Table 1. Identification of substances accumulated in different genotypes.

Genotype	Leucoanthocyanidin	cyanidin	cyanidin-3-glucoside
bz_1	P	P	A
bz_1 pr	P	A	A
bz_1 in	P	P	A
bz_1 a_1	A	A	A
bz_1 a_2	P	A	A
bz_2	A	TA	P
bz_2 in	A	TA	P
bz_2 a_1	A	A	A
bz_2 a_2	P	A	A

(P = Present; A = Absent; TA = Trace amounts)

These studies suggest that $\underline{bz_1}$ and $\underline{bz_2}$ accumulate cyanidin and cyanidin-3-glucoside, respectively, indicating that the $\underline{Bz_1}$ gene may control a glycosidation step. The double mutants, $\underline{a_1}$ $\underline{bz_1}$, $\underline{a_1}$ $\underline{bz_2}$, $\underline{a_2}$ $\underline{bz_1}$, and $\underline{a_2}$ $\underline{bz_2}$, lack these pigments.

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6. The role of the modifying factors, In/in and Pr/pr.

Colorimetric analysis of the pigment levels in $\underline{bz_1}$ $\underline{in}$ and $\underline{bz_2}$ $\underline{in}$ suggests that the homozygous recessive $\underline{in}$ enhances the production of cyanidin in $\underline{bz_1}$ and cyanidin-3-glucoside in $\underline{bz_2}$ tissue. The mutant $\underline{bz_1}$ $\underline{Pr}$ accumulates cyanidin and $\underline{bz_1}$ $\underline{pr}$ pelargonidin. The accumulation of cyanidin in $\underline{bz_1}$ and cyanidin-3-glucoside in $\underline{bz_2}$ indicates that $\underline{Bz_1}$ might be involved in glycosidation. Further the $\underline{Bz_1}$ gene may act prior to $\underline{Bz_2}$ and both of them act after $\underline{In}$, $\underline{Pr}$, $\underline{A_1}$ and $\underline{A_2}$. These observations independently confirm the sequence of gene action proposed earlier (MNL 35:95).

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