

Selecting the Right Grass for Rocky Mountain Lawns

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There are many factors, which SHOULD be considered when selecting a turfgrass species for planting in a new lawn, or for replanting an old one. First, consider what the turf will be used for: Is it being planted strictly for looks (visual beauty), or will children and/or pets play it on frequently? Will the turf receive a high level of maintenance, or will it receive only minimal amounts for water and fertilizer, and little or no pest control? What is the desired level of visual quality or playability? Is there a reliable supply of inexpensive water, or is irrigation expensive? Is the water salty? Is the soil in your yard sand or clay, and does it possess high salt levels or drain poorly? How hard will you be willing to work in establishing and maintaining a lawn? Is the lawn area sunny or shady? What is the elevation? Is it important for the lawn to be green for most of the year, or can you accept extended periods during which the lawn is dormant and brown? Is there a history of certain insect, mite, or disease problems on the site? Are you willing to use pesticides, or are they totally out of the question? Is sod readily available, or will the lawn have to be seeded?

Unfortunately, few people ask such questions before planting a new turf area. The most common assumption is that Kentucky bluegrass or tall fescue MUST be planted, and little consideration is given to alternative turfgrass species. The accompanying descriptions of the most widely used turfgrass species in the Rocky Mountain region provide information that can allow you to select a species best adapted for your specific turf situation.

Kentucky Bluegrass (*Poa pratensis*)

Kentucky bluegrass is the most widely used turfgrass in the US and the Rocky Mountain region. It has an undeservedly “bad reputation” in the minds of many people, largely because it is often over-watered and over-fertilized. Mismanagement of this grass leads many to believe that it is a “water hog” and that it requires frequent, heavy fertilizer and pesticide applications. On the contrary, properly managed bluegrass can do well with reasonable amounts of irrigation and fertilizer, and may only require infrequent applications of pesticides. In many cases Kentucky bluegrass is the most logical and intelligent choice for lawns and sports turfs in the Rocky Mountain region. From a quality perspective, it is the standard against which all other lawn grasses are compared, with its dark green color, fine leaves, excellent density, and soft resiliency. Its soft leaves are easily mowed with even the dullest of mowers (although this is not recommended!), yet it has good traffic tolerance. It is probably the most drought resistant of all lawn grasses, becoming healthily dormant (brown) when irrigation is withheld for even months on end – only to recover when regular irrigation returns. Bluegrass has excellent heat and cold tolerance. It recovers well from traffic damage because its underground stems (rhizomes) creep to fill in bare areas. It is a favorite of sod producers because of these rhizomes, which allow the sod pieces to hold together tightly during harvesting and subsequent planting in the lawn. It is important to remember that there is NO perfect

grass for all situations. Like ALL other turf grasses, Kentucky bluegrass does have some potential disadvantages. Perhaps most important of these is that it can, if care is not taken, form substantial amounts of thatch. Without regular core cultivation (aerification), a thick thatch layer can form which may require that the lawn be irrigated and fertilized more often than otherwise necessary – and disease, weed, and insect pests may also become more common. Because of the tendency for many bluegrass varieties to form shallow roots, it may require more frequent (but NOT frequent AND heavy!) irrigation – especially on shallow, compacted or otherwise poor-quality soils. It does not tolerate salty soil and is a poor performer in heavy shade. A relatively common and severe disease problem of Kentucky bluegrass is necrotic ring spot (NRS). The occurrence and severity of this disease can be reduced by good soil preparation prior to planting, coupled with proper irrigation, fertilization, mowing, and thatch management practices.

Turf-type tall fescue (*Festuca arundinacea*)

This grass, in recent years, has been touted as the “intelligent” replacement for Kentucky bluegrass. While it can claim certain advantages over Kentucky bluegrass; there are many instances where bluegrass remains the best turfgrass choice. Tall fescue will rarely form enough thatch for it to be a problem. It possesses good salt tolerance and is surprisingly shade tolerant. Unlike Kentucky bluegrass tall fescue does not invade gardens and other areas where grass invasion is unwelcome. This grass can be easily established by seeding or sodding, although it is important to understand that young (less than one-year old) stands of tall fescue will not fare well if subjected to heavy activity by people or pets. Where a turf will be immediately subject to traffic, tall fescue should be sodded for best results. Its ability to form very deep roots (where soil is sufficiently deep) accounts for its reputation for good drought resistance.

