

### Mutable r allele.

Studies among the progeny of a single seed (of Peruvian origin) which had numerous small colored areas on a colorless ground indicate that the effect is due to an allele of *r* (designated *r*-mutable and probably similar to *r*-stipple). The allele is associated with green plant color and its aleurone effect is not to be confused with the mottling ordinarily obtained in *Rrr* endosperms.

Increasing doses of the *r*-*m* allele produce corresponding increases in the frequency of colored regions in the aleurone. It is not uncommon to find several wholly colored seeds on ears of homozygous *r*-*m* individuals crossed with *rr*, and some of these have been shown to be germinal reversions. Under the same conditions changes to stable *r* (colorless aleurone) are much less frequent. Plants having the constitution *R/r*-*m* give rise to exceptional cases having a strikingly reduced frequency of reversion areas. These occur in ca. 4% of the offspring of such heterozygotes crossed with *rr* plants and apparently are not dependent on a specific *R* gene since all of several heterozygotes involving *r*-*m* and different *R* forms produced the exceptional offspring. From studies employing *R/r*-*m* heterozygotes marked with *g* and heterozygous for *T9-10a* (according to Dr. E. G. Anderson who kindly supplied this stock, the break-point is about 4 units beyond *R*) it is apparent that the occurrence of the exceptional individuals is associated with crossing over between *g* and *T*. It is considered tentatively that the high rate of reversion of the so-called *r*-*m* allele is a function of a linked modifier located about 4 crossover units from *r*-*m* and either absent or present in different form on the *R*-carrying chromosome.

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