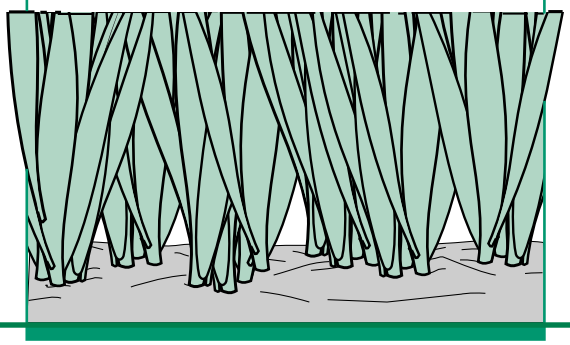
KENTUCKY BLUEGRASS LAWNS

Turfgrass



Kentucky bluegrass is a cool-season turfgrass that spreads by underground stems called rhizomes. It is a highly variable species, with cultivars that differ in color, texture, density, vigor, disease resistance and tolerance to close mowing. Bluegrass is best adapted to well-drained, moist, fertile soils with a pH between 6.0 and 7.0. It does best in full sun but will tolerate light shade. It will not perform well on shallow, compacted soils, or where the pH is excessively high or low. Under the right conditions and with proper management, Kentucky bluegrass can make a beautiful lawn. In fact, it is the most widely used species for turfgrass in the northern half of the United States. However, bluegrass is not as heat tolerant as tall fescue and the warm-season grasses, so it performs comparatively poorly during Kansas summers.

Heat Tolerance of Kansas Turfgrasses

HIGH <<<<<<<<---------->>>>>>>>LOW		
Bermudagrass	Tall fescue	Kentucky bluegrass
Buffalograss		Perennial ryegrass
Zoysiagrass		Fine fescue

Recommended Cultivars

The following cultivars have performed well relative to other bluegrasses in Kansas and in states with climates and growing conditions similar to ours. Use this list as a guide; omission from this list does not necessarily mean that a cultivar will not perform well. Cultivar availability will vary. Check the "Yellow Pages" in the telephone book for local seed suppliers. Call the suppliers to check on availability of specific cultivars.

Cultivars for higher-input lawns where visual appearance is a prime concern (4 to 5 pounds Nitrogen per 1000 square feet per year; irrigated to prevent drought stress): America, Apollo, Blacksburg, Brilliant, Champagne, Challenger, Chateau, Classic, Eclipse, Jefferson, Jewel, Livingston, Midnight, Odyssey, Rugby II, Showcase and Unique.

Cultivars for lower-input lawns where water savings is a prime concern (1 to 2 pounds Nitrogen per 1,000 square feet per year; minimal to no irrigation): Baron, Caliber, Cobalt, Freedom, Midnight, Monopoly, Northstar, Unique.

See the "Disease" section for a list of cultivars prone to disease problems.

Planting

Good soil preparation is extremely important for a quality Kentucky bluegrass lawn. Have your soil tested, and till in the appropriate nutrients and amendments based on the test results. Your county extension office has information on how to collect soil samples, and they will process the samples for you. Private labs also will provide this service.

One of the best ways to improve the soil is by tilling in good quality organic matter (e.g., compost or peat) *before* planting. Add 3 to 6 cubic yards of organic matter per 1000 square feet and till it in 8 to 10 inches deep.

Kentucky bluegrass lawns are established by seeding or sodding. September is the best time for seeding bluegrass because soil temperatures are warm, air temperatures are moderating, and weed competition is minimal. Spring seedings (late March or April) are more difficult, but are possible. Spring seedings may require crabgrass control with the preemergence herbicide siduron (Tupersan). Siduron is the only preemergence herbicide that can be used at the time

of seeding. Alternatively, DCPA (Dacthal) can be used when the seedlings are 1 inch tall. No other preemergence or postemergence herbicides should be applied until the new lawn has been mowed at least three times.

Kentucky bluegrass should be seeded at a rate of 2 to 3 pounds per 1,000 square feet. Bluegrass is relatively slow in getting started, so be patient. If the seed is kept constantly moist, it will germinate in 14 to 21 days, depending on the soil temperature. Begin mowing as soon as the grass reaches 3 to 3½ inches tall; then mow regularly at a height of 2 to 2½ inches. This will help the lawn thicken up faster.

