FURTHER DATA ON THE ASSORTMENT OF THE sn LOCUS

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Linkage tests covering most of the known linkage map failed to locate the sn gene (2). However, the tests did raise the possibility of linkage between sn and pl. Furthermore, the top end of group 7 was not covered in the survey. In addition, Bereznicki and Reid (1) reported evidence of a loose linkage between sn and the unlocated gene, es. These leads have now been checked.

Additional data on the joint segregation of pl and sn have been obtained from a further 110 plants of Cross 175 (L58 x Marx G) and 85 plants of Cross 235 (L58 x L66). These new results are combined in Table 1 with the previous data from (1). In addition, data on the joint segregation of fl and sn were obtained from crosses 278 (L53 x L100), 295 (L60 x L100) and 286 (Weibullsholm line 360 fl Sn wsp Es x L59 Fl sn Wsp es). In all, the results provide no statistical justification for assuming anything other than free recombination between sn and markers pl and fl but, on the other hand, the results do not entirely discount the possibility that sn is located at the lower extremity of chromosome 6.

Cross 286 also provided data on the joint segregation of wsp, es and sn. All three loci assorted independently in this cross.

In summary, after twenty years of study, the location of the horticulturally important and academically interesting sn gene remains unknown.

1. Bereznicki, W.C. and Reid, J.B. 1978. PNL 10:3-4.
2. Murfet, I.C. 1978. PNL 10:56.

Table 1. Joint segregation data (F_2) involving unlocated genes sn and es and the established markers pl, fl and wsp.

Phase	Phenotype				Total	Joint seg. χ^2_1	Cr0% ± S.E.
	Pl Sn	Pl sn	pl Sn	pl sn			
C	283	72	83	28	466	1.17	46.06 ± 3.32
	Fl Sn	Fl sn	fl Sn	fl sn			
C	113	32	23	9	177	0.54	45.49 ± 5.35
R	59	13	11	1	84	0.70	37.66 ± 9.23
	Wsp Sn	Wsp sn	wsp Sn	wsp sn			
R	68	11	15	5	99	1.46	> 57
	Es Sn	Es sn	es Sn	es sn			
C	29	6	12	2	49	0.11	53.05 ± 11.07
	Wsp Es	Wsp es	wsp Es	wsp es			
R	29	9	6	5	49	1.91	> 57