

Frequency of crossovers from the cross $a a sh/a^m Sh \times a^s sh$.

	Total No.	$a a^m Sh$	$a a Sh$	$a-Sh$	$a^m sh$ or $a sh$	$a^s sh$	T co	%
Control	3628	0	0	0	2	0	2	.00055
EDTA	4035	0	4	3	3	3	13	.0032

4. Response of 2 alleles of an_1 to gibberellic acid.

Plants that are homozygous an_1 normally do not shed much pollen because the anthers remain encased in the glumes. Several an_1 individuals were treated at a stage comparable to shedding in a normal plant, by rubbing a spot at the base of the tassel with a glass rod coated with a lanolin paste containing 1.25% gibberellic acid. Within less than twenty-four hours that portion of the tassel immediately above the region touched with the paste appeared as a sector of normally expressed anthers that shed normal pollen. The remainder of the tassel continued to have tightly-closed florets and produced no pollen. The effect of the treatment appeared to be that of lengthening of the filaments and opening of the glumes. Similar treatment was applied to plants that were homozygous for another allele an_{6923} (a radiation induced mutant associated with bz_2). The treated plants showed an elongation of tassel parts but failed to extrude any anthers. Careful examination showed that the anthers were empty and beginning to degenerate.

M. G. Nuffer

5. Chromosome 9 mapping.

Data has been accumulated for incompletely placed factors as follows:

<u>Genes XY</u>	<u>Phase</u>	<u>XY</u>	<u>Xy</u>	<u>xY</u>	<u>xy</u>	<u>Total</u>	<u>Recombination</u>
Ar Bk ₂	RS	227	130	110	1	468	9
Ar Em ₄	RS	222	60	69	24	369	55
Ar Ms ₂	RS	100	46	44	0	190	<15
Ar Wx	CS	477	32	41	121	671	12
Au Cr	CS	32	7	1	9	49	12
Bf Bk ₂	RS	141	41	60	8	250	39
Bf Em ₄	RS	117	65	68	0	250	<11
Bf Ms ₂	RS	157	55	46	7	265	38
Br Wx	CS	171	48	38	18	275	43
Bk Gl ₁₅	RS	85	24	32	0	141	<22