be expected, with two obvious types of exceptions. One of these exceptions is the special case where effects on crossover frequencies in the two regions are approximately inversely related. In this case clustering of cells with double crossovers would not be expected, and variability in the frequency of doubles should be relatively small (both circumstances apparently contrary to present findings). The other type of exception results from the case where a large part of the variability in crossover frequency is due to factors which affect crossover interference with special constraints. The results are consistent with the suppositions (1) that classes of cells are somehow generated such that some are predisposed to crossing over within the inversion but not in the proximal region while others are predisposed to coincident crossing over in both regions and still others possibly to double crossovers within the inversion, and (2) that there is some tendency for cells of the same class to occur in groups of unknown size within the anther. Such a system accounts for clustering of cells of each cross-over class in the absence of correlated distribution of cells of the various crossover classes. An economical alternative explanation (short of gross sampling error) has not yet been conceived by me.

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An interchromosomal effect in maize — The effect of structural chromosome rear-rangements on recombination in heterologous chromosomes has been well documented in a variety of organisms (see Lucchesi and Suzuki, Annual Review of Genetics, 1968, 2:53-87). Although this phenomenon, termed the interchromosomal effect, has been reported in maize (Bellini and Bianchi, 1963, Z. Vererbungslehre 94:126-132; Ting, 1963, Genetics 48:913-914), its properties and characteristics in corn remain to be explored.

We report preliminary data obtained with two paracentric inversions (In2e^S and In3c), which were supplied by Dr. Greg Doyle. Recombination was studied in the short arm of chromosome 9, delineated by the markers c-sh-wx. Heterozygous inversion stocks were crossed to c sh wx. The resulting structural heterozygotes and their normal sibs were then backcrossed to the same tester.

In order to determine whether or not backcross differences were randomized, Chi-squares for heterogeneity were calculated. Among the normal sibs from either inversion, good homogeneous fit in both the c-sh and sh-wx regions was found. For the c-sh region, in the inversion heterozygotes homogeneity was also found.

However, for the sh-wx region the inversion heterozygotes from either In2e^S or In3c proved to be heterogeneous.

For both regions the inversion heterozygotes and their normal sibs were pooled and tested for fit to a pooled $\overline{P}_{In2e^S+N2e}^S$ and $\overline{P}_{In3c+N3c}$. Among the pooled groups only two were not homogeneous, the c-sh region of In3c and the sh-wx region of In2e^S.

Table 1. Recombination and coincidence in testcrosses of inversion heterozygotes and normal sibs.

Inversion	Parental gametes	Reg. 1 singles	Reg. 2 singles	Doubles	Total	Recombination % Reg. 1	Reg. 2	Coinci- dence
In3c	856	103	285	30	1274	8.1	22.4	1.30
Normal sibs	646	54	222	8	930	5.8	23.9	.62
In2e^S	575	45	157	9	786	5.7	20.0	1.01
Normal sibs	1359	86	361	10	1816	4.7	19.9	.59

Table 1 shows the backcross results. Although total recombination in the two regions tested was unaffected, multiple exchanges appear to be increased in the inversion heterozygotes. In order to determine whether or not the increase in multiple exchanges was significantly different from the number of multiples in the normal sibs, the probabilities of occurrence of the observed number of double exchanges in the inversion heterozygotes were calculated from Stevens' binomial-Poisson distributions. The frequency of double exchanges in the normal sibs was used as the expected number. For both inversions the number of multiple exchanges was significantly increased. In In3c heterozygotes the probability of obtaining the observed number of double exchanges was less than .005, and in In2e^S, 0.39.

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Brown pericarp — We presently have two stocks giving brown pericarp, pheno-typically similar if not identical. One stock was obtained from the Coop as Sh bp wx P-RR, and the other segregated from stocks originally obtained (also from the Coop) as Pl a A2 C R B. After growing out and testing these stocks for two years, we have concluded that the brown pericarp phenotype requires a a for its expression. We would be interested in knowing whether anyone else has infor-mation that would confirm this. Flavanones are present in fresh cob and pericarp