



Turfgrass research review

by Dr. James B. Beard

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.

There is a trend toward developing individual turfgrass varieties for a particular environment or soil condition of a specific region. Thus, a particular variety may not have wide adaptation and use. This is an important concern to an individual considering the use of a new variety.

Name:
RUBY RED FESCUE
(*Festuca rubra* L.)

Development: Selection made by D.J. Van der Have of Holland. The variety was released in the United States in 1967 by Northrup, King and Co. of Minneapolis, Minnesota and seed was commercially available in 1968. The original selection was made from the sandy areas of eastern and southern Holland. Ruby was tested for eight years in Europe and the United States.

Adaptation: Ruby is adapted to areas in the United States and Canada where bluegrass is adapted for turfgrass purposes. The winter

hardiness of Ruby is satisfactory throughout the northern part of the United States. Heat tolerance evaluations are not yet complete, however, it appears to be at least equal to the other available varieties. The drought tolerance is very good and the shade tolerance is very satisfactory, being equal to the other available red fescue varieties.

Characteristics: Ruby is a bright, medium green with a semi-upright growth habit. It possesses a moderately rapid growth rate and a moderate density. In general, Ruby produces a more open sod than can be obtained with any other presently available red fescue variety. It has a fine leaf texture similar to Rainier. The establishment rate is very rapid and the rhizome vigor is superior to the other varieties presently available. The thatching tendency of Ruby is not as great as varieties like Pennlawn. Though Ruby has not been completely evaluated for disease resistance, it appears to be more resistant than Pennlawn, Illahee, and other available varieties. The wear tolerance is equal to the other varieties.

Use and Management Requirements: Ruby is preferred for use in general purpose turfgrass mixtures where bluegrass is the dominant species. Ruby produces a more open sod which allows for a balance of bluegrass and red fescue. The chances of clumps of red fescue becoming unsightly are not likely where Ruby is used. Ruby is not recommended for seeding by itself because it does produce a more open sod. Ruby maintains satisfactory density when mowed at 3/4 of an inch or higher. It tolerates the high fertility levels used for high quality Kentucky bluegrasses and will also perform well under moderate fertility levels as well as under both limiting and optimum

moisture conditions. The variety is particularly outstanding under high fertility management regimes.

Name:
NUGGET KENTUCKY BLUEGRASS
(*Poa pratensis* L.)

Development: Selection made by H.J. Hodgson, J.G. Dickson, R.L. Taylor, L.G. Klebesadel, and A.C. Wilton of the Alaska Agricultural Experiment Station. The original selection was from a single plant collection made at Hope, Alaska in 1957. The variety was released February 1, 1966, and a limited quantity of seed will be commercially available in 1968. The variety has been under evaluation for turf use the past ten years at Matanuska Valley, Palmer, Alaska and five years at Tanana Valley, College, Alaska.

Adaptation: Nugget is well adapted to Alaska but only limited information is available for other areas. It possesses outstanding winter hardiness which far surpasses any commercial strain yet tested in Alaska.

Characteristics: Nugget germinates rapidly with the early establishment vigor somewhat below Park, equal to Windsor and greater than Merion or Newport. It produces a low growing, dense, medium textured, dark green turf. The color is darker green than Merion and the texture is somewhat finer. It has been completely resistant to natural infestations to powdery mildew and very resistant to *Helminthosporium* spp. However, Nugget is as susceptible to snow mold as the other Kentucky bluegrass varieties. It is relatively low growing and has excellent mowing qualities. The growth rate is less rapid than Merion, Park or Newport and equal to Windsor.

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Use and Management Requirements: Nugget is adapted to a wide range of different turf uses in Alaska. It produces an ideal turf when cut at one inch and shows excellent tolerance to a one-half inch cut. A high fertility level is required for vigorous growth throughout the season.

Name:
WINTERGREEN RED FESCUE
(*Festuca rubra* L.)

Development: Selection made by F.C. Elliot of the Michigan Agricultural Experiment Station. This polycross was selected from a Netherlands plant introduction. The variety was released December of 1967 and will be commercially available in 1970. It has been under evaluation for turf use eight years at East Lansing, Michigan and six years at several out state locations in Michigan. Since 1964 it has been under test at nine other experiment stations throughout the north central region.

Adaptation: Wintergreen is well adapted to the Michigan climate and soil conditions. Since it has had only limited testing in other states at this time its potential range of adaptation is not known. The winter color of this variety has been superior to any of the red fescues evaluated at East Lansing, Michigan. The shade tolerance is similar to Pennlawn.

Characteristics: Wintergreen has an establishment vigor comparable to Pennlawn. It attains an upright, fine textured turf. Wintergreen has almost twice the density of Pennlawn as well as a darker green color. It has a moderate creeping habit with a thatching tendency similar to Pennlawn.

Use and Management Requirements: Wintergreen is well adapted to cool summer climates and droughty, coarse textured soils. An outstanding characteristic of Wintergreen is the capability to produce a superior quality turf under extremely low management conditions including nitrogen fertility and water. Its mowing quality is excellent.

