

UNITED STATES DEPARTMENT OF AGRICULTURE  
and  
IOWA STATE COLLEGE  
Ames, Iowa  
Department of Agronomy

1. Crossover data for chromosome 4.

$\frac{Su\ Gl_4\ Tu}{su\ gl_4\ tu}$		x		$su\ gl_4\ tu$				
(o)	(o)	(1)	(1)	(2)	(2)	(1-2)	(1-2)	Total
95	111	14	19	2	12	1	2	225

Recombinations     $Su-Gl_4 = 16.0$   
                                  $Gl_4-Tu = 7.6$

2. Tan cob color.

Two mutations affecting cob color have been found in breeding material. One of these, giving a brown color, was found to be an a allele. The second, characterized by a pale brown or tan coloration, on the basis of data now available, appears to act as a specific modifier of the P alleles.

$P^{rr}$  x ta

$P^{rr}$  Ta 156     $P^{rr}$  ta 43     $P^{rw}$  Ta 31     $P^{rw}$  ta 10

$P^{rw}$  x ta

$P^{rw}$  Ta 137     $P^{rw}$  ta 45     $P^{rw}$  Ta & ta 52

Plants of the genotype  $P^{rr}$  ta have a tan pericarp as well as cob color.

3. Frequency of triploids.

In years past triploid ears have been found with some regularity while harvesting our experimental yield trials. This year it was decided to get proximate figures on frequency of occurrence. This was done by keeping a record of the number of triploid ears and assuming that all plots had a perfect stand with each plant bearing a single ear. Records were made at three different locations and at each location the frequency was approximately 1 per 1000.

G. F. Sprague