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Maine Forage Facts: **Kentucky Bluegrass**

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Bluegrass (*Poa pratensis* L.) is a short grass (6 to 12 inches tall) that forms a dense sod by underground stems called rhizomes. Maximum root system development occurs after one to two years from planting. The leaves are quite narrow, two to seven inches long, and the leaf tips are "boat-shaped" and dark green. Most leaves are near the ground rather than high up the stem. Fine stems are produced mainly in the spring. The seedhead is an open, loose triangle, about two to eight inches long.

Kentucky bluegrass has long been the most important cool-season grass planted as turf. It has been used for lawns, athletic fields, golf course fairways, tees, and rough, and it has been widely planted for pastures in the New England region.

While there is an annual flush of new roots in spring, many of last year's roots remain alive and functioning. Because many roots live through the winter, it is not unusual to dig up a patch of healthy bluegrass and observe that most roots appear brown.

Kentucky bluegrass is also known as Junegrass or smooth meadow grass.

Site selection

Bluegrass grows well on a wide variety of soils but best on humid and subhumid sections of the northern half of the United States. It is frequently found on wet/heavy soils with a pH above 6. However, it does not stand in saline-alkaline soils (produces iron deficiencies). In pastures, it rarely needs to be seeded.

Due to its growth by rhizomes and high persistence once established, Kentucky bluegrass is a tolerant grass to overgrazing, making it highly desirable for grazing pastures with horses.

Soil preparation and establishment

Where bluegrass is established from seed, the seeding rate should be 5 to 10 pounds per acre planted alone or in a mixture. Lower seeding rates require much longer to develop a cover, particularly where seeds are broadcast over the

Kentucky bluegrass seed head.
Photo: Bars Kers, Creative Commons

soil surface. Lower seeding rates can be used when seeds are drilled into the top inch of soil. New seedings require light and frequent watering. After seedling emergence, watering frequency can be reduced.

Liming and fertilization

Bluegrass does not respond well to nitrogen, phosphorous, or lime. Even so, fertilization and liming must be done following the recommendations of a soil test. Nitrogen requirements of Kentucky bluegrass are much higher during the establishment year than during subsequent years. The grass will respond to 5 to 10 pounds of nitrogen per acre the first year. Whereas 2 to 5 lb pounds of nitrogen per acre is adequate for maintenance after the first year.

High nitrogen fertilization may decrease root growth in Kentucky bluegrass and probably speed up invading species' encroachment.

Varieties

Balin: This is an early maturity Kentucky bluegrass with a medium to strong establishment of shoots. It has a very high winter tolerance and usually quicker establishment than common bluegrass. Very suitable for extensive lawns.

Shamrock: Persistent bluegrass that withstands foot traffic well. It forms a dense sod and outcompetes weeds, making it great for home lawns, parks, and commercial use. Early spring green-up.

Concerto: Improved variety that comes from Shamrock Kentucky bluegrass. Hence, Concerto has its predecessor's characteristics, plus leaf spot disease and drought resistance.

Productivity

High temperatures and low soil moisture during July and August may cause bluegrass growth to stop completely. The yield and palatability of Kentucky bluegrass are good in the spring, but the yield is generally quite low, low enough that it is rarely worth harvesting other than by grazing. Bluegrass blooms in late May to mid-June if it is not cut or grazed, but it will keep producing leaves all summer if it is grazed continuously. Bluegrass grows back easily, even with frequent cutting. This is one reason it is so popular as turf grass.

"Boat-shaped" leaf tips.
Photo: Matt Lavin, Creative Commons

Kentucky bluegrass also helps prevent erosion control on uplands with its dense, vigorous root system and the sod it forms.

Grazing management

Kentucky bluegrass is a palatable pasture plant making very early growth in the spring. It becomes the dominant grass species, in most of the older pastures. It withstands close and continuous grazing but becomes nearly dormant in midsummer when daily maximum temperatures approach 90°F. Growth resumes with the return of cool weather in the fall. Kentucky bluegrass is not a good hay crop.

Due to its type of growth and persistence, Kentucky bluegrass can be grazed at 1.5 to 2 inches of stubble height. Utilization of 70% of the top growth annually allows it to maintain good performance. Heavy use causes it to form a dense sod. If not grazed too closely, it is more productive in terms of herbage for grazing animals. Kentucky bluegrass is often an indication of overuse of rangelands.

The nutritive value of bluegrass is not as high as timothy or orchardgrass, so its inclusion in diets for animals with high nutritional requirements must be careful. However, this characteristic makes bluegrass recommendable for horses, since its use can prevent incidences of metabolic syndrome, which often occurs with the inclusion of pastures with high energy content.

If land or fencing costs are high, improvements on Kentucky bluegrass pastures may not be economical.

Additional Resources

- Bulletin #2262, *Forage Facts: Growing Forage Grasses in Maine* extension.umaine.edu/publications/2262e/
- Bulletin #2263, *How Maine Farmers Can Determine if They Have Enough Hay and Forage for the Winter* extension.umaine.edu/publications/2262e/
- Bulletin #2272, *Forage Facts: Selecting Forage Crops for Your Farm* extension.umaine.edu/publications/2262e/

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