

F ₁	Parental	Reg. 1	Reg. 2	1-2	Total
<u>+ + ms₂</u> wx PG ₁₂ +	200 165	17 24	3 0	1 0	410
	365	41	3	1	
		10.2 ± 1.5	1.0 ± 0.5	c = 2.4	
<u>+ + v +</u> wx ar + bk ₂	220 (110)	-- --	1	-- -- --	111
			1		
			0.9 ± 0.9		

Ar is between T1-9a and T1-9c (9L.15 and 9L.22); Bk₂ is proximal to TB-9a (9L.5); Bf is distal to T4-9⁵⁷⁸⁸ (9L.82) and probably to T5-9⁷²⁰⁵ (9L.90) according to duplication-deficiency tests.

E. H. Coe, Jr.

4. Deletions of B' and chromosome 2 markers.

Pollen of + B' + was x-rayed (1,000-2,000 r) and used on marked B and b (gl₂+/gl₂sk). Zygotes from the hybrids + B' + x gl B sk and + B' + x gl b sk were x-rayed (1,000-2,000 r) at 24 to 52 hours after pollination. The resulting individuals were examined for exceptional plant color and loss of Gl₂. Exceptions were classified for all markers, checked for pollen sterility, and progeny-tested when possible. Hemizygotes for Gl B have a distinctive morphology (compact, club-like tassel and zigzag culm) that helped to distinguish exceptions.

Cross	Irradiated	Recognized Loss					Examined Number
		Gl B'	Gl B' Sk	Gl	B'	'	
B x B'	pollen	23	4	4	0	0	3200
b x B'	pollen	20	1	3	0	0	1100
B' x B	zygotes	11	2	6	0	0	1700
B' x b	zygotes	5	0	2	0	0	350

Loss of B' is invariably accompanied by loss of Gl (distal to B). Loss of Gl is usually accompanied by loss of B' (exceptions are morphologically distinct from Gl B hemizygotes and are attributable to breakage between Gl and B'). Zygotes of B'/B constitution do not show conversion of B up to 52 hours after pollination. B' is refractory to x-rays except by deletion.

B' must be entirely chromosomal. The conversion or paramutation event is not immediate at fertilization; it may be as late as meiosis.

E. H. Coe, Jr.