Registration of ‘LN90-4524’ Soybean

‘LN90-4524’ soybean [Glycine max (L.) Merr.] (Reg. no. CV-349, PI 593257) was developed by the Illinois Agricultural Experiment Station at the University of Illinois and released in August 1995. It was released because of its resistance to Race 14 and moderate resistance to Races 3, 4, and 5 of the soybean cyst nematode (SCN) (Heterodera glycines Ichinohe) derived from PI 88788 and higher yield compared with SCN-resistant cultivars of similar maturity.

LN90-4524 originated as an F₄ plant selection from the cross LN86-4668 × ‘Asgrow A3733’ made at the Illinois Agricultural Experiment Station. LN86-4668 is a selection from the cross ‘Fayette’ × ‘Hardin’ (4,5). Asgrow A3733 is a selection from the cross ‘Elf’ × ‘Asgrow A3127’ (3). Asgrow A3127 is a selection from ‘Williams’ × ‘Essex’ (1,9). The original cross was made in the field in the summer of 1987, and the F₁ generation was grown in the field at Urbana, IL, in 1988. The F₂, F₃, and F₄ generations were advanced by a modified single-seed-descent procedure in Puerto Rico during the winter of 1986-1987 and at Urbana in the summer of 1989. In the winter of 1989, progeny of selected F₄ plants were evaluated in the greenhouse with SCN Races 3 and 4. The F₅ generation from SCN-resistant F₄ plants was grown as plant rows in 1990. Single plant rows were selected, composited, and evaluated in replicated yield trials in Illinois in 1991 and 1992. LN90-4524 was evaluated in the 1993 Northern SCN Regional Tests (Group III test) in 1993 (7).

LN90-4524 is classified as Group III maturity (relative maturity 3.7), maturing an average of 1 d earlier than ‘Linford’ and 4 d later than ‘Resnik’ (2,6). It is best adapted to 39 to 41° N lat. Seed weight and seed protein and oil content of LN90-4524 are similar than ‘Resnik’ (2,6). It is best adapted to 39 to 41° N lat. Seed Tests (Group III test) in 1992 to 1993(7).

LN90-4524 was evaluated in the 1993 Northern SCN Regional Tests in 1991, and in Uniform III Test in 1992-1994 of the Uniform Soybean Tests—Northern Region Test (9).

LN90-4524 is susceptible to phytophthora rot (Races 1, 4, and 7) (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann), 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, LN90-4524 is susceptible to Races 1 and 2, moderately resistant to Races 3, 4, and 5, and resistant to Race 14 (8).

LN90-4524 is a nonexclusive release for use by seedsmen for brand labeling. Parent seed of LN90-4524 will be maintained by Illinois Foundation Seeds, Inc., Route 45 South, Champaign, IL 61820. A research assessment fee of $0.70 per 50-pound unit (≈22.7 kg) of the commercial class of seed sold will be collected. A small sample of seed of LN90-4524 may be obtained for research purposes for at least five years from the authors.


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Registration of ‘Iroquois’ Soybean

‘Iroquois’ soybean [Glycine max (L.) Merr.] (Reg. no. CV-351, P1 593259) was developed by the Illinois Agricultural Experiment Station at the University of Illinois and released in 1995. This is an early Maturity Group III cultivar, released because of its resistance to phytophthora rot (Race 1) (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann) and higher yield compared with cultivars of similar maturity.

Iroquois is an F₄-derived line from the cross ‘Asgrow A2943’ made at the Illinois Agricultural Experiment Station. LN81-1029 is a selection from the cross ‘Bonus’) × ‘Pella’ (3,4,5). Asgrow A2943 is a selection from the cross ‘Asgrow A1564’ × ‘Asgrow A3127’. Asgrow A1564 is a selection from ‘Williams’ × ‘Essex’ (1,7). The original cross was made in the field at Urbana, IL, in the summer of 1987. The F₂, F₃, and F₄ generations were advanced by a modified single-seed-descent procedure in Puerto Rico during the winter of 1986-1987 and at Urbana in the summer of 1987. The F₅ generation was grown in the field in 1986. The F₂, F₃, and F₄ generations were advanced by a modified single-seed-descent procedure in Puerto Rico during the winter of 1986-1987 and at Urbana in the summer of 1987. The F₅ generation was grown in the field in 1986. The F₅ generation was grown in the field in 1986. The F₅ generation was grown in the field in 1986. The F₅ generation was grown in the field in 1986. The F₅ generation was grown in the field in 1986. The F₅ generation was grown in the field in 1986. The F₅ generation was grown in the field in 1986. The F₅ generation was grown in the field in 1986. The F₅ generation was grown in the field in 1986. The F₅ generation was grown in the field in 1986.