Sodding is possible about any time of year, although chances for successful establishment are much higher if done in September or October. Lawns sodded in the spring will require more careful irrigation during summer dry spells because their root systems will be less developed than those sodded the previous fall. Summer-sodded lawns will be most susceptible to heat and drought stress; consequently, good irrigation practices become critical to the success of the new lawn.

For more detailed information on these topics, see the K-State Research and Extension publication *Planting Your Lawn*, MF-608.

Mowing

Kentucky bluegrass does best when mowed at a height of 2 to 3 inches. Mowing too low encourages weed invasion; significant weed control can be accomplished just by raising the cutting height. Additionally, root growth is proportional to shoot growth, so mowing high encourages deeper rooting and leads to a more heat- and drought-resistant turf. Mow often enough so that no more than one-third of the foliage is removed at a time (e.g., if the mower is set to cut at 2 inches, the lawn should be mowed when it is 3 inches tall; this would remove 1 inch out of 3, or one-third of the foliage). If the lawn is mowed frequently enough, it is not necessary to catch the clippings. Contrary to popular belief, clippings do not contribute to thatch accumulation, and they actually return nutrients that can be used again by the turfgrass. Finally, keep the mower blades sharp. A dull mower blade shreds the leaf tips, resulting in an unattractive lawn that is less resistant to stresses and disease.

Watering

Kentucky bluegrass generally needs more water to stay green than most other Kansas turfgrasses. It will, however, survive extended hot, dry periods by going dormant if it is not irrigated. If allowed to go dormant, bluegrass can be considered a water-saving grass, but it will be brown in color. This may or may not be acceptable, depending on expectations for the lawn.

If a green color is desired all summer, bluegrass will require approximately 1½ inches of water (from rainfall and/or irrigation) per week during hot weather. Less water is needed in the spring and the fall. Morning watering is most efficient and may help prevent some diseases. When the turf begins to turn a bluish cast, or when walking across the lawn leaves lingering footprints, the lawn needs water. Soak the lawn thoroughly. The goal is to wet the soil to a depth of 6 to 8 inches. When irrigated in this fashion, the interval between successive waterings is lengthened. This is called "deep, infrequent irrigation" and results in a healthier, more disease-resistant turf.

Be careful that you do not apply water at a faster rate than the soil can absorb; doing so results in wasteful surface runoff. You may need to apply water in several short cycles to avoid runoff, especially if the soil is high in clay or is compacted.

Fertilizing

The amount of fertilizer needed depends on expectations for the lawn. A lower-input Kentucky bluegrass lawn, where appearance is not the primary objective, should be fertilized once or twice a year. A higher-input lawn, where appearance is a primary objective, will require more fertilizer. Most of the fertilizer should be applied in the fall. Fertilizing too early in the spring (March or early April) causes excessive growth and can deplete the turf of stored carbohydrates needed for root growth. The result is a weakened turf that is more susceptible to diseases, insects and drought.

Nitrogen is the fertilizer nutrient required in the greatest quantities and with the greatest regularity. Phosphorus, potassium, lime and sulfur should be applied based on soil test results. Many soils already contain adequate amounts of these nutrients; a soil test is the only way to know for sure.

Nitrogen sources are classified as quick-release or slow-release. Many fertilizers available to the home-

Fertilizing Schedule for Kentucky Bluegrass Lawns

	Pounds of nitrogen per 1000 square feet			
Visual Quality Expectation	September	November	Late April or early May	June or early July
Low	1½			
Medium	1	1	½–1*	
High	1–1½	1½	1*	½–1*

*Use a slow-release nitrogen source.

owner contain a combination of the two types. Spring and summer applications of nitrogen should generally consist of slow-release forms. These promote more controlled growth. An alternative would be to use lighter (i.e., half-rates), more frequent applications of quick-release nitrogen.

For more information on fertilizing, see the K-State Research and Extension publications *Fall Lawn Fertilizing Program*, MF-628, and *Fertilizing Your Lawn*, MF-544.

Thatch Control

Kentucky bluegrass is moderately prone to thatch accumulation. Thatch is a layer of dead and decaying roots, stems, and rhizomes that forms between the turfgrass foliage and the soil surface. Proper watering, mowing, and fertilization practices will help prevent excessive thatch buildup but control measures may still become necessary. If the thatch layer becomes thicker than ½ inch, core-aerate or power-rake the lawn.

