

Corn-Tripsacum crossovers have been obtained with some regularity (ca 1%) involving \underline{yE}_2 on the short arm and \underline{bk}_2 and \underline{bm}_4 on the long arm of corn 9. Recombinants for the five other loci in the interstitial region of corn 9 have not been observed so far.

Because of preferential pairing at pachytene of the concerned corn and Tripsacum homologs observed in the addition disomics, it is not known yet whether the gene sequence or their relative distances are the same in the two chromosomes. The differences in their lengths and arm ratios could mean differences in both. Heterozygous substitution stocks ($2n = 20$) carrying all 8 dominants are under study and may provide this information.

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3. "Overdominance" between corn and Tripsacum alleles at the Bz locus.

When the dominant Bz gene borne on Tripsacum chromosome 7 or 8 (see item 8) is combined as a heterozygous substitution with its recessive allele bz on corn chromosome 9, the aleurone coloration is a deeper purple than when the Tripsacum chromosome is present as a homozygous substitution. The genotypes and phenotypes of kernels (aleurones) borne on a self-pollinated ear heterozygous for this corn-Tripsacum substitution are as follows:-

<u>Genotype*</u>	<u>Phenotype Color</u>	<u>Ratio</u>
$\underline{Bz}^T / \underline{Bz}^T / \underline{Bz}^T$	pale purple	1
$\underline{Bz}^T / \underline{Bz}^T / \underline{bz}$	dark purple	2
$\underline{bz} / \underline{bz} / \underline{Bz}^T$		
$\underline{bz} / \underline{bz} / \underline{bz}$	bronze	1

*Both the corn and Tripsacum chromosomes were dominant C. The presence of the Tripsacum allele is shown as \underline{Bz}^T .

If this were a single allelic interaction, it would be overdominance. An alternate explanation could be the presence of a recessive modifier on the Tripsacum chromosome.

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