Registration of M87-1569 Soybean Germplasm Resistant to Soybean Cyst Nematode

The soybean [Glycine max (L.) Merr.] germplasm line M87-1569 (Reg. no. GP-175, PI 584527) was developed by the Minnesota Agricultural Experiment Station. M87-1569 was released because of its early maturity (Maturity Group 0) and resistance to Races 1 and 3 of soybean cyst nematode (SCN) (Heterodera glycines Ichinohe).

M87-1569 originated as an F₄ plant selection from the cross M70-187 x L77-808 (4). M70-187 was an SCN resistant germplasm line released by the Minnesota Agric. Exp. Stn. L77-808 has the pedigree ‘Williams’ x PI 87631-1 (1), PI 87631 is reported to have partial resistance to SCN Race 3 (R.L. Bernard, personal communication). The population was advanced by the single-pod bulk method to the F₄ generation in Chile and Minnesota. The F₅ plants were screened in the field against Race 3 of SCN. F₅ plants were screened in the greenhouse against Races 1 and 3 of SCN. M87-1569 was yield tested in Minnesota under both SCN infested and noninfested conditions from 1989 through 1993. It was evaluated in the Northern Regional Soybean Cyst Nematode Test, Group I, from 1990 through 1992 (2) and in the Uniform Soybean Tests, Northern States, Uniform Test 0, from 1991 through 1993 (7).

M87-1569, classified as Group 0 maturity (relative maturity 0.9), is about 2 d later than ‘Lambert’, about 5 d earlier than ‘Alpha’, and about 10 d earlier than ‘Bell’ (3,5,6). M87-1569 has indeterminate growth habit, purple flowers, tawny pubescence, and tan pods at maturity. Seeds are yellow with black hila and dull seed coat luster. In comparison with Lambert, M87-1569 is taller, has indeterminate growth habit, purple flowers, tawny pubescence and tan pods at maturity. Seeds are yellow with black hila and dull seed coat luster. In comparison with Lambert, M87-1569 is taller, has similar lodging, seed quality, and iron chlorosis scores, has smaller seeds, and is lower in oil and protein content. Under moderate to heavy SCN infestations, M87-1569 will yield more than Lambert.

In addition to being resistant to Races 1 and 3 of soybean cyst nematode M87-1569 carries the Rps1 gene for resistance to phytophthora root rot (caused by Phytophthora sojae) and 3 of SCN. (Heterodera glycines Ichinohe).

Seed of M87-1569 was distributed to soybean breeders and other interested individuals in 1994. Breeder seed will be maintained by the Minnesota Agric. Exp. Stn. Small samples of M87-1569 for research purposes can be obtained for at least five years by writing to the corresponding author.

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References and Notes