

Fine Fescue Management – Reduced Input Grasses

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Turfgrasses provide many environmental benefits including reducing carbon dioxide, cooling the environment, preventing wind and water erosion, controlling dust and cleaning water. The fine fescues are excellent choice for turf that provide environmental benefits with reduced inputs. From golf course fairways to unmown areas, the fine fescues require less water, lower nitrogen and reduced mowing compared to many other turf species. The fine fescues persist in soils that are droughty, acid and infertile. Although they perform well in the shade and with tree root competition, they can also be used in sites where other turfgrasses will not persist, they can also be used in the full sun. The hard and sheep fescues prefer well drained soils but the red fescues can tolerate a wider range of soil types.



The general term fine fescue refers to a group of species and subspecies that are all leafy, low-growing grasses with fine bristle-like leaves. The five primary types used for turf are in two general subtypes, the red fescue complex and the hard fescue complex. The red fescues include Chewings (*Festuca rubra* ssp. *commutata*), strong creeping red (*F. rubra* ssp. *rubra*) and slender creeping red (*F. rubra* ssp. *litoralis*) fescue. The hard fescues include hard (*F. brevipila*), sheep (*F. ovina*) and blue (*F. glauca*) fescue. Each of these subtypes has different strength and weaknesses. Seed Research of Oregon has been actively working on improvements to these species for many years and has developed cultivars with superior performance compared to what was available even a few years ago. These superior cultivars include SR 5130 and Silhouette Chewings Fescue, Shoreline slender creeping red fescue, SR 5250 strong creeping red fescue, SR 3150 and Scaldis II hard fescue and SR 3210 blue fescue.

USES AND ADAPTATION

Fine fescues can be used for many sites from very low maintenance sites that are unmown, such as roadsides, reclamation areas and even home lawns, to golf course fairways and greens. Traditionally they were used in areas with cooler summers or in the shade but recent breeding has emphasized heat tolerance as well as disease and insect resistance. Seed Research of Oregon has emphasized developing fine fescue

cultivars with high endophyte levels for insect resistance, stress tolerance and improved dollar spot resistance. They can all be blended with Kentucky bluegrass (*Poa pratensis*), perennial ryegrass (*Lolium perenne*), colonial bentgrass (browntop) (*Agrostis capillaris*) and other fine fescues.

The hard, blue and sheep fescues have superior drought tolerance and good wear tolerance but slow recovery if damaged. They do excellent in the dry shade under trees and perform better under very low maintenance with few inputs. Typically these

species have better resistance to red thread and net blotch but only the newest cultivars such as SR 3150 hard fescue have the improved summer patch resistance necessary for heavy wear sites. Once established the improved hard fescues have a high water use efficiency rating due to their leaf structure, deep rooting and high root to shoot ratio. These are all bunch type grasses that spread by tillering. High nitrogen can lead to excessive thatch development in these species.

The red fescues establish quicker than the hard fescues and have better growth during cool times of the year. They are well adapted to golf course fairways usage and the improved Chewings and slender creeping red fescues can be used for golf greens. The strong creeping red fescue have spreading rhizomes and are well adapted to blend with Kentucky bluegrass and perennial ryegrass, as well as other fine fescues. These species tend to recover better from wear. The red fescues also have a natural herbicide they release from their roots. They tend to be more salt tolerant, with the slender creeping red fescues among the most salt tolerant cool season turfgrasses. They can also be used as part of overseeding blends for dormant bermudagrass.

ESTABLISHMENT

The seeding rate for fine fescue should be 4 to 6 lbs. per 1000 sq. ft (20 to 29 grams per sq. m) for permanent turf. For golf roughs and reclamation sites the seeding rates can be reduced to allow individual plant development. Establishment is rapid and seedling vigor is high for the creeping red and Chewings fescues but slower for the hard, sheep and blue fescues. The creeping red fescues can repair damage with their rhizomes but the other species are all bunch-types and may require overseeding to repair injury.

MAINTENANCE

The fine fescues are low in cultural intensity. The low growth rate and dwarf growth habit can significantly reduce the amount of mowing required during the growing season. The new hard fescue can be mown down to 1/2 inch (12 mm) or mown only to remove seedheads once a year. The strong creeping red fescues can be mown down to 1/2 inch (12 mm) but also perform well at 2.5 inch (60 mm) height or as an unmown meadow. Chewings and slender creeping red fescues can be mown at greens height, fairways height, lawn height or unmown. The red fescues may require slightly more mowing than the hard fescues but still less than many other species,

Fertility should be kept low. The sheep and blue fescues can take no or minimal fertility. Nitrogen levels for the hard fescues should be 1 to 1.5 lbs. 1000 sq. feet per year (5 to 7.5 grams/sq. m), although they can persist with none. The red and Chewings fescues perform best with 1.5 to 2 lbs. of nitrogen per 1000 sq. feet per year. This is best split between fall and spring. In areas with longer growing season or more wear higher fertility will be required.

WATERING

Fine fescue can survive in more northern areas with limited or no water, although they may go dormant. Their water use rate is low and they can maintain acceptable turf quality at lower soil water potentials. Depending on the location some watering may be required to maintain growth. Overwatering can make them more disease susceptible and less drought tolerant.

Turf Guide to Improved Fine Fescue

	<i>Hard Fescue</i>	<i>Chewings Fescue</i>	<i>Sheep or Blue Fescue</i>	<i>Strong Creeping Red Fescue</i>	<i>Slender Creeping Red Fescue</i>
Growth Habit	bunch	bunch	bunch	rhizomatous	rhizomatous
Nitrogen Requirements	low	low to medium	very low	low to medium	low to medium
Mowing Frequency	low	low to medium	low	low to medium	low to medium
Drought Tolerance	excellent	good	excellent	good	excellent
Wear Tolerance	good	excellent	good	high	excellent
Close Mowing (1/2in.), (12mm)	fair	good	fair	good	good
Salt Tolerance	fair	good	fair	good	excellent
Thatch Formation	medium	medium to high	medium	low to medium	medium
Competitiveness	medium	high	medium	medium	medium
Establishment Rate	slow to medium	excellent	slow to medium	medium	medium