Registration of ‘Skylla’ Soybean

‘Skylla’, a Maturity Group II soybean Glycine max (L.) Merr. (Reg. no. CV-479, PI 639693), was developed by the Michigan Agricultural Experiment Station. Skylla was released in 2005 because of its superior yield compared with cultivars of similar maturity.

Skylla is derived from the cross Dairyland ‘DSR-217’ × Syngenta (formerly Novartis) S19–90. DSR-217 is a glyphosate-susceptible cultivar derived from the cross ‘Dairyland Experimental’ × ‘Asgrow 3127’. Asgrow 3127 (PI 556511) is from the cross ‘Williams’ (Bernard and Lindahl, 1972) × ‘Essex’ (Smith and Camper, 1973). S19–90 is derived from the cross Pride ‘B152’ × ‘Pella’ (Bahrenfus and Fehr, 1980). B152 is from the cross Syngenta ‘S1346’ × ‘Mack’ (Caviness et al., 1972) and S1346 is from the cross A55–4629–4 × PI 257435. A55–4629–4 is derived from the cross ‘Roanoke’ × ‘Hawkeye’ (Weiss, 1953). The cross DSR-217 × S19–90 was made in 1994 and the F1 plants were grown during the summer of 1995. The F2 seeds were sent to Belize and advanced two generations using single-seed descent (Brim, 1966) during the winter of 1995–1996. The F4 seeds were planted in Michigan in 1996 and the plants were individually thinned to composite F4-derived lines. The F4-derived lines were evaluated in single row, 1-m-long plots with two replications in 1997. Selections among lines were based on yield and maturity. Skylla was evaluated annually in replicated tests in Michigan from 1998 to 2004 and in the USDA Uniform Soybean Tests, Northern Region, from 2000 through 2003, under the designation E98076.

Skylla is a late Maturity Group II soybean cultivar (2.6 relative maturity) with indeterminate growth habit, purple flowers, tawny pubescence, and tan pods at maturity. The mature seeds have a yellow seed coat with dull luster, black hilum, and yellow cotyledons. Over 3 yr of USDA Uniform Group II Tests (2001–2003), Skylla had an average yield of 3467 kg ha⁻¹, compared with 3353 kg ha⁻¹ for the check cultivar IA2021 (Crochet, 2002,2003; Nowling, 2001). In the same tests, Skylla matured 3.9 d later, had a better lodging score, and was 10 cm taller than IA2021. Skylla averaged 148 mg seed⁻¹, 371 g kg⁻¹ seed protein content, and 208 g kg⁻¹ seed oil content on a 0% moisture basis, similar to the check cultivar IA2021 (Crochet, 2003). In the Michigan South Conventional Soybean Variety Trials conducted at four locations each year during 2002 to 2004, Skylla yielded an average of 3729 kg ha⁻¹, which was the highest average in the trials (Wang and Boyse, 2004). In the same trials, the cultivar Sandusky (St. Martin et al., 1995) yielded an average of 3494 kg ha⁻¹. Skylla is resistant to Phytophthora sojae Kaufmann and Gerdemann race 7 but susceptible to race 4 (Crochet, 2003). Skylla is partially resistant to Sclerotinia stem rot [also called white mold, caused by Sclerotinia sclerotiorum (Lib.) de Bary]. In the 2004 North Central White Mold Uniform Test, the average disease severity index (Grau et al., 1982) for Skylla over the four most infected nurseries (North Dakota, Ohio, Wisconsin, and Pioneer) was 48.5, compared with 69.0 for Dwight (Nickell et al., 1998) and 44.1 for the check cultivar Syngenta S19–90 (Grau, pers. comm., 2004). Skylla is best adapted to 41° to 44° N lat.

Foundation seed of Skylla will be produced by the Crop Improvement Association, and will be available for exclusive licensing from the Intellectual Property Office at Michigan State University. U.S. Plant Variety Protection may be applied for.

Seed of Skylla will be deposited in the USDA Germplasm System where it will be available for research purpose. Small quantities of seeds for research purposes may be obtained for at least 5 yr from the date of this publication from the corresponding author. Breeder seeds will be available from the Michigan Agricultural Experiment Station.

D. Wang,* B.W. Diers, and J. Boyse

References
