CENTRO DI GENETICA DEL C.N.R.
University of Pavia, Italy
and
ISTITUTO DI GENETICA VEGETALE, FACOLTA' DI AGRARIA
University of Piacenza, Italy

1. Defective endosperm factors from maize-teosinte derivatives.

Data obtained during the past year suggest a revision of statements made in the 1956 Maize News Letter on defective endosperm factors in derivatives of the controlled introgression of teosinte in the inbred A158. Many of the defective factors are turning out to be identical or allelic. So far allelism has been well established for the following groups of factors:

a) de^{t4}, de^{t5}, de^{t10}, de^{t11}, de^{t17}, de^{t18}, de^{t19}, de^{t23}, de^{t24}

b) de^{t14}, de^{t15}, de^{t20}

Allelism is possibly true for the groups:

c) de^{t2}, de^{t3}

d) de^{t13}, de^{t22}, de^{t26}, de^{t27}, de^{t29}

2. Ga factors in maize-teosinte derivatives.

The Ga factor, strongly linked to wx-locus, previously described (MNL, 1957), when crossed on and by strains provided by Dr. Schwartz, turned out to be identical or allelic to Gag described by him (MNL 25: 30).

3. Mendelian characters in Italian maize varieties.

To detect genetic mutants in Italian varieties of maize, self-pollination has been carried out in a few plants grown from seed collected throughout Italy. The selfed ears were examined and scored first for kernel characters. Subsequently 30-40 kernels from every ear were germinated in the greenhouse and classified for seedling mutants. Plant characters have not been observed as yet.

With the exception of color character, the segregation was often very close to 3:1; in a few cases the ratio was close to 15:1.

The following mutants have been obtained in a total of 186 selfed ears belonging to 103 different samples of open-pollinated populations: