Registration of J87-233 Soybean Germplasm with Resistance to Soybean Cyst Nematode Races 1, 2, 3, and 5

J87-233 soybean [Glycine max (L.) Merr.] line (Reg. No. GP-152, PI 562611) was developed by the USDA-ARS and released in 1992 because it has a high level of resistance to soybean cyst nematode (SCN), Heterodera glycines Ichinohe, Races 1, 2, 3, and 5, and has moderate resistance (4) to Race 14. J87-233 is also resistant to root-knot nematode, Meloidogyne incognita (Kofoid & White) Chitwood.

J87-233 was derived from an F 4 plant selection composed of the F 4 from the cross ‘Bedford’ (2)/D79-5353/D79-5353/PI 90763. D79-5353 is a selection from J74-77/D72-8927. J74-77 is of the same parentage as Bedford and has the same resistance to SCN Races 3 and 14 as Bedford (derived from PI 88788). D72-8927 was developed from the cross D66-12392/‘Hill’*2 (3)/PI 90763. PI 90763 provided resistance to SCN Races 1, 2 and 5. D66-12392 was a selection from D63-6100/‘Dyer’ (1). D63-6100 was a selection from Hill*4/PI 171442.

Progenies of D79-5353/PI 90763 were screened in the F 2 generation for resistance to SCN Race 2, and resistant plants were transplanted to the field. The resistant plants were crossed to a Race 5–resistant selection from Bedford/D79-5353. Progenies of these crosses were screened in the F 3 generation for Race 2 resistance and in later generations for reaction to other SCN races and M. incognita.

J87-233 is of Maturity Group V, maturing 7 d earlier than Bedford. Plants have a determinate growth habit, tawny pubescence, tan pod walls at maturity, and purple flowers. Seeds are yellow with black hila. Seed yield is similar to that of Bedford in the absence of SCN.

A sample of 50 seeds will be available for research purposes from the author.

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References and Notes


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