



Buffalo Grass



Buffalo grass still grows wild on the western prairies of the U.S. and has become a true rags to riches lawn grass variety. Originating in the United States on the prairies of the Western Great Plains region, it was given the name "Buffalo Grass" because it grew under the feet of millions of American bison, often referred to as buffalo. This native range grass formed a thick mat that was also used by early settlers in sod home construction. Researchers have developed this native species into a beautiful lawn and sports grass. A warm season perennial grass, Buffalo grass is best known for its extreme drought and heat resistance, low water use, and low growth habit. Older varieties, like those to the right, will have the characteristic seed heads buffalo grass is known for. Newer turf varieties have less visible seeds and make a more attractive grass.



A special note to our Australian friends: The grass Australians refer to as Buffalograss is a completely different grass type than what is referenced on this page. St. Augustinegrass is called buffalo grass in Australia.

Description of Buffalo Grass

All buffalo grass varieties are sod-forming grasses that spread by the production of stolons. Stolons are above ground stems that grow horizontally along the ground and root at the nodes forming new plants.

Buffalo grasses are classified as dioecious- meaning they have male and female seed producing flowers that are located on separate plants. Male plants produce seed on tall stalks while female plants have seed that is located much lower near the crown. The female seed is encased in a bur-like covering that is difficult to remove. For this reason all buffalo grass seeded varieties come from the male plants and produces grass with visible seed stalks. Varieties developed from the female plants will generally produce grass without stalks. Female varieties form a more attractive turf and must be started vegetatively, either by sod or plugs. They cannot be started by seed.

Native grasses and the older cultivars are gray-green to blue-green in color. Their low density makes the older varieties a poor choice for lawns. Maximum growing height is about 8 to 12 inches and are used primarily as forage grass, ground cover for right of ways and hill sides, and as a prairie grass.

Benefits of Buffalo Grass Turf

- **Water Conservation:** Buffalo grass is well-known as a drought resistant grass species. Without water it will survive drought during the summer by going dormant and revive as soon as there is sufficient moisture. However, to it will need to be irrigated regularly for it to look its best all year.
- **Low Fertility Requirement:** In addition to its water conservation qualities, it has a low fertility requirement. Mature grass requires only 1 to 2 lbs of Nitrogen per 1000 sq.ft. each year. Compare this to tall fescue or Kentucky bluegrass that requires two to three times that much each year.
- **Low Growing:** Buffalo grass, depending on the variety, will have a reach a maximum height of 3 to 8 inches.
- **Few Insect Problems:** Chinch bug Very few insects are known to bother buffalo grass although chinch bug can be a problem for some varieties

Disadvantages of Buffalo Grass

Below are a few considerations when choosing buffalo grass:

- Somewhat limited adaptation range for a number of varieties.
- Short growing season, especially in the northern ranges.
- Older varieties are less dense with numerous seed heads that are unattractive to some people.

The main disadvantage is that its adaptation range is somewhat limited. The grass originated in the drier climate of the Great Plains states and will do best in areas with similar conditions. Therefore, its primary range will be in the western states starting in West Texas to California to the southern portions of Western Canadian Provinces. Moderate to high rainfall areas are generally not compatible with most varieties.



The growing season is somewhat short, especially for northern regions. It survives the cold by going dormant. Southern varieties that remain green longer into the fall are not as adapted for colder regions and will suffer winter damage. Varieties engineered to go dormant more quickly into the fall have better cold tolerance and survive winters better.

What may be a disadvantage to some is that turf density is still somewhat less than other popular warm season grasses. If you are looking for a turf grass with the thickness of Zoysia, you will be disappointed in Buffalo grass. However, the newer varieties have

improved considerably, but you should research the specific types that grow best in your area to see how they will meet your expectations.

Different varieties may have vastly different adaptation ranges, turf quality and appearance. Varieties that were developed to stay green farther into the fall are more likely to suffer damage in colder regions with shorter summers. The best advice is to be sure you know how a variety will perform where you live to save yourself troubles down the road. Check with your County Extension Office for help choosing the best grass for your location.

Buffalo Grass Varieties (also called "Cultivars")

"Prairie" Variety

This was the first Buffalo Grass released as a true "turf grass" variety. It forms a beautiful blue-green turf. Many of the qualities are found in other varieties as well. Below are more Prairie characteristics.

- Prairie is a female plant that must be purchased in buffalo grass sod or plugs.
- It is best suited for home lawns and recreational areas and has fine, short leaf blades.
- Forms a medium dense turf, is fast spreading with a stoloniferous growth habit and has good wear resistance.
- Prairie is best adapted for drier, heat prone areas from South Texas to the mid-Great Plains states. It may suffer winter damage in the coldest regions of the U.S.
- Due to a low growth habit this grass requires less mowing, less water, and less nutrients than most other types of lawn grasses.
- Does well in clay soils and prefers neutral to slightly alkaline pH.
- Grows best in full sun and does not do well in shade.

