REGISTRATION OF ‘SUSQUEHANNA’ WHEAT

‘SUSQUEHANNA’ (Reg. no. 750) (PI 474581) is a soft red winter wheat (Triticum aestivum L.) developed by the Maryland Agricultural Experiment Station, Department of Agronomy, and jointly released in 1988 by the Maryland Agricultural Experiment Station and the Cornell Agricultural Experiment Station. It was previously released as ‘MD 286’ wheat germplasm and registered with the Crop Science Society of America (GP no. 224) (1). Susquehanna has been released as a cultivar to provide a high yielding, stiff strawed, winter hardy, disease resistant soft red winter wheat with good milling and baking quality that is adapted to the colder regions of the Middle Atlantic and Northeast region of the USA.

Susquehanna originated from a complex series of crosses made by T.M. Starling at Virginia Polytechnic Institute and State University, Blacksburg, VA. The pedigree is VA 68-26-331/6×Thorne×5/199-4/5 Thorne/4×Taylor×2/Norin 10×Brevo/3/unknown parent. Cultivar development procedures are described in the earlier publication (1). This line was evaluated in preliminary tests for four years (1974–1978) at one location in Maryland, and in statewide trials from 1979 to 1982. In addition, it was regionally tested in the Uniform Southern Soft Red Winter Wheat Nursery (1981) and the Uniform Eastern Soft Red Winter Wheat Nursery (1982) throughout the southern and eastern USA. This line has been tested more recently in New York State (1985–1988), and has exhibited superior yield and agronomic performance in that region leading to the cultivar release decision.

Yield and other performance data for Susquehanna under Maryland conditions are summarized in the previous germplasm registration article (1). In New York tests from 1985 to 1988, Susquehanna yielded an average of 5235 kg ha⁻¹ over eight environments, which was similar to ‘Geneva’ and 3% greater than ‘Houser’ and ‘Tyler’. Among soft red winter wheat cultivars tested in New York, Susquehanna has been consistently a superior entry, one of only a few that appears to be well-adapted that far north in the eastern soft wheat region.

Susquehanna is similar in plant height to Geneva and Houser, and about 50 mm taller than Tyler. It is characterized by excellent straw strength with superior lodging resistance. The spike is apically awnleted and medium-long. Glumes are white to cream at maturity. Kernels are midsize, soft, and ovate. Spike emergence is midseason, equivalent to Tyler, about 2 d later than Geneva, and 1 d earlier than Houser. Susquehanna has excellent winter hardiness in the region. Test weight has averaged 746 g L⁻¹, similar to that for Geneva and Tyler, and 36 g L⁻¹ greater than Houser. Susquehanna has good milling and baking quality characteristics, and above average but acceptable flour protein for a soft wheat. Susquehanna is resistant to the races of powdery mildew (incited by Erysiphe graminis DC. f. sp. tritici em. Marchal) present in Maryland and New York. It also possesses field resistance to leaf rust (incited by Puccinia recondita Rob. ex Desm. f. sp. tritici) races in the region. Breeder seed of Susquehanna will be maintained by the Maryland Agricultural Experiment Station, Department of Agronomy, University of Maryland, College Park, MD 20742; and by the New York Seed Improvement Cooperative, 249 Emerson Hall, Cornell University, Ithaca, NY 14853.

Authorized seed classes will be breeder, foundation, and certified. The releasing stations will not apply for variety protection under the Plant Variety Protection Act.

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References and Notes

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REGISTRATION OF FIVE COTTON GERMPLASM LINES WITH RESISTANCE TO BOLLWORM, TOBACCO BUDWORM, AND BOLL WEEVIL

Five noncommercial germplasm lines of cotton, Gossypium hirsutum L., of diverse ancestry with resistance to bollworm, Heliothis zea (Boddie), tobacco budworm, H. virescens (Fabricius), and boll weevil, Anthonomus grandis (Boheman), were released by USDA-ARS and the South Carolina Agricultural Experiment Station in 1988. These germplasm lines should be useful in cotton improvement programs, particularly if effective insecticides are lost to production or if insects develop resistance to the chemicals.

PD 0648 (Reg. no. GP-394, PI 533629) was developed from the cross PD 695×‘Deltapine 7146N’. PD 695 is a frego bract germplasm line with resistance to Heliothis spp. and boll weevil (1). Deltapine 7146N is a nectariless cultivar, developed by Delta and Pine Land Co., with resistance to tarnished plant bug, Lygus lineolaris (Palisot de Beauvois). PD 0683 (Reg. no. GP-395, PI 533630) was developed from the cross PD 695×PD 869. These frego bract germplasm lines possess resistance to Heliothis spp. and boll weevil (1,2). PD 869 is later maturing than PD 695 and is not as prone to cut-out during hot, dry weather.

PD 0723 (Reg. no. GP-396, PI 533631) was developed from the cross PD 695×5-718. The frego bract line 5-718, which may have resistance to Heliothis spp. and boll weevil, was developed by J.B. Weaver at the Georgia Agricultural Experiment Station.

PD 0878 (Reg. no. GP-397, PI 533632) was developed from the cross TX-ORS-75C×Deltapine 7146N, TX-ORS-75C is a very early maturing, frego bract, okra, and smooth-leaf germplasm line developed by L.S. Bird at the Texas Agricultural Experiment Station.

PD 0948 (Reg. no. GP-398, PI 533633) was developed from the cross TX-ORS-75C×PD 875. PD 875 is an early maturing, normal-bract germplasm line with resistance to boll weevil and Heliothis spp. (1).

When insects were controlled in four replicated tests from 1981 through 1984, these five germplasm lines produced lint.