

in this cross, the observed recombination value of 40.6% is probably not too reliable.

Table 3

Two point testcross linkage data involving a and yd2

Parental classes		recombinations		Total	% recombination
A yd	a +	A +	a yd		
53	42	29	36	160	40.6

In sum, the data indicate that yd2 is located on the long arm of chromosome 3 in the vicinity of the lg2 locus.

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2. Placement of luteus*-1106 on the chromosome 4 linkage map.

In 1960 an apparently spontaneous luteus mutant occurred in one of my stocks. The phenotype of this mutant is somewhat variable. Seedlings are not intensely yellow but tend to be on the pale side and some develop a little chlorophyll.

F₂ data from a cross with wxT4-9g (4S.27, 9L.27) indicated linkage. The testcross results given in Table 1 involve the following translocations: T4-9g, T4-6 (4447) (4S.28, 6L.14), T4-6b (4S.80, 6L.16), and T4-6 (8380) (4S.47, 6L.18). Although translocation linkage data are unreliable, the results in Table 1 are in agreement with the location of l*-1106 in the short arm of chromosome 4 between the breakpoints of T4-6 (4447) and T4-6b in the close proximity of the breakpoint of T4-6 (8380) (4S.47).

Pollination of stocks heterozygous for l*-1106 by plants carrying TB-4a (4S.25) resulted in ears segregating for luteus seedlings, thus confirming the placement of the gene in the short arm of chromosome 4.

Three-point testcross data involving su and gl4 are given in Table 2. These data place l*-1106 in the short arm of chromosome 4 to the left of su about two crossover units.

Table 1

Testcross data for crosses of l^*-1106 with T4-9g, T4-6 (4447), T4-6b, and T4-6 (8380)

Translocation	Parental classes		Recombinations		Total	% recom- bination
	T +	+ 1	T 1	+ +		
T4-9g	133	133	6	4	276	3.6%
T4-6 (4447)	148	177	4	8	337	3.6%
T4-6b	55	120	1	8	184	4.9%
T4-6 (8380)	142	121	3	1	267	1.5%

Table 2

Testcross data for plants of the genotype $\frac{+ \quad \text{su} \quad \text{gl}^4}{l^*-1106 \quad + \quad +}$

Parental classes + su gl/1 + +	c.o. region 1 + + +/1 su gl	c.o. region 2 + su +/1 + gl	c.o. region 1 & 2 1 su +/ + + gl		Total
113 132	3 3	22 38	0 0		311
%	1.9	19.3			

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3. Location of pale yellow*-PI177593 on chromosome 4.

A pale yellow seedling mutant was found segregating in a Plant Introduction accession from Turkey. Young seedlings of this mutant start out medium yellow and fade to a pale yellow with age.

Data from an F_2 linkage test with $wxT4-9g$ (4S.27, 9L.27) indicated the gene was on chromosome 4. Testcross results involving $py^*-PI177593$ and T4-9g, T4-6 (4447) (4S.28, 6L.14), and T4-6 (8380) (4S.47, 6L.18) are given in Table 1. The data from Table 1 are not