

# Grasses for Oregon Lawns

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There are four basic grasses used for turf in Oregon. These include colonial bentgrass, fine fescue, improved perennial ryegrass, and Kentucky bluegrass. Within each of these grasses exist individual types (varieties or cultivars) that are in some way different from the "average plant." This difference may be in color, turf density, disease resistance, or a combination of traits. The number of available varieties ranges from a few in the case of bentgrass to literally dozens in the case of Kentucky bluegrass. The following information outlines the basic characteristics and adaptability of each grass and lists commercially available varieties adapted in the Northwest.

## Colonial bentgrass *Agrostis tenuis*

Traditionally, colonial bentgrass has been the mainstay of turf west of the Cascades. It is rarely grown east of the Cascades since it does poorly

in the hot summers and suffers from winter diseases where snow occurs. It is also poorly adapted south of the Willamette Valley.

In areas where it is adapted, colonial bentgrass forms a dense, vigorous turf that readily tolerates mowing at three-fourths of an inch (2 cm). Colonial bentgrass performs well in the cool parts of the year and blends well with annual bluegrass, a weedy grass that commonly invades lawn turf. Drawbacks include poor wear tolerance, a tendency to form thatch, and a general susceptibility to diseases such as *Fusarium* patch and *Corticium* red thread.

Highland bentgrass is the most common of the Colonial bentgrass that are likely to be found commercially. Chances are when you buy bentgrass you will get Highland. Others commercially available include Astoria, Exeter, and Holfior.

Fine fescues *Festuca rubra*, *Festuca rubra* var. *commutata*, and *Festuca ovina* var. *duriciscula*

When discussing fescues for use in turf it is important to distinguish between the coarse types (*Festuca arundinacea*) and the fine types listed. Coarse fescues have broad blades and a clumpy, open-growth habit. They form an inferior turf and do not mix well with other grasses. Fine fescues (red, chewings, or hard) have very fine blades and form a dense, uniform turf.

Historically, the fine-leaf fescues have been planted in mixtures with either colonial bentgrass or Kentucky bluegrass. As part of a mixture they enhance turf quality through shade and drought tolerance. Fine fescues are well suited to eastern parts of the state and generally perform well west of the Cascades except in frequently or usually wet areas. They are adapted to mowing heights from  $\frac{3}{4}$  to  $1\frac{1}{2}$  inches (2 to 4 cm).

Fine fescues have a strong reputation as grasses that thrive under low maintenance. Where intensive maintenance is required, fine fescues are not competitive enough and fail to persist ex-

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cept in areas where other grasses are not adapted, such as shade. Red and chewings fescues are susceptible to *Corticium* red thread and various *Helminthosporium* diseases. Hard fescue appears to be resistant to *Corticium* red thread.

The varieties listed here are generally available commercially:

Banner, Cascade, Ensylva, Fortress, Highlight, Jamestown, Koket, Shadow, Scaldis, Tournament, and Waldina.

### Perennial ryegrass *Lolium Perenne*

Perennial ryegrasses are quite variable and range from the common forage types to those selected specifically for quality turf characteristics. Many unwary shoppers have purchased the "wrong" ryegrass and have learned the hard way that common types are coarse, rank growing, have poor mowing qualities, and produce thin turf. To help people avoid common types, suppliers often advertise turf-adapted ryegrasses as "improved" or "turf-type" ryes. While these may not be the best terms, they do help make an important distinction. For further insurance it is important to become familiar with specific variety or cultivar names.

The increasing popularity of turf-adapted perennial ryegrasses in the Northwest is due to several very desirable characteristics. Foremost is the ability to germinate and establish rapidly and compete with weedy grasses such as annual bluegrass. Ryegrass also forms the least thatch of the four commonly used turfgrasses and mixes well with fine fescue and Kentucky bluegrass. Improved ryegrasses tolerate mowing from  $\frac{3}{4}$  to  $1\frac{1}{2}$  inches (2 to 4 cm) and respond readily to nitrogen fertilization.

