

## 2. A new pale aleurone gene.

A selfed ear in a culture that was homozygous for all the genes required for full purple aleurone color was found to be segregating for a pale aleurone effect. The ratio was 3 full colored: 1 pale. Approximately three fourths of the pale seeds had many small full purple aleurone sectors suggesting frequent reversion to the normal type. One explanation for this behavior would be that the effect was due to a recessive pale aleurone factor which was unstable in the presence of a dominant modifier. Purple seeds from this ear gave plants with normal anthocyanin pigmentation whose ears included some which were homozygous colored and others which were segregating for colored and pale seeds. The sectored pale seeds gave green plants with red anthocyanin sectors. They produced ears with all pale seeds but which segregated for stable and unstable seeds. The pale stable seeds gave all green plants which produced ears with only pale stable seeds. Tests on  $a_1$ ,  $a_2$ ,  $c$ ,  $r$ , and  $bz$  testers have shown that the effect is not allelic to any of those. Therefore it must be a new gene-affecting anthocyanin pigmentation of both aleurone and plant tissues. It has been tentatively designated  $pa$  (pale aleurone).

M. G. Nuffer