Pinnacle is an advanced-generation synthetic cultivar selected from the maternal progenies of 14 clones. Seven additional clones were included as pollen sources. Attractive plants selected from ‘Manhattan II’, ‘Citation II’, ‘All*Star’, and ‘Jazz’ were hybridized with plants selected from germplasm composite A-80 to provide the parental germplasm of Pinnacle. Germplasm composite A-80 was selected from the best-performing progeny plots in a turf trial established in 1980 at Adelphia, NJ. Germplasm selected from old turfs in Maryland, Pennsylvania, New Jersey, and New York was subjected to varying cycles of recurrent phenotypic selection in spaced-plant nurseries, disease screening under greenhouse conditions, and progeny testing in closely mowed turf trials prior to establishment in the 1980 test. The 21 parental clones of Pinnacle were selected from a spaced-plant nursery of over 7,000 plants. Selection was based on an attractive, leafy, turf-type growth profile, uniform medium-early maturity, high seed yield, attractive fall color, reduced vertical growth rate, and relative freedom from disease. The prevalent diseases occurring during this phase of the selection process included net blotch caused by Drechslera dictyoides f.sp. perennae (Drechsler) Braverman and Graham, crown rust incited by Puccinia coronata Corda, and stem rust caused by P. graminis Pers.

Propagules of the 21 selected clones were subsequently established in a replicated, randomized, isolated crossing block for the production of Syn 1 breeder seed. Seed was harvested from the 14 clones that contained an endophytic fungus, Acremonium lolii Latch, Christiansen, and Samuels. This endophyte has been shown to enhance resistance to a number of harmful turfgrass insects, including billbugs (Sphenophorus spp.), and many lepidopterous species of sod webworms (1, 3 and 4) and appears to be transmitted only by the maternal parent. The first certified seed of Pinnacle was produced by Normarc, Inc. in western Oregon in 1988.

Pinnacle is an attractive, leafy, turf-type perennial ryegrass of medium-early maturity. It is capable of producing a persistent, moderately dense, low-growing, fine-textured turf with a bright, dark-green color. Pinnacle has improved mowing qualities and the ability to produce an attractive dark-green turf at lower N fertility levels than many currently available perennial ryegrass cultivars. It has shown good heat tolerance, good summer performance, and above-average winter hardness ratings in New Jersey tests. Pinnacle has good resistance to many, but not all, present races of crown rust but shows moderate susceptibility to races of stem rust currently prevalent in the seed production areas of western Oregon. It has improved resistance to the large brown patch disease caused by Rhizoctonia solani Kuhn, and the winter net blotch disease. Pinnacle has excellent seedling vigor, excellent tillering ability under close mowing, and the ability to establish rapidly and grow on a wide range of soils. It has excellent wear tolerance and recuperative ability, especially during favorable, cool growing conditions. It produces little or no objectionable thatch and shows moderate shade tolerance.

Pinnacle shows promise of excellent performance on lawns, institutional grounds, school play areas, parks, sports fields, and golf course tees, fairways, and cart paths in regions where perennial ryegrasses are well adapted for turf usage. It is often mixed with a blend of adapted Kentucky bluegrasses (Poa pratensis L.) for such uses. Pinnacle is also recommended for the fall and winter overseeding of dormant warm-season turfs throughout the southern USA.

When seed lots of Pinnacle containing high levels of the Acremonium endophyte are desired, the seed should be either freshly harvested or maintained in cold, dry storage. These precautions are needed to ensure the viability and effectiveness of the endophyte where this is desired for enhanced insect resistance and improved turf performance. However, seed containing high levels of viable endophyte should not be used to establish fields for pasture or forage. Endophyte-containing feed may adversely affect animal health and performance under some conditions (2).

Breeder seed of Pinnacle will be produced and maintained by Pickseed West with cooperation of Normarc, Inc. and the New Jersey Agricultural Experiment Station. Seed classes will be limited to breeder, foundation, registered and certified. Application (no. 8800238) has been made for U.S. Plant Variety Protection.

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References and Notes
5. C.R. Funk, R.H. White and R.F. Bara, Soils and Crops Dep., New Jersey Agric. Exp. Sin., Cook College, Rutgers Univ., New Brunswick, NJ 08903; G.W. Pepin, Pickseed West, P.O. Box 888, Tangent, OR 97389; and Joe O. Jacob and Don J. Herb, Normarc, Inc., P.O. Box 238, Tangent, OR 97389. Publication no. D15166-4-89, New Jersey Agric. Exp. Sin. Some of this work was conducted as part of New Jersey Agric. Exp. project no. 15166, supported by New Jersey Agric. Exp. Sin. funds, other grants, and gifts. Additional support was received from the U.S. Golf Assoc.—Golf Course Superintendents Assoc. Res. Fund. Registration by CSSA. Accepted 31 Mar. 1989. *Corresponding author.

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REGISTRATION OF ‘MESÄ’ TALL FESCUE

‘Mesä’ tall fescue (Festuca arundinacea Schreb.) (Reg. no. 124; PI 531230) was developed and released in August 1987 by Jacklin Seed Co. of Post Falls, ID, and Jonathan Green and Sons, Inc. of Farmingdale, NJ. Germplasm developed at the New Jersey Agricultural Experiment Station was used in the development of this cultivar. Mesä is a synthetic cultivar selected from the progenies of eight clones. The parental germplasm of Mesä originated from plants collected from old turfs in Georgia, Idaho, New Jersey, and Pennsylvania, and from ‘Rebel’ tall fescue (1).

Selected clones were vegetatively propagated and evaluated in field trials receiving frequent, close mowing. Progenies of the best-performing clones were seeded in turf trials and maintained at a 2-cm mowing height. Clones showing the best general combining ability were subsequently intercrossed. A total of 6,030 seedlings from selected crosses were transferred to a second-cycle clonal evaluation trial at North Brunswick, NJ. An old Kentucky bluegrass trial had been killed with glyphosate to provide a uniform, well-stabilized test area on a south-facing slope. This nonirrigated test was frequently mowed at 5 cm.

During the third spring following establishment, eight clones were selected. Selection was based on attractive appearance, medium texture, medium density, soft leaves, free-