From these data the following recombination frequencies may be calculated, together with their standard errors obtained using as $\bar{p}$ the average value, from the pooled data: (Table 2).

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2. Reversion frequency of waxy pollen type in normal and hypoploid maize plants.

In some organisms, and especially in Saccharomyces cerevisiae, it has recently been found that reversion rate of some biochemical mutants is much higher (tenfold or more) in diploid condition than in the haploid one, and that this is largely associated with chromosomal exchanges in the region involved (restoration of a normal genetic sequence as a consequence of unequal crossing-over).

To test the validity of such a phenomenon in maize the frequency of Wx pollen grains in normally diploid plants and in hypoploid individuals (obtained following appropriate screening of genetically marked X-rayed material) has been estimated, and is presented in the table on page 117.

It is evident that these data show no clear difference between the reversion rate at the wx locus of the haploid condition and that of the diploid one. These results, and the heterogeneity of the values exhibited by the different plants as well as within different sectors of the same tassel, may find their explanation in the nature of the mutant studied, as will be discussed in the paper which is being prepared for publication.

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Reversion Rate at the *wx* Locus

Year and Chromosome Type	Tassel No.	Estimated Number of Pollen Grains	No. of *Wx* Pollen Grains	Frequency of *Wx* Pollen Grains x 10^{-5}
1963	1092-3	572,669	28	4.89
	1064-1	112,616	1	0.89
Hypoploid	1064-2	733,192	68	9.27
	1069-	386,501	70	18.11
	1064-4	103,400	0	0.00
Total and average		1,908,378	167	8.75
1963	56-1	618,021	13	2.10
	56-7	695,767	21	3.02
Normal	56-11	1,540,347	229	14.87
	56-16	2,256,349	374	16.57
	56-2	2,030,517	168	8.27
	56-3	3,288,372	128	3.89
	56-4	3,086,460	48	1.55
Total and average		13,515,833	981	7.25
1964	1309	448,860	29	6.46
	1291	73,010	0	0.00
Hypoploid	1298	406,630	12	2.95
	1282	74,080	15	20.24
	1290	914,850	6	0.65
	1283	989,550	7	0.70
	1291	1,117,350	19	1.70
Total and average		4,024,330	88	2.18
1964	1267-1	1,967,200	14	0.71
	" -2	343,880	4	1.16
Normal	" -3	3,000,680	57	1.89
	" -4	669,210	7	1.04
Total and average		5,980,970	82	1.37