

seedlings were observed in the M_1 . In the selfed progeny, a colorless sugary seed, which could be due to simultaneous mutations at three different loci \underline{A}_1 \underline{Y}_1 \underline{Su}_1 , and four normal colorless seeds, which could be due to simultaneous mutations at two loci \underline{A}_1 and \underline{Y}_1 , were observed. These observations suggest that hydrazine may induce recessive mutations at specific loci even in the M_1 .

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6. Position of the purple gene (Pr/pr) in gene action sequences of anthocyanin biosynthesis.

The U.V. absorption spectra of the alcoholic extracts of aleurone tissue of \underline{a}_1 , \underline{a}_2 , \underline{c}_1 , \underline{c}_2 , \underline{r} testers and homozygous double recessive mutants of \underline{a}_1 \underline{pr} , \underline{a}_2 \underline{pr} , \underline{c}_1 \underline{pr} , \underline{c}_2 \underline{pr} , and \underline{in} \underline{pr} were compared.

All the single and double mutant extracts gave the same absorption maxima, i.e. 320mu, 286mu, and 275mu, with the exception of \underline{a}_1 \underline{pr} and \underline{a}_2 \underline{pr} , which gave 308mu and 310mu respectively in addition to 286mu and 275mu. The spectral pattern of tissue extracts of \underline{pr} differs from \underline{Pr} extracts only in the \underline{a}_1 \underline{pr} and \underline{a}_2 \underline{pr} combinations whereas in combination with \underline{c}_1 , \underline{c}_2 , \underline{in} , and \underline{r} the pattern is the same. This might suggest that the $\underline{Pr/pr}$ locus actively controls the nature of the accumulated substance(s) only in \underline{a}_1 and \underline{a}_2 , if the spectral pattern and absorption maxima are controlled by the $\underline{Pr/pr}$ locus in the aleurone tissue. Thus, $\underline{Pr/pr}$ may act prior to \underline{A}_1 and after \underline{R} in the gene action sequence (MNL 36:62, 1962).

It is possible that the $\underline{Pr/pr}$ locus, which controls the hydroxylation of the B-ring, may not necessarily shift the observed absorption maxima and/or spectral pattern.

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7. Opaque-2 synthetic variety of maize.

Several Indian inbred lines were selected to incorporate the opaque-2 gene to develop hybrids (MNL 42:148, 1968). The yellow opaque-2