USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

Plant Guide

KENTUCKY BLUEGRASS

Poa pratensis L.

Plant Symbol = POPR

Contributed by: USDA NRCS National Plants Data Center

J.M. Randall @ TNC. 2003.

Alternate Names

June grass, *Paneion pratense*, *Poa anceps*, *Poa angustifolia* var. *pratensis*, *Poa angustifolia* var. *angustiglumis*, *Poa pratensis* var. *macounii*, *Poa pratensis* var. *pinegensis*, *Poa pratensis* var. *stricta*, *Poa pratensis* var. *transnominata*, *Poa pratensis* var. *urjandhaica*, *Poa pubescens*, *Poa urjanchaica*, *Poa viridis*, smooth meadow grass, spear grass.

Uses

Landscape: Kentucky bluegrass is a popular sod-forming grass that is used on golf courses, ski slopes, and campsites.

Livestock: Kentucky bluegrass is an important forage species for sheep and cattle. In the west, it is very abundant and frequently used as a forage crop. In the east, it is planted as a pasture grass. It is not usually used for hay, but it has been found as an invader of hay mixes.

Rehabilitation: Kentucky bluegrass is included in seed mixes that are used to revegetate roadbanks. It is a slow-growing plant, establishes in 2 to 3 years and forms a dense sod. It is not as good at stabilizing soil as its native counterparts.

Wildlife: Elk, mule deer, and bighorn sheep eat Kentucky bluegrass. It is an important winter forage grass for these animals in the west. Cottontail rabbit, wild turkey, and prairie chickens consume the leaves and seeds of Kentucky bluegrass. In the mountain meadows of Oregon, the northern pocket gopher, mice, and Columbian ground squirrel feed off of the dominating Kentucky bluegrass. Therefore this is an important habitat for foraging raptors. Kentucky bluegrass also provides cover for small mammals and nongame birds.

Legal Status

Kentucky bluegrass is listed as an invasive weed in the Great Plains States and Wisconsin. Please consult the PLANTS Web (http://plants.usda.gov) site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Weediness

This plant may become weedy or invasive in some regions or habitats and may displace desirable vegetation if not properly managed. Please consult with your local NRCS Field Office, Cooperative Extension Service office, or state natural resource or agriculture department regarding its status and use. Weed information is also available from the PLANTS Web site at plants.usda.gov.

Description

General: Grass Family (Poaceae). Kentucky bluegrass is a cool-season perennial sod-forming grass. The roots are shallow, often within the upper 8 cm of the soil surface. Stems are 30 to 90 cm tall. Leaves are attached to the base of the stem, folded and sometimes hairy at the point of attachment, have flat blades, are 2 to 5 mm wide and 10 to 40 cm long. The inflorescence is an open panicle consisting of two to six flowers. The lemmas have a tuft of cobwebby hairs. Flowering starts in May and fruit is mature by mid-June.

Kentucky bluegrass is distinguished from Canada bluegrass (*Poa compressus*) by its darker green

foliage, longer leaves, and pubescence at the bases of the leaves.

Distribution: Kentucky bluegrass is native to portions of North America, including areas within the United States. Exact delineation of native status has not been determined, but data seems to indicate that it is native in parts of the southeast, northeast, and upper Midwest regions and introduced or naturalized elsewhere. It occurs throughout the United States although it is most prevalent in the northern half. It is not common in the Gulf States or in the desert regions of the southwest. For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site (http://plants.usda.gov).

Habitat: Kentucky bluegrass is promoted on sites that have cool and humid climates. It is found in uplands and lowlands of the tallgrass prairie and in the lowlands of mixed-grass prairies where adequate precipitation falls. In the west, it is found on northern exposures at mid to high elevations. In the southwest and California, it is found in cool mountainous regions.

It frequently occurs as an understory dominant in aspen habitats throughout the Intermountain Region, ponderosa pine, sagebrush/bunchgrass, and bunchgrass habitats throughout the U.S., and riparian habitats in the Mountain West. It is also a common dominant of Midwestern prairies.

Adaptation
Kentucky bluegrass is found most abundantly on sites that are cool and humid. It has become naturalized across North America and often occurs as a dominant species in the herbaceous layer.

Kentucky bluegrass grows best on well-drained loams or clay loams rich in humus and on soils with limestone parent material. It needs large amounts of nitrogen during active growth stages. The optimal soil pH is between 5.8 and 8.2.

In the Blue Mountains of eastern Oregon and southeastern Washington, Kentucky bluegrass dominance is an indicator of dry to moist meadow conditions and of soils that are dark brown to black and clayey.

Kentucky bluegrass plants that have shorter leaves are more likely to produce tillers. Plants that occur in full sun have shorter leaves while those in shade have leaves longer than the stems. Therefore plants that are in full sun will produce more tillers and spread more quickly than those in the shade.

