

2. Striate-2 (sr₂).

This character has been reported under the name waseca stripe in the Corn News Letter 27 (page 66) and 29 (page 54). Further linkage data on it were obtained in 1955. These confirm its location on chromosome 10. The genetic constitution of the striate stock with respect to the aleurone color series was found to be A₁A₁A₂A₂A₃A₃ cc rr ii (not a₃a₃ as was previously stated).

The following data were obtained from backcrosses, F₂'s and combined backcross and F₂ data, and originated from ears segregating for one color factor (R) only. Heterogeneity tests were applied to the different groups of data and indicated that the data were homogeneous. The following table shows the source of the data, number of plants classified and the percent crossing over. All crosses were in the coupling phase.

golden ₁ vs r.		
Source	N	% c.o.
3 point backcross test	436	20.0
F ₂ data	231	18.5
(3:1)(1:1) data	1360	16.0
striate ₂ vs r.		
3 point backcross test	436	25.0
F ₂ data	231	31.5
all backcrosses	1796	25.1
striate ₂ vs golden ₁		
3 point backcross test	436	44.9
F ₂ data	231	45.0
(3:1)(1:1)	1360	40.0

The detailed data on the three point test are as follows:

grs 129	g++ 38	gr+ 49	g+s 3	
+++ 118	+rs 42	++s 53	+r+ 4	total 436.

Therefore the order of the genes is golden₁ - R - striate₂, as already reported. (Corn News Letter 29).

The striate stock had also been crossed on to nana-2. From three F₂ progenies it was concluded that nana-2 was independent of R and of striate-2. One ear segregated for Pr vs pr: 82 PrNa: 14 Prna: 13 prNa: 27 prna. The data suggest linkage between nana-2 and pr.

Gertrud Joachim