Registration of ‘Mustang’ Soybean

‘Mustang’ soybean [Glycine max (L.) Merr.] (Reg. no. CV-354, PI 595363) was developed by Southern Illinois University at Carbondale and released by the Missouri Agricultural Experiment Station as a high-yielding Maturity Group IV cultivar with resistance to soybean cyst nematode (SCN) (Heterodera glycines Ichinohe) Race 3 and moderate resistance to SCN Races 1 and 14 (6).

Mustang originated as an individual F₅ plant selection from the cross ‘Fayette’ (2) × ‘Pyramid’ (4). The F₂ and subsequent generations were advanced via the single-pod descent procedure (3). The F₅ plant was selected from a field infested with SCN Race 3. Soybean cyst nematode resistance was determined in subsequent generations by greenhouse evaluation utilizing SCN Race 3 infested soil collected from a field near Elkhville, IL, and SCN Race 14 infested soil collected from a field near Sandridge, IL. Resistance was confirmed at the University of Missouri by greenhouse evaluation against SCN Races 1, 3, and 14. Race 1 culture was maintained on PI 88788 and ‘Essex’ (7). Race 3 and 14 cultures were maintained on Essex.

Mustang was evaluated as LS87-1615 in the Regional SCN Tests (5) and the Uniform Soybean Tests—Northern Region (8) in 1990 and 1991. Seed yield of Mustang on SCN infested soils was 56% higher than ‘Spencer’ (9) and 9% higher than ‘Delsoy 4210’ (1). Seed yield of Mustang was 2% lower than Spencer and 14% higher than Delsoy 4210 on noninfested soils.

As evaluated in the North Missouri Soybean Breeding trials from 1990 through 1994, seed yield of Mustang was 9% higher than Delsoy 4210 on SCN infested soils and 10% higher on noninfested soils.

Mustang is indeterminate in growth habit, and has white flowers, gray pubescence, and tan pod walls. It matures 1 d later than Spencer and 2 d earlier than Delsoy 4210. Mustang’s range of adaptation is from approximately 37° to 40° N lat. Plant height averages 99 cm, compared with 97 cm for Delsoy 4210. Lodging score averages 1.4, compared with 1.8 for Delsoy 4210. Seedcoats are shiny yellow with buff hila. Seed quality scores average 1.6 for Mustang, compared with 2.0 for Delsoy 4210. Seed size is approximately 152 mg seed⁻¹, compared with 171 mg seed⁻¹ for Delsoy 4210. Seed composition averages 394 g kg⁻¹ protein and 220 g kg⁻¹ oil on a dry weight basis.

Mustang is susceptible to Races 1 and 4 of phytophthora rot (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann) and soybean mosaic virus (SMV) (8).

Application for U.S. plant variety protection is pending, specifying that seed be sold by variety name only as a class of certified seed. Classes of seed production are limited to breeder, foundation, and certified. Breeder seed of Mustang will be maintained by Missouri Agricultural Experiment Station. Small quantities of seed for breeding and research purposes may be obtained from D.A. Sleper for a minimum of 5 yr.

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References and Notes


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Registration of ‘Granite’ Soybean

‘Granite’ soybean [Glycine max (L.) Merr.] (Reg. no. CV-358, PI 592524) was developed by the Minnesota Agricultural Experiment Station. It was released because of its high yield and resistance to brown stem rot (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann) and is resistant to phytophthora root rot (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann) and soybean mosaic virus (SMV) (8).

Granite was derived from an F₃ plant selection, ‘Sibley’ × ‘BSR 101’ (1,2). The population was advanced by greenhouse evaluation utilizing SCN Race 3 infested soil collected from a field near Elkville, IL, and SCN Race 14 infested soil collected from a field near Sandridge, IL. Resistance was confirmed at the University of Missouri by greenhouse evaluation against SCN Races 1, 3, and 14. Race 1 culture was maintained on PI 88788 and ‘Essex’ (7). Race 3 and 14 cultures were maintained on Essex.

Granite was evaluated as LS87-1615 in the Regional SCN Tests (5) and the Uniform Soybean Tests—Northern Region (8) in 1990 and 1991. Seed yield of Granite on SCN infested soils was 56% higher than ‘Spencer’ (9) and 9% higher than ‘Delsoy 4210’ (1). Seed yield of Granite was 2% lower than Spencer and 14% higher than Delsoy 4210 on noninfested soils.

As evaluated in the North Missouri Soybean Breeding trials from 1990 through 1994, seed yield of Granite was 9% higher than Delsoy 4210 on SCN infested soils and 10% higher on noninfested soils.

Granite is indeterminate in growth habit, and has white flowers, gray pubescence, and tan pod walls. It matures 1 d later than Spencer and 2 d earlier than Delsoy 4210. Granite’s range of adaptation is from approximately 37° to 40° N lat. Plant height averages 99 cm, compared with 97 cm for Delsoy 4210. Lodging score averages 1.4, compared with 1.8 for Delsoy 4210. Seedcoats are shiny yellow with buff hila. Seed quality scores average 1.6 for Granite, compared with 2.0 for Delsoy 4210. Seed size is approximately 152 mg seed⁻¹, compared with 171 mg seed⁻¹ for Delsoy 4210. Seed composition averages 394 g kg⁻¹ protein and 220 g kg⁻¹ oil on a dry weight basis.

Granite is susceptible to Races 1 and 4 of phytophthora rot (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann) and soybean mosaic virus (SMV) (8).

Application for U.S. plant variety protection is pending, specifying that seed be sold by variety name only as a class of certified seed. Classes of seed production are limited to breeder, foundation, and certified. Breeder seed of Granite will be maintained by the Minnesota Agricultural Experiment Station. U.S. plant variety protection for Granite is pending.

Granite was released on 15 Feb. 1995 to approved seed growers in Minnesota, South Dakota and Wisconsin. Granite will be maintained by the Minnesota Agricultural Experiment Station. Small samples of Granite for research purposes can be obtained from D.A. Sleper for a minimum of 5 yr.

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