(b) When proportionate changes from the controls are compared, significantly different Wx frequencies are found for the same homoallelic combinations at the same position. These differences are not assignable to the influence of the wx-centromere or wx-breakage point distances.

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2. The $a_2^{m(r\text{-}pa\text{-}pu)}$ allele: phase changes.

The $a_2^{m(r\text{-}pa\text{-}pu)}$ allele is a derivative of $a_2^{m\ 1\ 1511}$ (Peterson 1968, Genetics 59: 391) of the En system. In the absence of En this allele shows a uniform pale pigmentation and in the presence of En it shows purple, pale and colorless sectors in a colorless background. Changes in the mutability pattern from higher to lower levels have been observed among kernels and some of these have been ascribed to changes in En. Thus, En undergoes phase variation changing from periods of high activity to various levels of lower activity that is expressed in a reduced ability to suppress the $a_2^{m(r\text{-}pa\text{-}pu)}$ allele and the responsive $a_2^{m(r)}$ allele. This altered activity, designated En^V (En variable) originally exhibiting a low level of activity expressed a higher level of activity in kernels of ears from tillers than in kernels of ears from main stalks of the same plant. These different levels of En^V expression were inherited in the next generation in main stalk ears indicating that En^V itself had been altered. Thus, En^V is in a labile or unstable condition and susceptible to environmental alterations that influence its level of activity.

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3. Hydrolytic enzymes during development of SCLB.

Resistant (N-Normal) and susceptible (T-Texas male sterile) varieties of maize, infected with Helminthosporium maydis race T (SCLB -