

5. Vestigial-tunicate crosses.

Substantial populations of the F_1 between heterozygous vestigial-glume and heterozygous tunicate plants have been grown in two seasons. As previously reported by Langham (Maize News Letter 1940), the $Vg\ vg\ Tu\ tu$ plants from this cross show the vestigial condition on the tassel but have tunicate ears. However, in our stocks, the tassel glumes of such plants are longer than those of $Vg\ vg\ tu\ tu$ plants, while the ear glumes only partially enclose the kernels. A better description of the $Vg\ vg\ Tu\ tu$ phenotype would be "tassel glumes weak vestigial, ear glumes weak tunicate". F_1 's between $Vg\ vg\ tu\ tu$ and $vg\ vg\ Tu\ tu$, therefore, produce the following genotypes and phenotypes in a 1 : 1 : 1 : 1 ratio:

Genotype	Phenotype	
	Tassel glumes	Ear glumes
$Vg\ vg\ Tu\ tu$	weak vestigial	weak tunicate
$Vg\ vg\ tu\ tu$	vestigial	vestigial
$vg\ vg\ Tu\ tu$	tunicate	tunicate
$vg\ vg\ tu\ tu$	normal	normal

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