

The diallel analysis showed a significant dominance for low protein content, but the degree of dominance was different in different cross combinations. It varied from 1.06 (L.4042 x L.X.) to 8.47 (L.4042 x L.3026). The highest value was obtained in crosses involving two high protein lines, L.4042 and L.3026, indicating a genetic difference between them in spite of the similarity in protein content in the lines themselves. On the basis of the results of diallel analysis and the analysis of particular cross combinations two hybrids, L.4042 x L.3026 and L.3026 x L.3527, were chosen for further breeding.

SUPPLEMENTARY EVIDENCE FOR THE LINKAGE OF *afila* WITH MUTANTS ON CHROMOSOME 1

Kielpinski, M. Plant Breeding Station, Prusinowo, Poland

The *afila* (*af*) gene which converts leaflets into tendrils is now widely used in breeding programs around the world.

The data of Khangildin (1), Marx (2), and Snoad (3) place *aX* in chromosome 1 in the region of I. My own findings confirm those presented by others.

The following lines were used:

- Induced *afila* mutant in cv. 'Wasata' (genotype: *af Red I*)
- WL 1535 from Weibullsholm collection (genotype: *Af red i*)
- Variety 'Allround' (genotype: *Af Red i*)

The genetic analysis was carried out on F₂ progeny derived from the following crosses: *af Red I* (Wasata) x *Af Red i* (Allround) and *af Red I* (Wasata) x *Af red i* (WL 1535).

The crosses revealed the expected linkages, i.e. *af-i* and *af-red*. The Cro value for genes *af -1* was 8.3 ± 2.9, and for genes *af-red* 3.1 + 1.3 (Table 1). This compares with 14.5 ± 1.6% between *af-1* as determined by Snoad (3) and < 9% between *af-red* (1). It should be noted that my data, like those of Marx (1), show a deficiency of *red* segregants, thus evidently confirming the difficulty of scoring for *red* in an *af* background.

Table 1. Joint segregation of *Af* with I and with *Red* in two crosses.

Cross	<i>Af I</i>	<i>Af i</i>	<i>af I</i>	<i>af i</i>	Total
<i>af I</i> x <i>Af i</i>	572	280	292	1	1146
	<i>Af Red</i>	<i>Af red</i>	<i>af Red</i>	<i>af red</i>	
<i>af Red</i> x <i>Af red</i>	3125	118	1497	1	5741

1. Khangildin, W. V. 1966. Genetika (USSR) 6.
2. Marx, G. A. 1969. PNL 1:9-10.
3. Snoad, B. 1971. PNL 3:43.