Registration of ‘Rodgers’ Oat

‘Rodgers’ winter oat (Avena sativa L.) (Reg. no. CV-341, PI 593020) was developed cooperatively by the North Carolina Agricultural Research Service (NCARS) and the USDA-ARS. It was released in 1995 through NCARS, because of its excellent yield potential combined with good overall agronomic performance. Rodgers was named for the late Dan Rodgers, whose untimely death in an automobile accident in 1985 cut short an excellent career in the plant breeding profession.

Rodgers was developed by the pedigree breeding method from the cross NK-Coker 80-33/NC 81-376. The pedigree of NK-Coker 80-33 is NK-Coker 69-26/'NK-Coker 70-16/'NK-Coker 716'. The pedigree of NC 81-376 is 'Brooks'/NK-Coker 72-24. The pedigree of Brooks is 'Carolee'/Fulgrain/4/Cimarron//'Hajira'/'Joanette'/3/'Atlantic'/'Clinton'*/2/'Santa Fe' (1). Panicles were selected from an F2 bulk plot grown at the Central Crops Research Station, Clayton, NC, in 1984. During the next four growing seasons, F2, F3-4, F4-5, and F5-6-derived lines underwent visual selection. Rodgers traces to a single F5-6 panicle row harvested in 1988 and given the designation NC 88-1818. It was entered in the Uniform Winter Oat Yield Nursery and the Uniform Oat Winter-hardiness Nursery in the 1992 and 1993 seasons and the North Carolina Official Variety Testing Program annually from 1992.

Rodgers has a prostrate to semiprostrate juvenile growth habit. It has medium-diameter stems and a drooping leaf carriage. Leaf margins are ciliate. Ligules are present. Panicle emergence is 7 d later and plant height is 5 cm taller than the cultivar FL501. Panicles are equilateral in shape, medium in size, and midbroad in width. Glume color is striped. Spikelet separation is by fracture; floret separation is by disarticulation. Awns are absent. Seed color is yellow and basal hairs are absent. Seed does not fluoresce under ultraviolet light. Rodgers is resistant to prevalent races of crown rust (caused by Puccinia coronata Corda) in North Carolina, and it has a moderate to high level of tolerance to barley yellow dwarf viruses. Rodgers has demonstrated good winter survival in the Piedmont and eastern regions of North Carolina, but its winter-hardiness is insufficient for locations with low temperatures more extreme than those in North Carolina.

Rodgers was evaluated in 17 year-location environments in the North Carolina Official Variety Testing Program during 1992 to 1995. Its mean grain yield was 4.26 Mg ha⁻¹, compared with 3.66 Mg ha⁻¹ and 3.48 Mg ha⁻¹ for the cultivars SS76-30 and Brooks, respectively. Test weights of all three cultivars were similar. Plant height of Rodgers was 7 cm shorter than SS76-30. Rodgers was more lodging-resistant than Brooks and SS76-30.

Classes of seed of Rodgers will be limited to breeder, foundation, and certified. Application for U.S. plant variety protection with the Title V option will be made for this cultivar. Breeder seed of Rodgers will be maintained by the North Carolina Agricultural Research Service. Foundation seed will be maintained by the N.C. Foundation Seed Producers, Inc., Zebulon, NC. Certified seed will be produced by seed growers licensed by the N.C. Foundation Seed Producers, Inc., Zebulon, NC. Foundation seed of Rodgers will be available for research purposes. Breeder seed of Rodgers will be available for research purposes. Appropriateness recognition should be documented if Rodgers is used for developing a new breeding line or cultivar.

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Registration of ‘TifBlair’ Centipedegrass

‘TifBlair’ centipedegrass [Eremochloa ophiuroides (Munro) Hack. (Reg. no. CV-184, PI 594912)] was cooperatively released by the USDA-ARS and the University of Georgia Coastal Plain Experiment Station in April 1995.

Common centipedegrass seed was recurrently irradiated with 120 Gy (12 kilorads) cobalt-60 gamma-radiations beginning in 1977. In each generation, plants were spaced on 0.3-m centers in isolation and allowed to mature. Seeds were bulk harvested from all plants in the F2 generation for the next generation. A total of 4500 plants cycle of irradiation were space-planted on 0.3-m spaced plots from May 1980 at Blairsville, GA, on a Congaree clay loam soil (clayey, kaolinitic, thermic Typic Udifluvents) and became well established. No winter-kill was observed from winter, probably because the plot was not mowed. It was mowed monthly at a 5-cm height. The 1982 winter had a minimum temperature of -23°C, approximately 30% of the plants survived. Another 2300 plants from the irradiation were planted in May 1983, adjacent to the 1980 planting at Blairsville. TifBlair originated from bulk-harvested seeds approximately 2000 plants from the 1980-1981 season that survived a low of -28°C during the 1983-1984 winter.

TifBlair has turf quality, color, and greenness similar to common centipedegrass under favorable conditions. TifBlair grew more rapidly, showed better turf quality than common centipedegrass. On a sandy clay loam soil (clayey, kaolinitic, thermic Typic Udifluvents) that had an artificially reduced pH of 4.2, growth was reduced 5% for TifBlair on a soil with pH = 4.2, while growth was reduced 35% for common centipedegrass on the same soils. TifBlair produces more stolons and have more leaves than common centipedegrass. TifBlair provides the first seed-propagated commercial cultivar with a known pedigree. The availability of a seed-propagated, registered cultivar will enhance the use of this turfgrass species across the south.

Breeder seed of TifBlair will be maintained by the author. One generation of foundation seed can be produced from breeder seed and two generations of certified seed increased from foundation seed. It is proposed that TifBlair is released under an exclusive or limited arrangement of variety protection (Certificate no. 9600255) has been granted for TifBlair. Seed of TifBlair will be deposited in the USDA-ARS Germplasm System, where it will be available for research purposes, including development and commercial cultivars. Appropriate recognition should be documented if TifBlair contributes to the development of a new breeding line or cultivar.

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References and Notes