As good as it sounds, this is not a perfect grass. When it is worn down to bare soil by excessive traffic, it does not grow back and recuperate like Kentucky bluegrass has the ability to do; worn-out tall fescue must be over seeded. This grass grows more quickly than Kentucky bluegrass and will require more frequent spring mowing than a bluegrass lawn - especially if it is over-fertilized. And its tough leaves will shred and turn brown if mowers aren’t kept sharp and in good adjustment.

Lastly, it is important to address the issue of potential water savings – the most common reason for planting turf-type tall fescue. Turf-type tall fescue can form very deep roots (3-6 feet deep). When it can form deep roots AND good subsoil exists, this species will often require less frequent irrigation than Kentucky bluegrass. But it DOES use water, and in fact, tall fescues water use rate is higher than Kentucky bluegrass. On shallow soils where tall fescue cannot form deep roots, or when insufficient subsoil moisture exists, tall fescue may require as much (or more!) irrigation than Kentucky bluegrass growing in the same soil. Much of tall fescue’s reputation for drought resistance comes from its use in the eastern and central U, where soils are deeper (and better) and annual precipitation in the range of 30-50 inches per year constantly recharges

subsoil moisture. The potential to reduce irrigation by the planting of turf-type tall fescue in the Rocky Mountain region will vary greatly from site to site.

COMPARISON OF TALL FESCUE, BUFFALOGRASS, AND KENTUCKY BLUEGRASS FOR LAWN USE			
Characteristic	Tall Fescue	Buffalograss	Kentucky Blue Grass
NATIVE TO COLORADO?	No	Yes	No
LEAF TEXTURE	Somewhat coarser, soft	Very fine, soft	Fine, soft
COLOR	Light to dark green	Light green to blue green	Light to dark green
LENGTH OF GREEN SEASON	Long; March-December	Short; May- September	Long; March-December
MOWING REQUIREMENT	More frequent	Infrequent/None	Less frequent
MOWER LEAF SHREDDING	Common	Rare	Rare
FERTILIZER REQUIREMENT	Lower	Very low	Higher
IRON CHLOROSIS	Infrequent	Infrequent	More frequent
DISEASE PROBLEMS	Infrequent	Almost none	More Infrequent
INSECT PROBLEMS	Almost none	Almost none	Occasional
TRAFFIC TOLERANCE	Excellent	Fair	Good
RECUPERATION FROM TRAFFIC	Poor to fair	Poor to fair	Good to Excellent
THATCH FORMATION	Little (slow to form)/ none	Generally not a problem	Can be a problem
COMPACTION TOLERANCE	Fair	Very good	Good
HEAT/COLD TOLERANCE	Excellent	Excellent	Excellent
SHADE TOLERANCE	Good/Excellent	Poor to Fair	Fair
SALT TOLERANCE	Good	Fair	Fair
SOD AVAILABILITY/COST	Available/higher cost	Not common / highest cost	Very common/lower cost
IRRIGATION REQUIREMENT	Often lower than bluegrass, but can be the same or higher	Very low to none	Low to high, depending on soil and care.

Buffalograss (*Buchloe dactyloides*)

This is a native species, which has excellent heat, cold, and drought resistance. Once established, it forms a fairly dense sod (depending on variety) that requires infrequent mowing, irrigation and fertilization. It has no serious insect or disease problems. It can be planted as sod, from plugs, or from seed. Often touted as a “wonder grass”, buffalograss does have its drawbacks. First, its quality does not rival that of Kentucky bluegrass—even when well watered and fertilized. Also, it is a warm season grass, so it will become dormant in the fall with the first hard frost and will be straw-colored until mid-to late May in the spring. Because of this short summer growing season,

buffalograss is not adapted to use at higher elevations – probably not much higher than 6500 feet (unless it is a south or west exposure). Buffalograss should NOT be used where traffic will be heavy or sustained, as it will recuperate very slowly from injury. It is especially subject to wear during its dormant period. The two most important management problems associated with buffalograss include establishment and weed management. The most effective method of getting a good buffalograss turf quickly (and with the least amount of suffering!) is by using sod. Seeded and plugged buffalograss lawns are beset with weed problems that often take years to bring under control – and the lawn looks terrible during this time. Weeds invade Buffalograss much more easily than other lawn species. Most pre-emergent herbicides are safe for use on ESTABLISHED buffalo grass, but many post emergent herbicides (including 2, 4D) can discolor or kill buffalo grass. Weeds are frequent problems in newly seeded and plugged lawns, during the dormant season, and when buffalo grass is heavily fertilized and watered (in an attempt to make it “look” like bluegrass).