In general, ryegrasses do not provide acceptable turf under conditions of low fertility. Other drawbacks include susceptibility to several diseases including *Corticium* red thread, rust, *Helminthosporium siccans*, and occasionally *Fusarium* patch.

The following list contains only improved types of perennial ryegrasses suited for use in the Northwest: Blazer, Belle, Dasher, Derby, Diplomat, Fiesta, Manhattan, Omega, Regal, and Yorktown II. All of these are acceptable for use in the Willamette Valley and Coastal areas, while Manhattan and Pennfine may perform best east of the Cascades.

### Kentucky bluegrass *Poa pratensis*

Kentucky bluegrass has many desirable characteristics as a turf grass. Where adapted it forms a dense, erect-growing turf, tolerant of mowing from  $\frac{3}{4}$  to  $1\frac{1}{2}$  inches (2 to 4 cm). It has excellent wear tolerance, and rapid recovery from injury due to a strong rhizome system. It responds readily to nitrogen fertilization.

On the negative side, most varieties have very poor shade tolerance. A high nitrogen requirement means bluegrass is not well suited to low maintenance conditions. Most varieties are susceptible to rust and various *Helminthosporium* diseases. Annual bluegrass invasion is a problem since its light green color does not blend well with the dark green color of most improved Kentucky bluegrasses.

In most parts of the northern states, Kentucky bluegrass is the most widely planted turfgrass. It has long been planted in the Northwest, east of the Cascades, and is without question the single best turfgrass for that region. By contrast, attempts were rarely made to grow bluegrass west of the Cascades until the early 1960's, when the sod industry got started. Producers quickly learned that without Kentucky bluegrass the sod wouldn't hold together. As a result bluegrass became the dominant component of sod mixtures. Whether seeded or sodded, the early bluegrass varieties were not well adapted to the cool, rainy climate west of the Cascades. Most stands faded out in 3 to 5 years and were replaced by various weedy grasses such as annual bluegrass. This gave Kentucky bluegrass a bad reputation that has lingered.

Fortunately, in the past 15 years many improvements have been made in Kentucky bluegrass cultivars. Improved types have better persistence and turf quality than the old common varieties. Even with these improvements, however, long-lasting quality bluegrass turf in the Willamette Valley and Coastal areas requires intelligent maintenance. Newer cultivars may require four to six applications of nitrogen fertilizer per year to maintain vigor and density. This includes at least one application during winter months. Liming of soils to achieve a pH between 6 and 7 is necessary since bluegrass performs poorly at the low pH of native soils. Deep and infrequent watering is vital to successful Kentucky bluegrass turf since frequent watering speeds up invasion by weedy grasses such as Annual bluegrass and native bentgrasses.

Kentucky bluegrass culture in eastern Oregon and south of the Willamette Valley is much easier since soil conditions and climate are generally better suited to growth. The important

factor in these areas lies in providing adequate, but not excessive irrigation during summer months.

For best results in establishing new bluegrass turf throughout the state, two or more varieties of bluegrass should be blended together and included in a mixture with fine fescue, improved perennial ryegrass, or both. Since bluegrass is slow to germinate and establish and fescue and ryegrass are quick to establish, the percentage of fescue and ryegrass in the seedling mixture should generally be kept down around 25 percent or less. This will reduce competition and encourage more uniform establishment of the bluegrass. Where shade is a problem the proportion of fine fescue may be increased substantially.

The following list includes 14 of the newer bluegrass varieties that have rated well in varietal tests in the Pacific Northwest. All are commercially available: Adelphi, Baron, Ben-Sun, Birka, Bonnieblue, Fylking, Glade, Majestic, Merion, Sydsport, and Victa.

