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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:

Character	No. of ears in which found
Defective seeds	12
Sugary endosperm	1
Albino seedling	8
Luteus seedling	9
Virescent seedling	21
Yellow-green seedling	2
Pale-green	2
Glossy seedling	8
Liguleless	3
Striped leaves	4
Abnormal growth	6
Booster color	7

Several "papyrescent" glume types have also been collected, especially in the populations from middle and southern Italy. It may be of interest, also, to note that out of the 12 defective seeds observed only one is from northern Italy, which contributed about 2/3 of the studied samples.

Angelo Bianchi

#### 4. Knobs in open-pollinated maize populations in Italy.

According to the results obtained by most of the maize cytologists up to date, knobs are found in 24 different positions of the chromosome set, but the actual existence of the knobs in such positions depends on the strain one is dealing with.

Since the knob endowment of the different varieties is becoming more and more a part of varietal descriptions, to designate the different knobs, it is here suggested adopting a practice similar to that largely used by salivary gland dipterian cytologists and, in order to avoid confusion, to modify slightly the Rhoades proposal (MNL 1957). For instance in chromosome 1, the knobs are as follows: 1S1, 1S2, 1L1; in chromosome 6 the symbols would be 6S1, 6L1, 6L2, 6L3, etc. If new positions are discovered a change would be necessary, according to the location of the new knobs. In every case the numeration would start from the left in the short arm and from the centromere in the long arm.

Samples of open-pollinated maize populations, collected throughout Italy, have been grown in Pavia, Piacenza and Rieti. At the appropriate stage, two or three tassels have been fixed and cytological observations were made.