"609" Variety

The variety called 609 is an improved variety that makes a beautiful lawn. For a while it became the standard that all other varieties were compared to, but is not superior to the most recent turf varieties. It is used on golf courses to home lawns. It has many of the qualities of Prairie

- Established vegetatively by sod or plugs. Cannot be established by seed.
- Beautiful blue-green turf. However, it is a darker green than earlier cultivars.
- Forms a low growing, medium thick turf with fine blades.
- Low water consumption on mature turf.
- Adapted for southern regions from South Texas to the lower Great Plains states.
- Can suffer winter damage in the Northern Great Plains States.
- Does well in clay soil or soil with neutral or alkaline pH.

Fertilization

Buffalo grass is well-known for its low nitrogen requirement. Mature grass does well on 1 to 2 lbs nitrogen per year per 1000 sq. ft. However, newly seeded lawns or grass just starting from plugs will need slightly more until it becomes established. Lawns that are fertilized with 2 lbs will be thicker than those using only 1 lb of nitrogen.

Low maintenance areas can be fertilized with one pound of nitrogen at green up in the spring. For high maintenance sports turf or for the best lawn quality, you should apply a second application in mid summer. Use a slow release summer fertilizer.

Organics are great for buffalo grass because of its slow release nitrogen and generally low nutrient content making it more difficult to over fertilize. In addition, most organic forms of fertilizer have a low burn potential and do not have to be watered in after application.

Over-fertilizing buffalo grass is well-known to weaken the plant causing it to decline. It is the same with over-watering. It is best to avoid the common mistake of thinking more is better when applying fertilizer.

The newest varieties form a thick turf, but older varieties tend to be less dense, so you can expect a certain level of weed problems. It is important to try to keep the weeds down until the grass thickens and matures. Application of a preemergent to prevent undesirable lawn grass seed and weed seeds from germinating is advised when starting from plugs. **Do not** use a preemergent if you are starting your lawn

from seed or it can keep your buffalo grass seed from germinating. Post emergent broadleaf weed control can be used after the first cutting or as directed on the herbicide label.

Irrigation

Buffalo grass is a low water user that requires approximately .25 (1/4) to .5 (1/2) inch of water each week. Its water requirement is one third to one half that of other lawn grasses. In fact, over-watering will actually cause the grass to decline.

On the down side, its low water requirement can limit the adaptation range of this native species. Areas that receive more than 25 to 30 inches of rain each year may begin to see a decline in density. Some varieties may tolerate more water than others. Excessive moisture over a period of time may actually kill the grass. However, for these very reasons, buffalo grass is a perfect match for drier climates.

Starting a Buffalo Grass Lawn

Before starting a lawn from buffalo grass seed, it is best to prepare the soil first. Use this time to correct any soil or nutrient problems as stated on a soil test. Keep in mind that older varieties do not produce a thick turf that many homeowners are looking for. However, if you are restoring your property to native grasses, it may be fine.

If you want an exclusive buffalo grass lawn you will need to kill all the existing grass first. Products such as Rodeo or Round-up are non-selective and kill all the grass it comes in contact with. Killing the grass may not be necessary if you are planting it on hillsides or as a groundcover.

Do not overseed buffalo grass with a cool season grass in the fall.

Starting from Seed

Spread from 1 to 6 lbs of seed in most situations depending on the variety, its use, and how quickly you would like it to fill in. Spread 1 to 2 lbs per 1000 sq. ft. on hill sides or rough terrain areas that will not receive supplemental water. It may take a few years, possibly overseeding each year, to establish a good stand of buffalo grass.

For lawns, spread 4 to 6 lb per 1000 sq. ft. The buffalo grass seeds will need to be covered with ½ inch of soil for best results. It is okay to apply a starter fertilizer at the time of seeding, but do not use a fertilizer that includes a pre-emergent. It will prevent your lawn seed from germinating.

From Sod or Plugs

For sod, prepare the soil and rake it level, removing all rocks and debris. Lay down sod carefully and use a lawn roller to help sod make good contact with the soil. Water the sod lightly and frequently until the roots pin the sod to the soil. When this happens cut back on the frequency of watering, but irrigate deeply to promote deeper reaching roots.

