

Though the data are incomplete and the results are only partially analyzed, it can be stated that this is an interesting technique because of its simplicity and efficiency. Its apparent advantage over other methods could be due to its operation during differentiation of the pollen grain (haploid phase) as opposed to many conventional techniques which perform during the diploid phase, under diplontic selection pressure.

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1. Possible nontunicate to Tunicate mutations.

Mangelsdorf and Galinat in their paper on "The tunicate locus in maize dissected and constituted" (PNAS 51:147-150, 1964) state that if their genetic analysis of the Tu locus is valid, Tu "cannot occur as a mutant in modern commercial nontunicate maize".

This note is to record four cases in which Tunicate ears have appeared in commercial corn. The first to come to my attention was sent to me by Midwest Research Associates about a decade ago. Dr. Bruce Ashman, Purdue University, found a Tunicate ear near Madison, Wisconsin about 1960. A third Tunicate ear was found at Macdonald College, near Montreal, in 1968 in a five acre increase block of the open pollinated land-variety Quebec No. 28. The most recent find occurred as two ears in a Foundation seed increase of Funk Seeds International near Bloomington, Ill. in 1972.

There is no sure way of knowing if these Tunicate ears resulted from mutation of tu to Tu or whether they resulted from "blow-in" pollen the previous generation. All of the mutants except that from Ashman still exist in my cultures and they will be analyzed to determine if they are different in some way from the standard Tu allele. Should they be different, this would suggest a mutant origin. Seed is available for distribution.

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