REGISTRATION OF CROP CULTIVARS

REGISTRATION OF 'PENNYRILE' SOYBEAN

'PENNYRILE' soybean [Glycine max (L.) Merr.] (Reg. no. 212) (PI 515961) was developed by the Kentucky Agricultural Experiment Station. Pennyrile was released in 1987 because of its superiority in seed yield in both full season and double crop plantings compared with public cultivars of similar maturity.

Pennyrile originated as an F1 plant selection from the cross 'Williams' (1) 'Exess' (3). The cross was made and the F1 plants were grown at the Kentucky Agricultural Experiment Station in 1976 and 1977, respectively. The seeds were advanced from the F1 through the F5 generation by single-seed descent at the Iowa State University soybean breeding nursery at the University of Puerto Rico, Isabela Substation. The F6 plant selection was made in 1978 in Lexington, KY. The F6 derived line was evaluated for seed yield in Kentucky from 1979 through 1986, in the Uniform Soybean Tests-Northern states in 1982, and the Uniform Soybean Tests-Southern states (Group 2) from 1983 through 1985 under the designation KY79-0237.

Pennyrile is an indeterminate Maturity Group 4 cultivar


References and Notes


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REGISTRATION OF 'HERCULES' OAT

'Hercules' spring oat (Avena sativa L.) (Reg. no. 320, PI 503644) was developed cooperatively by USDA-ARS and The Pennsylvania Agricultural Experiment Station, and released in 1986. Hercules was developed from a 'Dal'/ 'Noble' cross using the bulk method of breeding. The initial selection was made from an F1 bulk population in 1976, and a single panicle reselection was made in the F2 in 1979. The resulting line, PA4098-13900, was grown in preliminary tests at one location in Pennsylvania during 1980 to 1981 and in replicated tests at two or more locations during 1982 to 1985. Hercules was released in the Uniform Midseason Oat Nursery during 1984-1985. Hercules is a mid-tall cultivar and the primary reason for release is superior lodging resistance compared to cultivars of similar height.

Juvenile plants of Hercules are erect. The leaves are glabrous with ligules present. Culms are midsized and glabrous except at the peduncle node, which is densely ciliate. The panicle is equilateral, midbroad, and midlong with ascending branches. The rachis is slightly flexuous. Many short hairs are present on the rachis branches. The flag leaf is erect and frequently curls over the top of the culm resulting in upward orientation of the lower surface of the leaf tip. The lemma is short, yellow, and glabrous. Basal hairs are absent. The glumes are glabrous. Spikelet separation is by semisacrical. Floret separation is primarily by disarticulation, but a short segment of the rachilla sometimes is retained on the secondary seed. Secondary rachilla segments are mid-long and glabrous. Kernels are plump and nonflorescent under ultraviolet light except for occasional florescent variants. Awns are infrequent, but short, straight awns occur occasionally.

Hercules is yellow-seeded with maturity similar to 'Ogle'. In Pennsylvania tests, its average grain yield was similar to that of 'Porter' and 'Larry', 3.5% above Noble, and 12% below Ogle. Hercules was slightly taller than Ogle and averaged only 28% lodging compared to 78, 52, and 50% for Porter, Noble, and Ogle, respectively. Its test weight was 5.7% heavier than that of Ogle. In the Uniform Midseason Oat Nursery during the 2 yr, Hercules was 12% lower yielding than Ogle, but it lodged less than Ogle and ranked above that cultivar for test weight, grain percentage, groat-protein content, and groat-oil content. Hercules is resistant to currently important races of loose smut [caused by Ustilago avenae (Pers.) Rostr. and U. kolleri Wille], moderately resistant to barley yellow dwarf virus, but susceptible to prevalent races of Puccinia coronata Cda. f. sp. avenae Erks. and P. graminis Pers. f. sp. avenae Erks. and E. Henn.

Breeder seed of Hercules will be maintained by The Pennsylvania Agricultural Experiment Station, The Pennsylvania State University, University Park, PA 16802.

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varieties) in 1985 and 1986 and averaged 3402 kg ha⁻¹ compared to 3763 kg ha⁻¹ for Kline, Volbar, and 'Anson'. Test weight for Venus averaged 10% higher than Anson, Kline, and Volbar. Venus is a cultivar similar in maturity to Barsoy and 'Dawn'. Heading date of Venus is approximately 8 d earlier than Kline and Volbar. Venus had less winterkill in Virginia during the 1985-1986 season than Volbar, Kline, or Sussex.

Venus is a midtall (85-95 cm), six-rowed, rough awned winter barley. It has a semi-prostrate habit of winter growth. Spikes are dense, medium long, and nodding with small, plump, yellow kernels. Lateral kernels overlap from the base to the tip of the head. The lemma awns are long, rough, and spreading. Glume awns are rough and twice the length of the glume. The lemma is yellow at maturity, and has few hairs on the marginal nerves. Approximately 25% of the heads have a snaky neck at maturity. Distance from flag leaf to spike ranges from 10 to 20 cm.

Venus is resistant to BYDV, powdery mildew (incited by Erysiphe graminis DC. ex Merat f. sp. hordet Em. Marchal), and septoria glume blotch (incited by Leptosphaeria nodorum E. Müller). It is moderately resistant to scald (incited by Rhynchosporium secalis [Oud.] J.J. Davis), and leaf rust (incited by Puccinia hordet Oth). It is susceptible to spot blotch (incited by Cochliobolus sativus [Ito & Kurib.] Drehs. ex Dast), and loose smut (incited by Ustilago nuda [Jens.] Rostr).

Breeder seed will be maintained by the Agronomy Department, Georgia Experiment Station, Griffin, GA 30212. Foundation seed will be maintained by the Georgia Seed Development Commission, 2420 South Milledge Avenue, Athens, GA 30605.


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