

Bermudagrass in Utah Lawns

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Summary

Common bermudagrass [*Cynodon dactylon* (L.) Pers.] is a warm-season grass commonly used for turf and pastures in warm climates. Unfortunately, it is also established in many areas as an aggressive, weedy species. It grows actively during the heat of the summer, but is brown and dormant during the rest of the year. Bermudagrass can overtake cool season grasses such as Kentucky bluegrass and also infests landscape planting beds and vegetable gardens. Suppression and control is difficult, but is possible using cultural methods and/or herbicides.

Introduction and Identification

Bermudagrass was introduced to this country from Africa around 1750. It is a warm season grass that grows well in arid, Mediterranean, subtropical and tropical climates. Even though it is used most often in warmer areas, it can grow successfully in colder climates.

In colder climates, bermudagrass only grows actively during the warmest part of the growing

season, going dormant from early fall to late spring and turning brown when it is not actively growing. While dormant, its brown shoots are often seen in actively growing cool season grasses. Bermudagrass roots deeply and the plant spreads from rhizomes (below ground runners), stolons (above ground runners) and seeds making it very difficult to control. Seedheads of bermudagrass are formed on 3 to 7 spikes (1 to 2 ½ inches long) arranged in a whorl.



Bermudagrass seed heads ('Ken' and 'Forrest Star').



Bermudagrass above ground runners (stolons), seed heads and growth habit (right, USDA). Bermudagrass growing as a weed in a disturbed area (left, 'Ken' and 'Forrest Star').



Crabgrass is sometimes confused with Bermudagrass. Notice the lack of stolons and broader grass blades (left, Richard Arthur Norton). A crabgrass seed head (right, Robert H. Mohlenbrock).

Bermudagrass is sometimes confused with annual crabgrass (*Digitaria* spp.). In comparison to crabgrass, bermudagrass has deep rhizomes while crabgrass has a shallow, fibrous root system with no rhizomes or stolons. The leaves on bermudagrass are also arranged in a herringbone pattern and are often narrower than crabgrass leaves. The seedheads of crabgrass also tend to be taller and thicker than bermudagrass.

Control Methods

Bermudagrass may be introduced into the landscape in several ways including contaminated grass seed, hay, secondary irrigation water, compost, top or fill soil, shoes and even windblown seeds. It may also creep in from adjacent property.

The best control method is to prevent bermudagrass from getting established. Be certain that soil amendments are weed free. Inspect all topsoil or fill before it is delivered. Before planting any plants, make certain there are no bermudagrass rhizomes in the root-ball.

Prevention

A healthy lawn will out-compete bermudagrass and reduce the likelihood of its establishment. Some cultural practices that help cool-season grasses out-compete bermudagrass include:

- Mowing at a height of 3-3½ inches. Taller lawns shade and weaken bermudagrass.
- Fertilizing in late spring and early fall. Avoid fertilizing during the hottest part of the summer when bermudagrass is actively growing.

- Watering deeply and infrequently. Shallow, frequent irrigation favors bermudagrass.

For more information concerning how to properly maintain turfgrass, access Basic Turfgrass Care (http://extension.usu.edu/files/publications/publication/HG_517.pdf).

For other areas, such as the garden and landscape planting beds, use 3 to 4 inches of mulch where appropriate and edging material that penetrates at least 6 inches into the soil.

Controlling Bermudagrass Once Established

Mulches and Barriers: Use plastic and fabric mulch (weed barriers) to manage bermudagrass. Fabric barriers or mulch applied over bermudagrass prevent sunlight from reaching the plants and can provide effective bermudagrass control. Mow and irrigate the grass, place the barrier or mulch over the plants, and leave it for at least 6 to 8 weeks in the summer (note that any plants underneath the barrier will also be killed). Be sure that the barrier remains intact without holes or bermudagrass will grow through the holes and survive. If ornamentals are planted in holes in the barrier, bermudagrass control is reduced.

