amount of leucoanthocyanidin about five times. The purple pigments obtained by heating extracts from aleurone homozygous for in $\underline{a}_2$, $\underline{a}_2\underline{bz}_1$, $\underline{a}_2$ $\underline{bz}_2$, and $\underline{a}_2$, had absorption spectra identical to cyanidin. Pigmentation could be visibly observed from the heated extract of a single $\underline{a}_2$ mutant.

Table 1. Presence (+) or absence (-) of leucoanthocyanidin based on visible appearance of pigment, two to five minutes after heating an acidic-alcoholic extract of aleurone.

Mutant combination	C^I a_2	c_1 a_2	c_2 a_2	r a_2	in a_2	a_1 a_2	a_2	a_2 bz_1	a_2 bz_2	A_2 bz_1
Color	-	-	-	-	+	-	+	+	+	-

G. M. Reddy

3. Double mutants for dwarfing genes of Zea mays.

Four of the five gibberellin-responding dwarf mutants of maize have been intercrossed in all possible combinations and the F_1 selfed to give F_2's which segregate for the double mutant. These presumptive double mutants can be identified in the early seedling stage in some cases, or in other cases as the plants become older. The $\underline{d}_1$ - $\underline{an}_1$ double mutant has been backcrossed to both $\underline{d}_1$ and $\underline{an}_1$ plants; all progeny were dwarf, confirming the presumptive genotype of the double mutant. All presumptive double mutants (seven different combinations tested) respond to exogenous gibberellin by increased growth to give a phenotype which approached that of the normals.

Bernard Phinney.