Registration of 'Vernal' Soybean

'VERNAL' SOYBEAN [Glycine max (L.) Merr.] (Reg. no. CV-305, PI no. 564261) was developed by the Agricultural Research Service, U.S. Department of Agriculture in cooperation with the Mississippi Agricultural and Forestry Experiment Station, Stoneville, MS. Vernal was released in 1992 because of its superior productivity in early plantings in Mississippi and in plantings from early March to early August in the lower Rio Grande Valley of Texas. Prior to release it was identified as D82-2740.

Vernal was developed from an F₁ line selected from the cross D77-12244‘Bedford’ (4). D77-12244 (1) is a selection from ‘Tracey’/Hill/PI 159925 (2,6), which has the character "long juvenile period under short-day conditions." PI 159925 is the source of this character. Vernal was observed for the long juvenile character in winter plantings in Puerto Rico and at Cucalcan, Mexico. It has been evaluated for seed yield in May and early June plantings at Stoneville from 1983 to 1991, in April 20 plantings at Stoneville 1986-1991 and in plantings made at 30 d intervals from early March to early September in the lower Rio Grande Valley of Texas in 1988 and 1989. Seed yield (2825 kg ha⁻¹) was similar for Vernal and Centennial (3) when plantings were made during May or early June at Stoneville. However, when planted 20 April the two cultivars differ appreciably in seed yield, early bloom date, plant height, and date mature (Table 1). In plantings made in the lower Rio Grande Valley of Texas (lat. approximately 26°) in early March and in April, Vernal yielded 3940 kg ha⁻¹ and Centennial 860 kg ha⁻¹. The average number of days to maturity for Vernal was 140. Cultivars of Group IX maturity flowered early, then became vegetative, and did not mature until late November, and produced little seed. In June or July plantings, optimum for Group IX cultivars, Vernal equaled 'Santa Rosa R' (7) in seed yield and was superior to 'Jupiter R' (5).

Vernal has a determinate growth type, plants have white flowers, grey pubescence, and pods are tan at maturity. Seeds are yellow with buff hila and average 136 mg. Vernal is resistant to bacterial pustule caused by Xanthomonas campestris pv glycines (Nakano) Dye and carries the gene Rps-1b for resistance to phytophthora rot caused by Phytophthora sojae Kauf. and Gerd. It is sensitive to the herbicide metribuzin. It is resistant to stem canker caused by Diaporthe phaseolorum (Cooke and Ellis) Sacc. f sp. meridionalis Morgan-Jones.

Seed is being increased in Mississippi and Texas. Breeder seed will be maintained by the Delta Branch, Mississippi Agricultural and Forestry Experiment Station. Seed of Vernal for research purposes will be available for at least 5 yr from Soybean Production Research Unit, P.O. Box 196, Stoneville, MS 38776.

References and Notes


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Registration of 'Meridian' Wheat

'MERIDIAN' WHEAT (Triticum aestivum L., Reg. no. CV-788, PI 557013) was released in 1992 jointly by the Idaho Agricultural Station and USDA, Agricultural Research Service. Meridian is a hard red winter (HRW) wheat developed for irrigated cereal production areas along the Snake River Plain of Idaho.

Meridian is a pureline selection from A75232W, a 1975 cross of A68231W-A-7-5-3 with A71111W-5-1. A68231W-A-7-5-3 was an Aberdeen winter wheat breeding line with the pedigree 'Cheyenne'/7*'Lee'/Transfer'/5/SM4/4/'Burt'/3/'Rex'/Rio/"Nebred'. The breeding line A71111W-5-1 is a sib of 'Neeley' HRW wheaat. A75232W-3 was an F₁ selection made in 1978 from an F₂ bulk population. A75232W-3 was later given the designation ID0357 and tested in the Tri-State (Idaho, Oregon, and Washington) HRW Wheat Nursery from 1987 to 1989. A head selection of a short plant was made from ID0357 in 1987 and designated A75232W-3-2. A74232W-3-2 was tested in advanced yield trials at Aberdeen, ID in 1986. In 1987, A75232W-3-2 was assigned the advanced line number ID0360 and entered into the Tri-State HRW Wheat Nursery. In 1988, ID0360 was entered into the Western Regional Nursery. ID0360 was reclassified for uniform heating date in the spring of 1988 and the derived uniform bulk reentered into the Tri-State HRW Wheat Nursery in 1989. In 1990, the reclassified ID0360 was grown in the Western Regional Nursery. Seed from 200 heads were grown in individual head rows in 1990. Three bulk composites of approximately 50 head rows each were grown in 1991 at Aberdeen. The bulk composites were designated as breeder's seed for Meridian.

Meridian is a semi-dwarf winter wheat most similar in appearance to Neeley. Meridian is 2 d earlier than Neeley and 1 d later than 'Nugaines'. Meridian is 8 cm shorter than Neeley and 15 cm taller than 'Ule'. Meridian has prostrate, dark green, juvenile vegetation. Meridian has dark green leaves at flowering without waxy bloom. Meridian's flag leaf is erect and...