tripsacum region.

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3. The relationship of crossing over to chromosome synapsis in a short paracentric inversion.

Frequencies of (any) reverse pairing at pachytene and bridge and/or fragment formation at anaphase I have been compared in three plants heterozygous for inversion 1 Lh (Longley 5083). This inversion is listed by Longley as having break-points at .70 and .87 in the long arm of chromosome 1, and is thought to contain well less than 50 crossover units. Pooled data (homogeneous at the 5 per cent level in chi square tests) are as follows:

Plant	Frequency of reverse pairing at pachytene		Combined anaphase I bridge and fragment, and fragment only frequency	
	No.	%	No.	%
1	182/505	36.0	466/1303	35.8
2	149/495	30.1	303/1023	29.6
3	190/544	34.9	426/1244	34.2

Since 2 strand double crossovers within the inversion are rare, the anaphase I data are considered a measurement of crossover frequency within the inversion. Such a close correspondence of frequency of homologous pairing at pachytene and crossover frequency in a region of considerably less than 50 map units is interpreted as further evidence that either crossing over is a precondition for homologous pachytene synapsis or invariably follows pairing of the tested region.

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