Kentucky bluegrass is intolerant of drought, excessive flooding, high water tables, and poorly drained soils.

Establishment
For lawn establishment, plant 2 to 3 pounds of seed per 1,000 square feet. Seeding rates are reduced when seed is drilled into the top 1 inch of soil. Kentucky bluegrass can be seeded year-round, but the best results are obtained in the spring and fall. Seeds require light and frequent watering (2 to 3 times per day for the first 2 weeks) for germination to occur. After seedling emergence, watering frequency can be reduced.

Management
The active growth stage of Kentucky bluegrass begins in late winter/early spring. By midsummer, it is nearly dominant on its sites. Cool temperatures in fall promote growth when other species are dying back. It spreads by rhizomes, produces abundant seed, and can become established on disturbed sites faster than other plant species. It is an aggressive competitor with native species.

Total replacement of Kentucky bluegrass by natives is labor-intensive and impractical. It is best to manage for warm season native grasses rather than against Kentucky bluegrass. In grasslands, atrazine and glyphosphate are effective herbicides for decreasing Kentucky bluegrass abundance when applied prior to seeding warm-season native grasses like big bluestem. Also, irregular spring and fall burns can help to control or maintain co-dominance of Kentucky bluegrass (as opposed to complete dominance).

Kentucky bluegrass pastures are best managed under a grazing system other than season-long use. At the end of the growing season, it becomes less palatable and protein and fiber contents decline.

Pests and Potential Problems
White grubs, billbugs and sod webworms can destroy plantings of bluegrass. Insect populations should be monitored so that timely insecticide applications can be made. Pest management in this manner is much more cost effective than routine insecticide applications or replanting large areas.

Kentucky bluegrass is sometimes vulnerable to fungal infections including *Fusarium*, *Helminthosporium*, leaf spot, rust and powdery

mildew. Mixing bluegrass seed with ryegrass will prevent *Fusarium* blight.

Seeds and Plant Production
Seeds are sown in springtime in a cold frame containing moist compost. Seedlings are thinned to individual pots and moved into a greenhouse where they will remain for the first winter. After the last spring frost, plant the seedlings into their permanent positions. Plant divisions can be directly planted into their permanent positions in late spring or early summer.

Cultivars, Improved, and Selected Materials (and area of origin)
There are over one hundred Kentucky bluegrass cultivars readily available by commercial sources. Many of these cultivars have been developed for disease resistance, and nutritional content for livestock.

Contact your local Natural Resources Conservation Service (formerly Soil Conservation Service) office for more information. Look in the phone book under "United States Government." The Natural Resources Conservation Service will be listed under the subheading "Department of Agriculture."

Control
Please contact your local agricultural extension specialist or county weed specialist to learn what works best in your area and how to use it safely. Always read label and safety instructions for each control method. Trade names and control measures appear in this document only to provide specific information. The USDA NRCS does not guarantee or warranty the products and control methods named, and other products may be equally effective.

References
Agricultural Research Center. 2004. *GRIN taxonomy* (http://www.ars-grin.gov/cgi-bin/npgs/html/index, 26 July 2004). USDA, Beltsville.

Dubel, R.L. 2004. *Kentucky bluegrass* (http://aggie-horticulture.tamu.edu/plantanswers/turf/publications/bluegrass.html, 23 July 2004). Texas Cooperative Extension, Texas A&M University, College Station.

Morris, R. 2002.*Plants for a future database* (http://www.scs.leeds.ac.uk/pfaf/index.html, 23 July 2004). Plants for a Future, Devon, England.

Randall, J.M. 2003. *Image of Poa pratensis.* (http://tncweeds.ucdavis.edu/esadocs/poa_prat.html, 23 July 2004). University of California, Davis.

Rayburn, E. and J. Hall. 2004. *The identification of grasses* (http://www.caf.wvu.edu/~forage/library/cangrass/content.htm, 23 July 2004). Department of Agriculture and Forestry, West Virginia University, Morgantown.

Sather, N. 1996. *Element stewardship abstract (ESA) for Poa pratensis and Poa compressa.* (http://tncweeds.ucdavis.edu/esadocs/poa_prat.html, 23 July 2004). University of California, Davis.

Uchytil, Ronald J. 1993. *Poa pratensis*. (http://www.fs.fed.us/database/feis/, 23 June 2004). Rocky Mountain Research Station, USDA Forest Service, Missoula.

Wunderlin, R.P., and B.F. Hansen. 2003. *Atlas of Florida vascular plants* (http://www.plantatlas.usf.edu, 23 July 2004). Institute of Systematic Botany, University of South Florida, Tampa.

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site<http://plants.usda.gov> or the Plant Materials Program Web site <http://Plant-Materials.nrcs.usda.gov>

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