Core-aeration is more beneficial than power-raking, but it is a longer term approach to thatch control. Core-aerators remove plugs of soil from the turf. The resulting holes allow for increased oxygen movement to the rootzone, stimulating the microbes in the soil. The enhanced microbial activity then breaks down the thatch more quickly. The cores can be left in place to decompose and filter back into the holes, or they can be removed and composted. If the cores are left on the lawn, soil will mix into the thatch as the cores break down, improving the thatch's water- and nutrient-holding capacity. In addition to its thatch control benefits, core-aeration helps relieve compaction in heavy-use areas. Core-aeration on bluegrass lawns should be done in either the spring (before applying crabgrass preventers) or the fall (before overseeding).

Power-raking can be useful in situations where thatch accumulation is excessive, but it can damage the lawn severely if not done with care. Set the blades just deep enough to slice into the thatch. It is better to power-rake too shallow than too deep. The best time to power-rake is in September, before fertilizing or overseeding. Spring power-raking can encourage weed invasion, while power-raking too late in the fall can lead to winter injury.

Weed Control

The best weed control is a healthy, dense lawn. Proper mowing, watering, and fertilizing practices will improve your bluegrass lawn's density and help reduce weed problems. Herbicides are useful tools, but if the underlying problems that led to the weed infestation are not addressed the weed problem will recur.

When necessary, crabgrass and other annual grasses can be controlled by using preemergence herbicides (i.e., crabgrass preventers). These should be applied around April 15 (April 1 for extreme southeast Kansas, and April 30 for extreme northwest Kansas), or by the time redbud trees reach full bloom.

Dandelions and most other broadleaf weeds are most easily controlled with herbicides in September or October. Spring applications may give only partial control. Products containing 2,4-D alone, or in combination with MCPP and Dicamba, control most common broadleaf weeds and are readily available to homeowners. Always read and follow the instructions on the product label carefully.

Perennial grasses such as tall fescue, bermudagrass, orchardgrass, or quackgrass cannot be controlled selectively in a bluegrass lawn. If control is desired, spray with Roundup or Finale when the weedy grass is actively growing. Complete control often requires more than one application. The area will then need to be seeded or sodded.

Disease

Summer Patch is the disease of greatest concern on Kentucky bluegrass. Several other diseases can also attack bluegrass, but they generally can be managed with good cultural practices and they are transient; that is, they typically go away with a change in the weather. Summer Patch, however, can cause severe and recurring damage, and it is very difficult to control with fungicides. The best prevention is to avoid cultivars that are particularly susceptible and to follow sound mowing, watering and fertilizing practices. The following cultivars appear to be more susceptible to summer patch and should be avoided: Greenley, Ronde, Park, Ginger, Argyle, Donna, South Dakota Certified, Miranda, Chelsea, Cardiff, Kenblue, Noblesse and Chateau.

Insects

Small populations of insects, both beneficial types and harmful types, are normal in the lawn. Indiscriminate use of insecticides can destroy beneficial insects and allow harmful species to predominate. A healthy, vigorously growing bluegrass lawn usually can tolerate normal levels of harmful insect activity. Occasionally, populations of harmful insects will reach levels where they can cause visible damage. The homeowner may elect to apply an insecticide in these cases.

Grubs are common insect pests of bluegrass lawns. There are several different types of grubs that may damage lawns during the season including white grubs (May beetle and southern masked chafer) and billbug grubs. The southern masked chafer is the most common and is best controlled with a preventative insecticide application in late July or early August. Oftanol, Dylox / Proxol, Sevin, or Diazinon can be used. In general, insecticides applied after mid-August for the southern masked chafer grub will not be very effective.

Merit is a new grubicide that has a longer residual than other products. Because it is a systemic, it should be applied in early to mid-July for southern masked chafer, rather than late July or early August. If billbug grubs and/or May beetle grubs also are problems, apply Merit in late May. One application should give season-long control for all three types of grubs.

Sod webworms, cutworms, and some other pests also may cause damage to bluegrass lawns but they are not as common as grubs. Treat for them only if they are actually damaging the lawn. Always read and follow label directions carefully when using any pesticide.

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