Turfgrass research review

by Dr. James B. Beard

Latest developments In new grasses

There are a number of new turfgrass varieties which have recently been released or will be released in the near future. The purpose of this article is to bring together a summarization of the origin, development, adaptation, characteristics, and management requirements of many of these newly developed turfgrass varieties. This information was obtained from the originating institution or company. Some of the varieties have not been widely tested throughout the United States. Therefore, it is suggested that the reader confer with his own state agriculture experiment station concerning the performance of a specific variety which he is interested in under the soil and environmental conditions of his area.

Name:

KINGSTOWN VELVENT BENTGRASS (*Agrostis canina* L.)

Development: Selection made at the University of Rhode Island in 1929 from a back cross of Piper velvet bentgrass. The variety was released in 1963 and seed was commercially available in 1964. It has been under evaluation in Rhode Island since the early 1930's. It was not tested elsewhere until smut free seed was obtained in 1964. It is currently in test at sites in northern United States and Europe.

Adaptation: Kingstown is adapted to New England, northern United States, Canada and northern Europe. It has excellent winter hardiness and very good shade tolerance, especially when associated with wet soil conditions. The drought tolerance of Kingstown is good, being comparable to most bents. It is not adapted to areas having high summer temperatures.

Characteristics: Kingstown has a semi-brilliant, dark green color and an erect growth habit with profuse tillering. The density exceeds that of any creeping or colonial bentgrass. It is finer textured than either the colonial or creeping bentgrasses. The establishment rate of Kingstown is slightly slower than Penncross and the thatching tendency is high. It has good resistance to most diseases. The wear tolerance is moderate and the rapidity of recovery is slow. During the winter, Kingstown goes dormant and has a brown color.

Use and Management Requirements: Kingstown is the only pure selection of velvet bentgrass that is commercially available from seed. It is recommended for use on golf greens, hobby lawns and shade mixtures. The recommended management requirements for Kingstown include a cutting height of between 3/16 and 1/2 inch and a low fertility requirement somewhere between three and four pounds of nitrogen per 1,000 square feet per year as a maximum. Kingstown should be watered as other bentgrasses. Because of its fineness and great density it tends to thatch unless topdressed fairly frequently. The mowing qualities are excellent.

Name:

BOREAL RED FESCUE (*Festuca rubra* L.)

Development: Selection made by C.R. Elliott of Canadian Forage Seeds Project, Canada Department of Agriculture. The original selection was made from commercial red fescue seed fields in northern Alberta which had originally been seeded to the Olds variety some ten to fifteen years earlier. It is a polycross. The variety was released February 16, 1966, under Canadian license No. 1022 and the seed was commercially available in January of 1968.

Adaptation: Boreal is adapted to the northern climatic regions similar to that of most creeping red fescue varieties. Its winter hardiness is significantly superior to Pennlawn. Boreal tends to be darker green during the winter.

Characteristics: Boreal has a darker green color than Pennlawn and is also more rapid in establishment. Its growth habit and texture are similar to Pennlawn. It excells in seedling vigor and establishment and tends to have a stronger creeping root system than most other commercially available varieties, including Pennlawn. The mowing quality and disease resistance of Boreal is comparable to Pennlawn under the conditions of northern Alberta.

Use and Management Requirements: Boreal is a general purpose variety for turf use. The management requirements are similar to most common red fescue varieties.

Name:

KENBLUE KENTUCKY BLUEGRASS (*Poa pratensis* L.)

Development: Selection made by R.C. Buckner of the Kentucky Agricultural Experiment Station and the United States Department of Agriculture, ARS. Kenblue is a blend of seeds from farms located in central Kentucky. The fields from which the seed was selected were over eight and under fifteen years of age and had been established with Kentucky grown seeds for numerous generations.

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Adaptation: Kenblue is adapted to the northern, cool humid region of midwestern United States. Its cold, heat, drought and shade tolerance is similar to or slightly better than turfs seeded to common Kentucky bluegrass of Kentucky origin.

Characteristics: The establishment vigor, density, color, growth habit, texture and disease tolerance of Kenblue is similar to or slightly better than turfs seeded to common Kentucky bluegrass of Kentucky origin. At Lexington, Kentucky, Kenblue has shown some tolerance to sod webworm injury in comparison to Merion and Newport.

Use and Management Requirements: Kenblue is a general purpose variety for turf use. The use and management requirements of Kenblue are similar to that of turfs seeded to common Kentucky bluegrass of Kentucky origin.

Name:

PRATO KENTUCKY BLUEGRASS (*Poa pratensis* L.)

Development: Original selection was made by D.J. Van der Have of Holland. The variety was released in the United States in 1964 by Northrup, King and Co. and is now commercially available. The original selection was made from a collection of plants from eastern Holland. The initial testing of Prato began in the United States in 1956. It has been evaluated from the east coast to the west coast.

Adaptation: Prato is adapted to the bluegrass region of the United States and Canada. The winter hardiness and heat tolerance of Prato are satisfactory while the shade tolerance is average.

Characteristics: Prato has a bright, medium green color and a relatively fine leaf texture. Prato possesses prolific tillering with an above average number of leaves per tiller. Under turf conditions the leaves are medium narrow with the lower leaves tending to be prostrate and below the mowing height. The rhizome vigor is moderate with relatively short internodes. The establishment rate of Prato is intermediate between Merion and Park Kentucky bluegrass. The thatching tendency of Prato under high management is above average. Prato is tolerant to several species of *Helminthsporium* and resists "melting out" and thinning of turf. It possesses some tolerance to rust and mildew but is susceptible to stripe smut, although not as susceptible as Merion, Prato has above average wear tolerance, very satisfactory for high intensity use areas.

Use and Management Requirements: Prato is recommended for use in blends with other fine textured turfgrasses. Prato will perform well under both short and high mowing heights. It requires an average fertility level. The water requirements are also average. Mowing quality is satisfactory.

Name:

ARCTARED RED FESCUE (*Festuca rubra* L.)

Development: Selection made by H.J. Hodgson, J.G. Dickson, R.L. Taylor, L.G. Klebasadel, and A.C. Wilton of the Alaska Agricultural Experiment Station. The original selection was from a single plant collection made in Matanuska Valley near Palmer, Alaska in 1957. The variety was released February 1, 1966, and a limited quantity of seed will be available in 1969. The variety has been under evaluation for turf use the past ten years at Matanuska Valley, and five years at Tanana Valley, College, Alaska.

Adaptation: Arctared is well adapted to Alaska but only limited information is available for other areas. The outstanding characteristic of Arctared is its superior winter hardiness in comparison to other commercial varieties tested including Olds and Pennlawn.

Characteristics: Arctared possesses very rapid germination and establishment. It produces a dense medium texture turf with a medium green color which is somewhat lighter than Duraturf. It begins growth earlier in the spring than any variety tested. No diseases have been observed on the variety at Palmer, Alaska.

Use and Management Requirements: Arctared is adapted to a wide range of different turf uses in Alaska. □