### Seed Mixtures

The previous sections have dealt with the common turfgrasses individually. In practice it is often easier to purchase grass seed in prepackaged mixtures. Scrutinize these mixtures carefully. Determine which grasses and which varieties are included in the mixture. In western Oregon avoid mixtures that don't state varieties. Look closely at the proportions of the component grasses. If you want a bluegrass lawn it should make up at least 50 percent of the mixture, and 75 percent if any ryegrass is included. Following are some mixtures you may see on the market, usually with the variety named.

- Kentucky bluegrass, fine fescue
- Kentucky bluegrass, fine fescue, colonial bentgrass
- Kentucky bluegrass, fine fescue, perennial ryegrass
- Colonial bentgrass, fine fescue

One problem with pre-packaged mixtures is that they may not contain the proportions or even the varieties that are most desirable for a given area or situation. In addition many mixtures contain annual ryegrass as a filler. Do not purchase these mixtures if you want a quality lawn since annual ryegrass produces a thin, rank-growing turf.

If you don't mind the extra work, you can purchase the individual grasses and assemble your own mixture. If you choose this approach the following guidelines may prove useful.

### General lawn turf, partial shade

#### • *Willamette Valley and Coastal Areas*

1. Colonial bentgrass 25%, fine fescue 75%  
3 lbs. mixture/1000 sq ft ( 15g/m<sup>2</sup> )
2. Perennial ryegrass 50%, fine fescue 50%  
5-6 lb mixture/1000 sq ft ( 25-30 g/m<sup>2</sup> )
3. Kentucky bluegrass 70%, fine fescue 30%  
4 lb mixture/1000 sq ft ( 20 g/m<sup>2</sup> )
4. Kentucky bluegrass 75%, perennial ryegrass 25%  
5 lb mixture/1000 sq ft ( 25 g/m<sup>2</sup> )

#### • *East of Cascades and south of the Willamette Valley*

1. Kentucky bluegrass 70%, fine fescue 30%  
4 lb mixture/1000 sq ft ( 20 g/m<sup>2</sup> )

### General lawn turf, heavy shade

#### • *Willamette Valley and Coastal Areas*

1. Colonial bentgrass 15%, fine fescue 85%  
4 lbs mixture/1000 sq ft ( 20 g/m<sup>2</sup> )
2. Perennial ryegrass 25%, fine fescue 75%  
5-6 lb mixture/1000 sq ft ( 25-30 g/m<sup>2</sup> )

#### • *East of Cascades and south of the Willamette Valley*

1. Kentucky bluegrass 30%, fine fescue 70%  
4 lb mixture/100 sq ft ( 20 g/m<sup>2</sup> )

### Lawn turf subject to heavy wear

#### • *Willamette Valley and Coastal Areas*

1. Perennial ryegrass 100%  
6 lbs/1000 sq ft ( 30 g/m<sup>2</sup> )
2. Perennial ryegrass 50%, Kentucky bluegrass 50%  
5 lb mixture/1000 sq ft ( 25 g/m<sup>2</sup> )

#### • *East of Cascades and south of the Willamette Valley*

1. Kentucky bluegrass 75%, Perennial ryegrass 25%  
5 lb mixture/1000 sq ft ( 25 g/m<sup>2</sup> )

When assembling grass seed mixtures insist on named varieties of the individual components. This is the first step to having a top-quality functional lawn.

### **What About Exotic Grasses and Grass Substitutes?**

Zoysiagrass is often advertised as the perfect lawngrass and it is an excellent grass wherever it is adapted. Unfortunately, it is not adapted in the Northwest. East of the Cascades the summers are warm enough but the cold winters result in a gradual loss of turf over a period of years. West of the Cascades the mild summers and rainy winters are not conducive to strong growth and zoysia cannot compete successfully.

Dichondra is a broadleaf perennial common in parts of California. Where adapted it provides a beautiful lawn. Unfortunately, this grass substitute has very poor cold tolerance and often fails to survive even the mild winters in western Oregon.

From time to time other miracle lawns are sure to appear on the market. Save your money and invest in good locally adapted turfgrasses. You'll be glad you did.