locus is suppressed. "I" is found at the A_1 and at the Pg locus. En is specific for the "I" component and the introduction of En results in mutability. In some cases, however, differing patterns of mutability are considered to be due to differences in "I". By crossing a single specific En to an array of independently derived $a_1^{m(r)}$ alleles different expressions are observed. This indicates that the change must be in "I" and additional studies are being carried on to determine the nature of this change.

Thus, the final pattern is dependent on the particular En as well as the particular "I" and/or the interactions between them. This is unlike the mutable pericarp locus where pattern differences result from the varied number of tr-Mp present.

Peter A. Peterson

2. A dominant mutable.

Among a group of r mutants originating from standard R, there occurred a seedling mutable characterized by dark stripes on a virescent-like background. Outcrosses of this mutant to green plants of Dr. Brink's color converted W-22 strains (a strain which has not given rise to any seedling mutants in our cultures) yielded progeny, 1/2 of which were similar in expression to this same mutable. This type of mutable has not previously appeared among the numerous mutables studied in our cultures. It would seem, therefore, that this represents the origin of a dominant mutable allele.

Peter A. Peterson

3. Pales at the a_1 locus.

Pales, both stable and mutable, arise from certain a^m alleles. They arise from the same autonomous alleles that give rise to different pattern types in the presence of En. Stable pales are similar to $a^{m(mr)}$ in that they do not respond to independent En. Neither do the mutable pales show any response to En. The individual isolates of the stable pales show a wide range of expression from those displaying only a slight amount of color to those possessing deep pale color.

Peter A. Peterson

4. Knob and centromere associations of non-homologous maize chromosomes at pachytene.

This report is an extension of previous studies on the non-homologous association of knobs and centromeres (S. R. Peterson, M.S. Thesis--Univ. of Ill.; Gurgel MGCNL 30 and 31):

These studies were undertaken with stocks possessing 8 and 12 knobs in the hemizygous condition and were derived from a standard genetic line and maize chapolote, respectively, crossed with Tama knobless flint. The table below shows that more knob association and more multiple association occur in the higher knobbed family than in the lower knobbed families.