Name:
TIFDWARF BERMUDAGRASS
(*Cynodon* spp.)

Development: Selection made by G.W. Burton of the Georgia Coastal Plain Experiment Station and the United States Department of Agriculture. It was released in April of 1965 through the Georgia Crop Improvement Association. The available information indicates that Tifdwarf is a vegetative mutant that occurred in Tifgreen bermudagrass at Tifton, Georgia.

Adaptation: Tifdwarf appears to be widely adapted to the warm humid regions of the United States. It is slightly more winterhardy than Tifgreen.

Characteristics: Tifdwarf like most dwarfs has smaller and shorter leaves, stems, internodes and seed heads. It produces a higher turfgrass density than Tifgreen and possesses softer leaves and seed heads which contribute to superior putting quality. It tends to be somewhat slower in establishment than

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Tifgreen. Tifdwarf has a darker green color than Tifgreen and tends to have a somewhat purplish basic plant color which aids in maintaining a dark green color in the summer time but also results in a very noticeable purplish cast during the low temperature periods of the fall. The disease resistance of Tifdwarf appears to be equal to Tifgreen. Both are quite susceptible to sod webworm.

Use and Management Requirements: Tifdwarf is particularly adapted to use on golf putting greens due to its dwarf like characteristics, which results in it being quite tolerant to close mowing. Tifdwarf is much more tolerant to cutting heights of 3/16 of an inch than is Tifgreen. Its growth rate appears significantly less than Tifgreen which means that the mowing frequency for Tifdwarf would not be as critical as for Tifgreen. This slower growth rate also results in a reduced topdressing requirement in comparison to Tifgreen.

Name:

JAMESTOWN RED FESCUE
(*Festuca rubra* Var. *Commutata* Arud.)

Development: Selection made by personnel of the Department of Agronomy, University of Rhode Island, from an old abandoned golf green on the Beavertail Golf and Country Club, Jamestown, Rhode Island. The variety was released May 11, 1967, and a small quantity of seed will be available in the fall of 1968. It has been under evaluation since 1960 at the University of Rhode Island; since 1962 at Rutgers University and the USDA, Beltsville Station; and since 1964 at many states throughout the northeast as well as several European countries.

Adaptation: Jamestown is adapted to the northern, cool humid regions in the usual areas of red fescue adaptation. It possesses excellent heat, cold and drought tolerance as well as shade tolerance comparable to other fescues.

Characteristics: Jamestown has a

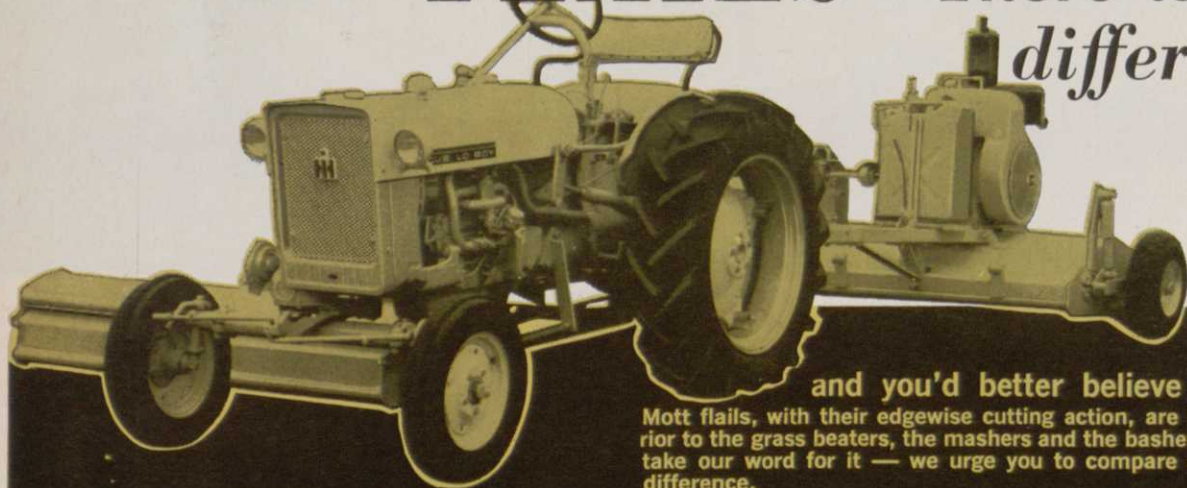
rich, green color comparable to Merion Kentucky bluegrass. It has a fine texture and an erect growth habit. The density is excellent, being superior to all other red fescue varieties tested at Rhode Island. The establishment rate is similar to Pennlawn. No obvious thatching problems have been observed to date. Disease resistance is average and the winter color is similar to Pennlawn. In general, Jamestown has held greater density in pure stands than any other fescue tested at Rhode Island.

Use and Management Requirements: Jamestown is recommended for general purpose uses in turfgrass areas comparable to that of other red fescues. Its fertility requirements are comparable to Pennlawn. Jamestown will tolerate lower cutting heights than any other red fescue tested at Rhode Island. It has given good performance at cutting heights, ranging from 1/4 to 1-1/2 inches. The mowing quality is excellent.

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