United States Plant Variety Protection Certificate no. 8200181 has been issued for Midnight Kentucky bluegrass.

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References and Notes
1. President and research director, Pure-Seed Testing, Inc., P. O. Box 449, Hubbard, OR 97032; president, Turf-Seed, Inc., P. O. Box 250, Hubbard, OR; associate research scientist, Soils and Crops Dep.; and professor, Soils and Crops Dep., New Jersey Agric. Exp. Stat. Publication no. D-15166-1-84, New Jersey Agric. Exp. Sta., Cook College, Rutgers Univ., New Brunswick, NJ 08903. Some of this work was performed as part of NJAES Project no. 15166, supported by New Jersey Agric. Exp. Stat. funds, other grants, and gifts. Additional support was received from the United States Golf Assoc. Green Section Res. and Educ. Fund, Inc. Registration by the Crop Sci. Soc. of Am. Accepted 12 Mar. 1984.

REGISTRATION OF CROP CULTIVARS

'GATOR' perennial ryegrass (Lolium perenne L.) (Reg no. 90) was developed and released by International Seeds, Inc. of Halsey, Oregon, using germplasm obtained from the New Jersey Agricultural Experiment Station. Gator is an advanced generation synthetic cultivar selected from the progenies of 56 clones. Eighteen plants selected from 'Loretta' perennial ryegrass were used as female parents of the 56 clones used in the development of Gator. Selection was based on seedling resistance to crown rust (caused by Puccinia coronata Corda) and attractive appearance in spaced-plant nurseries. The pollen parents of the clones used in the development of Gator were selected from four seedling composites designated H74-412, H75-969, H75-1076, and AW. Plants collected from old turfs in Maryland, New Jersey, New York, and Pennsylvania were the original source of the germplasm used in the development of these breeding composites. Two cycles of recurrent restricted phenotypic selection for disease resistance, stress tolerance, attractive appearance, mowing quality, and turf performance were used in the development of the four breeding composites. The selection of the 56 parental clones of Gator involved the screening of over 30,000 seedlings for crown rust resistance, the evaluation of over 10,000 clones in spaced-plant nurseries, and the study of 648 single plant progenies in seeded turf trials. Progenies of the 56 parental clones of Gator were subjected to interplant competition, disease, and environmental stress in closely mowed turf plots. A total of 6100 tillers were selected from these turf plots and transferred to an isolated, spaced-plant nursery near Halsey, OR., for production of breeder seed. This nursery was also carefully rogued to remove prior to anthesis. Bulked seed harvested from the leaves, attractive appearance, and uniform maturity. Nearly 50% of the plants failed to meet these standards and were removed prior to anthesis. Bulked seed harvested from the Adelphia nursery was subsequently used to establish a spaced-plant nursery near Halsey, Oreg., for production of breeder seed. This nursery was also carefully rogued to improve uniformity, disease resistance, appearance, and seed yield potential. R-39A was the experimental designation of Gator. The first certified seed was produced in western Oregon in 1983.

Gator is a leafy, persistent, turf-type perennial ryegrass capable of producing an attractive, dense, moderately low-growing turf with a bright, medium dark green color. Gator establishes readily. It has rapid germination, excellent seedling vigor, and the ability to grow on many different soils. It has excellent wear tolerance when growing conditions are favorable. It has shown good winter hardiness and improved summer performance in New Jersey turf trials. Gator performs well under different light regimes ranging from full sun to moderate shade. Mowing qualities are superior to most ryegrasses currently available. Gator has shown good resistance to the large brown patch disease incited by Rhizoctonia solani Kuhn, a winter leaf spot disease caused by Drechslera spp., and most races of crown rust. This cultivar is recommended for use on home lawns; parks; athletic fields; industrial sites; school grounds; and golf tees, fairways, and cart paths in regions where turf-type ryegrasses are well adapted. It is often mixed with a blend of adapted Kentucky bluegrasses (Poa pratensis L.) for these uses. Gator is also recommended for the winter overseeding of dormant warm season turfs. It has medium maturity for seed production and a high seed yield potential.

Breeder seed is produced by International Seeds, Inc. Propagation of seed is limited to two generations of increase from breeder seed, one generation each of foundation and certified.

Application (no. 8300179) has been made for United States Plant Variety Protection.

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References and Notes
1. Professor, Soils and Crops Dep., New Jersey Agric. Exp. Stat.; research director, International Seeds, Inc., P. O. Box 168, Halsey, OR 97348; and research director, Pickseed West, Inc., P. O. Box 888, Tangent, OR 97398 (former research director, International Seeds, Inc.), Publication no. D-15166-4-83, New Jersey Agric. Exp. Stat., Cook College, Rutgers Univ., New Brunswick, NJ 08903. Some of this work was conducted as part of NJAES project no. 15166, supported by New Jersey Agric. Exp. Stat. funds, other grants and gifts. Additional support was received from the United States Golf Assoc. Green Section Res. and Educ. Fund, Inc. Registration by the Crop Sci. Soc. of Am. Accepted 12 Mar. 1984.

REGISTRATION OF MANHATTAN II PERENNIAL RYEGRASS

'MANHATTAN II' perennial ryegrass (Lolium perenne L.) (Reg. no. 91) was developed and released through the cooperative efforts of the New Jersey Agricultural Experiment Station, Pure-Seed Testing, Inc., and the Manhattan Ryegrass Growers Association. Manhattan II is an advanced generation synthetic cultivar selected from the progenies of 22 clones. Plants resistant to crown rust (caused by Puccinia coronata Corda F. sp. lolii Eriks.) were selected from PI 197,270 (Finland), 'Sprinter,' and germplasm collections obtained from old turfs in New Jersey and Maryland. These diverse sources of crown rust resistance were used in a modified backcrossing program with plants selected from 'Manhattan' as recurrent parents. In addition, two cycles of recurrent restricted phenotypic selection for stress tolerance, disease resistance, attractive appearance, and improved mowing qualities were followed by progeny testing in seeded turf trials to produce nine separate breeding populations. Selections from these nine breeding populations were subsequently used as recurrent parents in a modified backcrossing program to improve resistance to stem rust. Stem rust resistant plants selected from old turfs in Missouri, Washington, D. C., and Oregon were used as donor parents. Again, phenotypic selection for attractive appearance, stress tolerance, disease resistance, and mowing quality was followed by progeny testing in closely mowed turf plots in Oregon and New Jersey to enhance the effective-