Perennial ryegrass (*Lolium perenne*)

Perennial ryegrass is among the most attractive of turf grasses. It possesses a fine, soft leaf and dark color. It establishes quickly from seed and forms a dense, tight turf if seeded at recommended seeding rates of 6-8 pounds per 1000 square feet. It is compatible in color and texture with Kentucky bluegrass, with which it is often mixed for lawns, sports turfs, and for golf turf use. This is a fairly traffic tolerant grass, but does not recuperate well from excessive traffic – when it is worn down to the point that bare soil is seen. Heavily worn areas must be reseeded, unless Kentucky bluegrass has been included in the mix to provide recuperative capabilities. On deeper soils this species can provide good drought resistance because of its deep root growth. However, it does lack the ability to go dormant during extended drought and will die if repeatedly drought stressed. A great advantage to this grass is that it forms little to no thatch – another reason that it is sometimes mixed with Kentucky bluegrass. Ryegrass will do well on moderately salty soil (6-10 mmhs/cm); it is more salt tolerant than bluegrass.

This is not a perfect turf grass, however. In the Rocky Mountain region it can suffer from the rigors of winter, thinning or dying from winter drying or where ice forms on poorly drained sites. It does not tolerate shade well and is more susceptible to a number of diseases – especially in shade. Luckily, it is resistant to necrotic ring spot, a common disease of Kentucky bluegrass lawns, so it is often used to overseed bluegrass lawns affected by NRS. It requires more nitrogen than the other turf grasses (4-6 pounds of N per 1000 square feet per year) and will tend to thin out where N levels are deficient over a number of years. Although the leaves appear soft, they are filled with tough fibers that can take on a brown, shredded appearance when the turf is mowed with a dull or poorly adjusted mower. During the time of seed head production in the spring (May-June) mowing quality of ryegrass can be poor, as well. Perennial ryegrass is rarely sold as pure sod, although it can be found as a component of many sod mixtures sold in our region.

Fine Fescues (*festuca spp.*)

This group of grasses includes the creeping red, hard, chewings, and sheep fescues. These are the finest textured of all turf grasses, with leaves that are almost needle-like in appearance- but soft to the touch. They form a dense turf when seeded at about 5 pounds per 1000 square feet. These species do best under conditions of low fertility; so will grow well on sandy, rocky, infertile soils. These grasses will do well at higher elevations, where days are cooler and soils tend to be less fertile. The fine fescues are excellent grasses for naturalizing and look very nice un-mowed, when they form attractive seed heads. Wildflowers can be mixed with naturalized fine fescue for added color.

On the downside, fine fescue lawns are generally not as attractive as bluegrass or ryegrass lawns. The leaves tend to lie down, sometimes resulting in a matted effect in the lawn. Fine fescues tend to form thatch very quickly, so thatch management is a must for lawns comprised of these species. During very warm weather the fine fescues will often go off color, becoming yellow or brown – a reason that they tend to do better at higher, cooler elevations and in shade.

Zoysiagrass (*Zoysia spp.*)

Zoysiagrass use is not recommended for Colorado, especially when it is introduced to the lawn via the use of plugs. Solid sodding may be successful, but zoysiagrass sod is not grown in Colorado. Some winter dieback can be expected with this species. Since it is a warm-season grass, it becomes straw-colored with the first fall frost and remains so until the following spring (May). It can be quite invasive (forms stolons and rhizomes) and nearly impossible to eradicate once established.

This species requires close mowing (1-1 ½ inches) and becomes quite thatchy if liberally fertilized. The cultivar ‘Meyer’ is the only commercially available cultivar with adequate cold tolerance that could perform well if sodded in the warmer areas of the state, including Pueblo and farther south.

Bermuda grass (*Cynodon spp.*)

There are naturalized biotypes of Bermuda grass throughout Colorado, even in the northernmost portions of the state. Some people have used these Bermuda grasses for home lawn purposes, often with great success. The most successful uses of Bermuda grass are seen in the south and southeastern parts of the state, as well in the Grand Junction area. Bermuda grass will perform in a fashion similar to buffalograss, since it is also a warm-season grass. It can be quite invasive and aggressive because of prolific stolon and rhizome production. It is quite difficult to eradicate once it becomes established in a lawn. When found in most lawn situations, it is considered to be a weed. The commercially available Bermuda grass cultivars would perform poorly in Colorado, although some experimental varieties show promise due to their improved cold hardiness.