Registration of 'Olympus' Soybean

'Olympus' soybean [Glycine max (L.) Merr.] (Reg. no. CV-381, PI 602059) was developed by the Michigan Agricultural Experiment Station. It was released in February 1997 because of its high yield potential compared with cultivars of similar maturity.

Olympus, originally tested as E91031, is an F₃-derived line from the cross of E84108 × 'Conrad'[1]. E84108 is an experimental line developed by Michigan State University that has the pedigree 'Sprite' × 'Hardin'[2,3]. The cross between E84108 × Conrad was made during the summer of 1986 at East Lansing, MI. The F₁ plant was grown the following summer and F₂ plants were grown during the winter of 1987–1988 in Belize. F₃ plants were grown during the summer of 1988 and were individually threshed to composite F₃-derived lines. Olympus was visually selected as an F₄ line in 1989 and first was tested in replicated yield trials in 1990. Olympus was evaluated in the Preliminary Test IIA in 1992 and the Uniform Test II in 1993, 1995, and 1996 of the Uniform Soybean Tests–Northern Region[4].

Olympus is an indeterminate cultivar with a Group II maturity and is best adapted to 41°–44° N lat. In the 1995–1996 Uniform Soybean Test II, the maturity of Olympus was 2.9 d later than 'IA2021' and 1 d later than 'Marcus 95'. Marcus 95 was developed by backcrossing the Rpsl-k and Rps6 genes into 'Marcus'[5]. Seed yield of Olympus was similar to IA2021 and 5% greater than Marcus 95. Olympus has better lodging and seed quality scores than either IA2021 or Marcus 95. The plant height of Olympus is 10 cm greater than IA2021 and 8 cm greater than Marcus 95. Compared with IA2021, the seed of Olympus is 17 mg seed⁻¹ smaller, the protein content is 1.1 g kg⁻¹ greater and oil content is 6 g kg⁻¹ less. Compared with Marcus 95, the seed of Olympus is 15 mg seed⁻¹ smaller, the protein content is 11 g kg⁻¹ less, and oil content is 5 g kg⁻¹ less.

Olympus has purple flowers, tawny pubescence, and dull yellow seeds with black hila. Olympus does not have a major gene conferring resistance to phytophthora rot (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann) and is susceptible to brown stem rot (caused by Phialophora gregata (Allington & D.W. Chamberlain) W. Gams). Olympus has moderate resistance to sclerotinia stem rot (caused by Sclerotinia sclerotiorum (Lib.) de Bary).

Application for U.S. plant variety protection will be made for Olympus, which will permit only Foundation and Certified classes beyond Breeder seed. A small sample of seed for research purposes can be obtained from the corresponding author for at least five years.


References and Notes

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Registration of 'Apollo' Soybean

'Apollo' soybean [Glycine max (L.) Merr.] (Reg. no. CV-380, PI 602059) was developed by the Michigan Agricultural Experiment Station. It was released in February 1997 because of its high yield potential in comparison with other cultivars of similar maturity.

Apollo, originally tested as E93001, is an F₃-derived line from the cross of Northrup King 'S23-12' × 'Elgin 87'[1]. Northrup King S23-12 is a selection from Northrup King 'S1346' × Asgrow 'A2575'. Northrup King S1346 is a selection from A55-5624-9 × PI 257435. A55-5624-9 was selected from the cross 'Roanoke' × 'Hawkeye'[2]. Asgrow A2575 is a selection from the cross C1453 × 'Amsoy 71'[3] and C1453 was selected from the cross C1266R × C1253. C1266R was derived from the cross 'Harosoy' × C1079[4] and C1079 was selected from the cross 'Lincoln' × 'Ogden'[25]. C1253 was derived from the cross 'Blackhawk' × Harosoy[2]. The cross between Northrup King S23-12 × Elgin 87 was made the summer of 1988 at East Lansing, MI. The F₁ plant was grown the following summer and F₂ and F₃ plants were grown during the winter of 1989–1990 in Belize. F₃ plants were grown during the summer of 1990 and individually threshed to composite F₃-derived lines. Apollo was visually selected as an F₄ line in 1991 and first was tested in replicated yield trials in 1992. Apollo was evaluated in the Preliminary Test IIA in 1994 and the Uniform Test II in 1995 and 1996 of the Uniform Soybean Tests–Northern Region[6].

Apollo is an indeterminate cultivar with a Group II maturity and is best adapted to 41°–44° N lat. In the 1995–1996 Uniform Soybean Test II, the maturity of Apollo, was 2.9 d later than 'IA2021' and 3.9 d later than 'Marcus 95'. Marcus 95 was developed by backcrossing the Rpsl-k and Rps6 genes into Marcus[7]. Seed yield of Apollo was 2% greater than IA2021 and 7% greater than Marcus 95. Apollo has similar lodging and seed quality scores as both IA2021 and Marcus 95. The plant height of Apollo is 15 cm greater than IA2021 and 13 cm greater than Marcus 95. Compared with IA2021, the seed of Apollo is 4 mg seed⁻¹ smaller, the protein content is the same and oil content is 4 g kg⁻¹ less. Compared with Marcus, the seed of Apollo is 2 mg seed⁻¹ smaller, the protein content is 12 g kg⁻¹ less, and oil content is 3 g kg⁻¹ less.

Apollo has purple flowers, gray pubescence, and shiny yellow seeds with yellow hila. Apollo has the Rps1-k gene, which provides resistance to races of phytophthora rot (caused by Phytophthora sojae M.J. Kaufmann & J.W. Gerdemann). Apollo is susceptible to brown stem rot (caused by Phialophora gregata (Allington & D.W. Chamberlain) W. Gams) and sclerotinia stem rot (caused by Sclerotinia sclerotiorum (Lib.) de Bary).

Application for U.S. plant variety protection will be made for Apollo, which will permit only Foundation and Certified classes beyond Breeder seed. A small sample of seed for research purposes can be obtained from the corresponding author for at least five years.

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References and Notes