REGISTRATION OF 'SCOTTY' WHEAT

'SCOTTY' (Reg. no. 747) (PI 469294) soft red winter wheat (Triticum aestivum L.) was developed at the Illinois Agricultural Experiment Station in cooperation with USDA-ARS and released in 1982. Scotty originated from the cross of a Virginia line designated Va. 66-54-10 with 'Arthur'. The parentage of Va. 66-54-10 is 'Vahart'/'Frondosa'/'Vahart'/CI12658/3/'Asosan'/4/'Norin 10'/Brevar'/5/CI13351. Scotty was developed using a combination of the bulk and pedigree method with the F₁ and F₂ generations grown in bulk without selection and with individual plant selection in the F₃ and F₄. Original breeder seed originated from the increase of a single-plant row selected in the F₅. Scotty has been tested in performance and disease nurseries at Urbana, IL since 1977, in drill plots at several locations in Illinois since 1978, and in the Uniform Eastern Soft Red Winter Wheat Nursery from 1979 to 1982. Soft wheat quality evaluations of Scotty were made by the USDA Soft Wheat Quality Laboratory at Wooster, OH. Scotty was designated IL 72-2218-1 during development and testing prior to release.

Scotty is an awnleted, white-glumed cultivar with moderately stiff straw and medium maturity. Compared to Arthur in Illinois tests, Scotty has been 20% higher yielding, about 2% lower in test weight, less susceptible to lodging, and similar in winter hardiness. Kernel shape is very similar to that of Arthur with an average weight of 34 mg. Milling and baking characteristics of Scotty are good to excellent for soft red winter wheats.

The coleoptiles of Scotty are purple and the auricles often exhibit a purple color due to anthocyanin pigments. The spikes are lax, tapered, and yellow at maturity. Glumes are long and medium wide with obtuse beaks. Kernel shape is ovate, and the kernel brush is short and not collared and the kernel cheek is rounded.

Scotty is resistant to soil-borne mosaic virus, moderately susceptible to barley yellow dwarf virus and prevalent biotypes of the Hessian fly, Mayetiola destructor (Say). It has been resistant in Illinois to Erysiphe graminis DC f. sp. tritici E. Marchal and to Puccinia graminis Pers, f. sp. tritici but susceptible to P. graminis Pers, f. sp. tritici Eriks. and Henn.

The generation sequence of seed production is breeder, foundation, registered and certified. Scotty is protected under the Plant Variety Protection Act, Public Law 91-577, and Title V of the Federal Seed Act. Breeder seed is maintained by the Illinois Agricultural Experiment Station, Urbana, IL 61801.

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References and Notes


REGISTRATION OF CROP GERMPLASM

REGISTRATION OF KS206 ALFALFA GERMPLASM WITH HIGH IN VITRO REGENERATION OF PLANTS

KS206 alfalfa (Medicago sativa L.) germplasm, Reg. no. GP 220; PI 531504, was released by the USDA-ARS and the Kansas Agricultural Experiment Station in March 1989. KS206 was derived from KS10 alfalfa germplasm (1) by one cycle of recurrent phenotypic selection for plant regeneration from cultured petioles. KS10 alfalfa germplasm was derived from the cultivar Ladak by selection for resistance to the pea aphid, Acyrthosiphon pisum (Harris), spotted alfalfa aphid, Therioaphis maculata (Buckton), and bacterial wilt caused by Clavibacter michiganense subsp. insidiosum (McCulloch) Davis et al., 1984.

Forty-two percent of KS10 plants regenerated in a two-step culture system (2). Medium 7951 (3) containing 2 mg/L 2,4-dichlorophenoxyacetic acid and 0.5 mg/L kinetin solidified with agar was used for callus initiation. A hormone-free medium, SHAP, which is a modified Schenk and Hildebrandt (4) medium without hormone and with the addition of 50 μm proline and 30 μm alanine, was used for regeneration. Both media were adjusted to pH 5.9 to 6.0. Petioles (sections about 0.5 cm long) of the second or third leaves from the stem apex were used as explants for callus initiation. Using the same protocol, 71% of KS206 plants regenerated. This corroborates the results of Wan et al. (2) that in vitro regeneration of plants is under genetic control and highly heritable.

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