



UNIVERSITY of RHODE ISLAND

Turfgrass Program

The College of the Environment and Life Sciences

Golf Course Superintendents Factsheet Series

*Variety
Selection*

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MANY golf courses today are looking to cut costs and decrease environmental impacts by reducing inputs. It is possible to maintain quality while reducing inputs of water, fertilizer, and pesticides. However, choosing the right grass for the location, use, and planned input level becomes extremely important. The differences between genetically elite cultivars and less expensive common types become particularly apparent with reduced inputs. In this fact sheet I will be discussing the grasses available for use on golf courses in New England. Variety recommendations are based on performance in trials at the Skogley Turfgrass Research Center in Kingston, RI and on national NTEP data. We do not currently have any variety trials maintained under greens conditions at URI, so I will focus on grasses for fairways and roughs.

Kentucky bluegrass, perennial ryegrass, bentgrasses and chewings fescues are all suited to maintenance at fairway heights in New England. Kentucky bluegrass, perennial ryegrass, and the fine fescues are suited for use in the rough. Each of these grasses has advantages and disadvantages; the best choice will depend on the specific circumstances under which the grass is to be used.

Bentgrasses: We have creeping bentgrass, velvet bentgrass and colonial bentgrass varieties in our fairway trial at URI. There are a number of advantages to using bentgrasses on fairways. They have excellent tolerance to mowing at fairway heights, and reasonable traffic tolerance. Having the same species on greens, surrounds, fairways and tees can simplify management. The primary disadvantages to using creeping bentgrass on fairways are that it requires frequent irrigation, and it is very susceptible to anthracnose and dollar spot. Colonial bentgrass and velvet bentgrass need

significantly less fertilizer than creeping bentgrass, and are much less susceptible to dollar spot. However, colonial bentgrass has proven very susceptible to anthracnose in our trials. There were no within-species differences among the commercial varieties of colonial bentgrass and velvet bentgrass in our trials. Among the 28 creeping bentgrass entries, the variety Declaration from Lebanon Turf is noteworthy. It has some of the best resistance to dollar spot and brown patch, good resistance to foliar anthracnose, and consistently good overall quality.



Figure 1. Low input variety trials at the URI Agronomy Farm examining turfgrass quality under minimal nitrogen, irregular mowing frequency and no irrigation.

Kentucky Bluegrasses: As a group Kentucky bluegrasses are an excellent choice for high quality turf in full sun. Kentucky bluegrass differs from most of our grasses in that there is considerable variation between varieties. The compact types form a dense turf with slow vertical growth and horizontal leaves; many are well suited to mowing at fairway height. Top performers in URI trials include 'Moonshadow', 'Diva', 'Blackstone' and

'Hallmark'. The popular varieties 'Midnight', 'Midnight II', 'NuDestiny', and 'Blue Velvet' were top performers in the Northeast as a whole. These varieties have excellent dark green color. However, in trials at URI they have suffered from leaf rust, summer patch, and loss of turf cover over time. Other top performers at URI were 'Avalanche', 'Casablanca', 'Washington', 'Eagleton', 'Serene', and 'Royce'.

Perennial Ryegrass: Perennial ryegrass has enjoyed some popularity for use on fairways, as it is very fast to establish, often has fewer disease problems than creeping bentgrass and tolerates wear very well. However, it is not particularly tolerant of heat, cold, drought or low fertility. The URI perennial ryegrass trial is maintained as a fairway at a mowing height of 0.5". We have seen few differences among the trial entries, with the exception of the older check entries. We have seen general thinning of the turf in our trial after three years. Much of the recent breeding effort in perennial ryegrass has focused on resistance to gray leafspot and salt tolerance. Neither of these stresses are present in our trial. Superintendents in areas where gray leafspot occurs should use the newer gray leafspot resistant varieties for permanent perennial ryegrass plantings, as the susceptible varieties are severely damaged by the fungus.

Fescues: The fine fescues include chewings fescue, red fescue and hard fescue. There are many differences among these grasses but all will tolerate acidic soil and low nitrogen fertility. The URI fine fescue trial is maintained with only 2 lbs N/ 1000 ft² annually. Fine fescues are the best choices for shade. Chewings fescue is the only fescue which will tolerate mowing at fairway heights. It is a

dense, fine-bladed grass which will not creep into greens. Top performers in the URI trial include 'SR5130', 'Ambassador', 'Longfellow II', 'Zodiac', 'Compass' and '7 Seas'. All have maintained greater than 95% cover after four years in full sun with no insect or disease control. The only significant disease on chewings fescue at URI is red thread; 'Zodiac', 'SR5130', 'Ambassador' and '7 Seas' have all shown moderate resistance to red thread. Chewings fescue is the most traffic tolerant of the fine fescues; 'SR5130', 'Ambassador' and 'Zodiac' demonstrated particularly good performance under traffic in Wisconsin.

Red fescue and hard fescue do not tolerate mowing below 1.5", so golf course use is limited to the rough. Both are fine textured, similar to chewings fescue. Hard fescues consistently top the list for quality in the URI trial, primarily because of red thread resistance and good color under hot, dry conditions. Hard fescue is also well suited for unmowed areas. Red fescues are the most variable in the URI trials. Common types such as 'Boreal' perform very poorly in full sun, with less than 50% cover after four years. However, elite varieties do very well. Top performers include 'Musica', 'Epic', 'Edgewood', and 'Fortitude'. All of these varieties have maintained greater than 90% cover and can maintain acceptable quality even in hot, dry conditions. 'Fortitude' has shown good tolerance to red thread. Red fescues have good lateral spread for repair of divots and other damaged areas.



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