The cto mutation shows a high degree of polymorphism and thus may be of interest for embryologists. Further studies of this mutation are in progress.

E. I. Vahrusheva

A mutation causing the absence of the first division in meiosis — After treating the seeds of line W23 with a 0.012% solution of N-nitroso N-methylurea for 24 hours at 20-22° C, we have obtained in F_3 a recessive monogenic mutation showing total male and female sterility.

While studying meiosis in homozygous mutants the following pecularities of chromosome behavior have been found:

(a) Premature spiralization of the chromosomes. A dense chromatin layer forms around the nucleolus and later divides into 20 strongly reduced univalents.

(b) Absence of all prophase I stages (leptotene, zygotene, pachytene, diplotene and diakinesis).

(c) Absence of chromosome conjugation.

(d) Division of the centromeres of sister chromatids in metaphase I and the strict separation of 20 chromosomes in anaphase I towards each pole.

(e) Random distribution of the chromosomes during division II, resulting in sterility.

We have designated this mutation as the absence of the first division (afd-W23).

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Possible sporophytic expression of the waxy gene — It is widely understood that the phenotypic influences of the waxy genotype are limited to the pollen and the endosperm. Ericksson (Hereditas 63:187, 1969), however, has presented the following summary of several studies:

Cross	Total kernels	Waxy kernels
wx wx x Wx wx	79,381	39,173
Wx wx x Wx wx	152,871	36,523

The expected ratio of non-waxy to waxy should be 2:2 in the first cross and 3:1 in the second. If the totals were equal in the two crosses, the numbers of waxy kernels in the first and second crosses would then be in the ratio 2:1. The totals are not equal, however, and this ratio should be corrected to 2:(152,871/ 79,381) or 2:1.9257, if we assume that the disadvantage of the wx pollen is equal whether the genotype of the maternal parent is wx wx or Wx wx.