If using plugs, place plugs in rows on 1 ft. centers being sure the roots are thoroughly covered with soil and planted as deep as the roots will reach. The grass will begin spreading by producing stolons that spread out in all directions. It is recommended that you use a fertilizer with a pre-emergent mixed in after all the plugs have been placed. The preemergent will help keep wild grass seeds from germinating while the grass thickens. Be sure to water the plugs thoroughly. For the first couple of weeks until the roots develop further, make sure the soil doesn't dry out too much, especially in high heat. Apply a slow release fertilizer equaling approximately one pound of nitrogen per 1000 sq. ft.

Mowing Buffalo Grass

A great thing about buffalo grass is that it requires less mowing than many other grasses. Its low growth habit means it may only need mowing once every two or three weeks. The maximum height for several turf varieties are in the 4 to 6 inches range, which means it is less likely to ever get out of hand.

Some varieties can handle mowing as low as half an inch. However, these low heights are usually reserved for sports turf. It takes a carefully developed, rock free, and flat soil surface to consistently maintain grass at that height. It can't have any high spots or the mower will scalp the grass.

Most home lawns will do well at mowing heights of two or more inches. In addition, grass that is maintained at higher mowing heights develop deeper roots than low cut grass. Deeper roots are better able to handle heat and drought stress and require less frequent irrigation.

Buffalo Grass Disease Problems

Fortunately, Buffalo grass is relatively disease free, but occasionally can suffer from a few lawn diseases. The most common diseases encountered are listed below:

Brown Patch Disease

Brown patch is a late spring and summer disease. It requires temperatures above 80 degrees and high moisture to activate the disease. Areas of high humidity will experience the most problems. Ground that stays damp for several hours at night can accelerate the disease. Try to refrain from watering in the late evening or at night.

The disease appears as semi-circular patches of dead or dying grass. The center of older patches may recover giving the patch a frog-eyed appearance. Close examination of the grass blades will reveal tan colored, irregularly shaped spots with purple margins.

The disease usually remains active as long as the environmental conditions continue, especially the humidity. If the humidity and temperature drops the disease progression will usually stop. Nitrogen in fertilizer will only fuel the disease. Avoid fertilizer applications if you suspect the disease and be careful not to over-fertilizer early in the season.

Summer Patch Disease

Summer Patch is a disease that affects the grass roots and crown. During hot, wet weather, if the pathogen is present, the grass can begin showing symptoms. Symptoms first appear as small circular patches of yellow-green to tan colored grass a couple inches in diameter. The patches may grow to a foot or more in diameter. Patches will often coalesce forming even larger patches. Like Brown Patch, the center of older diseased patches may recover giving it a frog-eyed appearance. The roots and crown of diseased plants will appear dark in color. In the final stage of the disease the roots and crowns of the grass will rot. At this point the affected grass cannot be saved and it will die.

Summer patch is worsened in high pH soils. Since buffalo grass grows well in clay soils, which can often lean toward the alkaline side, be especially watchful for signs Summer Patch disease.

If you have had problems with Summer Patch before, do not apply any fertilizer during the late spring and summer months when the disease threat is highest. Applying excessive amounts of nitrogen early in the growing season will lead to over fertilized grass, which can also fuel the disease once it begins. Try to be accurate in the amount of fertilizer you apply.

Leaf Spot and Melting Out Disease

Leaf Spot, formerly known as Helminthosporium Leaf Spot, is a cool, wet weather disease that begins in the grass blades. If the disease persists, it can progress down to the grass crown, which initiates the second half of the disease- the melting out phase (crown and root rot).

The disease symptoms begins as tiny brown or black spots on the grass blades. The spots become larger as the disease progresses. The larger spots have tan centers with a purple to black border. Several spots will coalesce causing the blade to wilt and die back. The melting out phase will be a browning of the crowns and stolons that will eventually kill the grass.

Fortunately, disease progression usually stops as soon as environmental conditions that promoted the disease changes. An increase in temperature with drier conditions will usually be enough to stop the disease. If you suspect the disease avoid evening and night watering or frequent daytime watering. Instead, water deeply and less frequently. Avoid applications of quick release nitrogen fertilizers.

Buffalo grass Insect Problems

Buffalo grass is not bothered by many insects. Probably the most frequent damage will be from chinch bugs. Chinch bugs pierce the leaf blade and feed on the plant's juices. While feeding, they inject toxins into the plant. These toxins are actually what causes the most damage.

Damage from chinch bugs usually begins during hot, dry conditions. Damaged grass will turn yellow and then brown. Chinch bug nymphs are red with a white band, later turning orange and then black with adjacent white spots as adults. Adults are approximately 1/10 of an inch long.

Reducing the amount of thatch may help control chinch bugs. Apply an insecticide containing the active ingredient "bifenthrin" or look for other products labeled for chinch bug control.