INSTITUTO FITOTECNICO DE SANTA CATALINA
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and

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Johnston, Iowa

1. The fl^a gene and its percentage of lysine.

The gene fl^a (allele of fl_1) differs from fl_1 in that it is recessive in two doses in the endosperm (Maize News Letter 41:86-87). As a result of preliminary studies by Dr. Alix V. Paez, fl^a appears to be similar to the gene opaque-2 (o_2) in its percentage of lysine content.

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1. A survey of B^9 instability in the sporophyte.

The B^9 chromosome is less stable in both the endosperm and sporophyte than members of the regular (A) complement (1). The instability is observed as a loss of the dominant alleles present on the B^9 chromosome and appearance of recessive sectors. Two general types of instability have been observed which produce either a fractional or a mosaic pattern of gene loss. (Fractional refers to the appearance of a single recessive sector; mosaic indicates a pattern of repeated loss of the dominant allele.) Both types of sectoring have been studied with TB-9b (2,3). Concurrent investigations of mosaic kernels have been reported with TB-4a (4). The indication is that fractional loss represents formation of an isochromosome of the B^9 during development of the endosperm or sporophyte, and the mosaic pattern results from transmission of a ring B^9 chromosome by the male parent. However, patterns of loss are not easily separated into fractionals and mosaics. Many intermediate types are seen that, for example, may have two sectored losses rather than one. Whether this is a mosaic pattern, or a fractional pattern with a re-arrangement of embryonic cells is open to