Registration of ‘Dwight’ Soybean

‘Dwight’ soybean [Glycine max (L.) Merr.] (Reg. no. CV-386, PI 597386) was developed by the Illinois Agricultural Experiment Station at the University of Illinois and released in August 1997. It was released because of its resistance to the soybean cyst nematode (SCN) (Heterodera glycines Ichinohe) derived from PI 88788 and higher yield compared with SCN-resistant cultivars of similar maturity.

Dwight originated as an F₁-plant selection from the cross ‘Jack’ × A86-303014 made at the Illinois Agric. Exp. Stn. [5]. A86-303014 is a selection from the cross A81356022 × ‘Hack’ [4]. A81-356022 is a selection from ‘Century’ × A76-304020 [9]. A76-304020 is a selection from (‘Beezon’ × AP68-1016) × (L15 × ‘Calland’) [6,7]. L15 is a selection from ‘Wayne’ (6) × ‘Clark 63’ [1,10]. AP68-1016 is a brown stem root resistant line selected from ‘Clark’ (5) × PI 84946-2 [2]. The Jack × A86-303014 cross was made in the field in the summer of 1989, and the F₁ generation grown in the field in 1990. The F₂ and F₃ generations were advanced by single-seed descent in Puerto Rico during the winter of 1990 and 1991 and the F₄ generation was grown at Urbana in the summer of 1991. In the greenhouse during the winter of 1991 and 1992, progeny of single-plant selections in the summer of 1991 were evaluated for resistance to Races 3 and 4 of soybean cyst nematode. The F₄ generation was grown as plant rows in 1992. Single-plant rows were selected, composited, and evaluated in replicated yield trials in Illinois, 1993 through 1996. Dwight was evaluated as LN92-10507 in the Preliminary SCN II Test in 1995 and in Uniform SCN II Test in 1996 of the Northern Regional Soybean Cyst Nematode Test [4].

Dwight is an indeterminate line classified as late Group II maturity (relative maturity 2.9), maturing 5 d later than 'IA2021' and 1 d earlier than Jack. Compared with Jack at SCN-noninfested locations, Dwight had 2% higher seed yield, 25 cm shorter plant height, and lower lodging score (1.5 vs. 2.4). At SCN-infested locations, seed yield of Dwight was 20% higher than IA2021 and 1% lower than Jack.

Dwight has purple flowers, tawny pubescence, brown pods at maturity, and yellow seeds with dull luster and black hilum. Dwight may have up to 1% other plant and seed types. Dwight is susceptible to phytophthora root rot (Races 1, 4, and 7) (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann), susceptible to brown stem rot [caused by Phialophora gregata (Allington & D.W. Chamberlain) W. Gams], and sudden death syndrome [caused by Fusarium solani (Mart.) Sacc.]. When evaluated against SCN in the greenhouse, Dwight is moderately susceptible to Race 1, and resistant to Races 2, 3, 4, 5, and 14 [8].

Seed production is restricted to Foundation and Certified classes beyond breeder seed. Foundation seed of Dwight will be available to qualified certified seed producers for 1998 planting. A research assessment fee of $0.70 per 50-pound unit (22.7 kg) will be collected on the Certified class of seed sold. A small sample of seed of Dwight may be obtained from the corresponding author for research purposes for at least five years.


References and Notes


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Registration of ‘Pana’ Soybean

‘Pana’ soybean [Glycine max (L.) Merr.] (Reg. no. CV-387, PI 597387) was developed by the Illinois Agricultural Experiment Station at the University of Illinois and was released in August 1997. It was released because of its resistance to the soybean cyst nematode (SCN) (Heterodera glycines Ichinohe) derived from PI 88788 and higher yield compared with SCN-resistant cultivars of similar maturity.

Pana originated as an F₁-plant selection from the cross ‘Jack’ × Asgrow ‘A3205’ made at the Illinois Agric. Exp. Stn. [4]. A3205 is a selection from the cross Norrthrup King ‘S1474’ × Asgrow ‘A3127’. S1474 is a selection from ‘Hark’ × ‘Wayne’ [1,8]. A3127 is a selection from ‘Williams’ × ‘Essence’ [2,7]. The original cross was made in the field in the summer of 1989, and the F₁ generation was grown in the field in 1990. The F₂ and F₃ generations were advanced by single-seed descent in Puerto Rico during the winter of 1990 and 1991 and the F₄ generation was grown at Urbana in the summer of 1991. In the greenhouse during the winter of 1991 and 1992, progeny from single plants selected in the summer of 1991 were evaluated for resistance to SCN Races 3 and 4 and for resistance to Races 1 and 3 of phytophthora rot (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann). The F₄ generation was grown as plant rows in 1992. Single-plant rows were selected, composited, and evaluated in replicated yield trials in Illinois, 1993 through 1996. Pana was evaluated as LN92-10855 in the Preliminary SCN III Test in 1995 and in Uniform SCN III Test in 1996 of the Northern Regional Soybean Cyst Nematode Test [3].