After bermudagrass is established, mulching with products such as wood chips alone is not effective because the grass can push up through this mulch. Using landscape (geotextile) fabrics under the mulch, can increase control. Overlap and pinned the fabric so the stolons do not grow between the fabric sheets. If holes for landscape plants are made in the fabric, control is reduced because bermudagrass is likely to grow through the holes. If any sunlight penetrates the mulch, control is compromised.

Clear plastic mulching (solarization) is also effective for eradication of bermudagrass plants and seed if it is applied during periods of high solar radiation (summer months) along the Wasatch Front and other warmer areas of the state. It is often less effective in cooler mountain valleys. Before applying the plastic, closely mow the bermudagrass, remove the clippings, and water the area well. It is not necessary to cultivate before solarization, but a shallow cultivation may improve control. Place clear, ultraviolet (UV) protected plastic sheeting

over the area. The plastic should extend roughly 2 feet beyond the bermudagrass stolons to ensure the infested area is covered. Maintain the plastic mulch for 4 to 6 weeks in the St. George area, and 3 to 4 months along the Wasatch Front. Solarization is most effective on flat soil or if the soil slopes in a south or southwest direction. After solarization, do not cultivate the area deeper than 3 inches to avoid bringing weed seed into the upper soil layer. Solarization in shady areas is usually unsuccessful.

Herbicides: Herbicides are useful tools in controlling established stands of bermudagrass. However, when used without other methods, such as maintaining a healthy lawn, they are often less effective. Apply herbicides to bermudagrass leaves and stems when they are vigorously growing. There are some selective herbicides that can be sprayed over the top of many cool-season turfgrasses or in landscape planting beds (but not both) that will suppress or control bermudagrass. In addition, there are nonselective herbicides that can be sprayed on bermudagrass that also kill many other plants. For more information concerning various herbicides labeled for control or suppression of bermudagrass, see Table 1.

All pesticides include labeling information concerning how to use the product and minimum safety requirements. This information is there for your protection. Federal law requires that the label be read and followed in all situations. Mention of specific products is not an official endorsement by Utah State University.

References

- Peachey, E. 2010. 2010 Pacific Northwest Weed Management Handbook. Pacific Northwest Extension Publication. Corvallis, OR.
- Whitson, T. 2009. Weeds of the West. Western Society of Weed Science and University of Wyoming Press. Laramie, WY.
- McElroy, S., and G. Breeden. Controlling Bermudagrass in zoysiagrass and tall fescue turf. University of Tennessee Extension. Knoxville, TN. Available online at: utextension.tennessee.edu/sullivan/Documents/Controlling%20bermudagrass%20and%20turf%20grass.pdf

Table 1. Selected Herbicides Labeled for Control or Suppression of Bermudagrass

Selective Herbicides for use in and around Trees, Shrubs and Perennials

Herbicide	Comments
Sethoxydim (GrassGetter®, Poast®)	This product is labeled for control of many grasses in groundcovers and woody plants. Do not apply to turf areas.
Fluazifop (Ornemec®, Over-The-Top®, Grass-B-Gon®)	This product is labeled for control of many grasses in groundcovers and woody plants. Depending on the formulation, a surfactant may need to be tank mixed with this product. Do not apply to turf areas.

Selective Herbicides for Use in Lawn Areas

Herbicide	Comments
Triclopyr (Turflon Ester®)	Offers suppression of bermudagrass only. Triclopyr is additionally labeled for suppression or control of many broad-leaf weeds in turf. Repeat applications will be necessary. Follow label exactly for best control.
Fenoxaprop (Acclaim Extra®, Bayer Advanced Bermuda Grass Control For Lawns®)	Labeled for control or suppression of bermudagrass and some other weedy grasses such as sandbur, crabgrass and foxtail. Repeat applications will be necessary. Follow label exactly for best control.

Nonselective Herbicides

Herbicide	Comments
Glyphosate (RoundUp®, KillZall®, Rodeo®, Touchdown®, etc.)	Two to four applications 3 to 4 weeks apart will be needed. It may be beneficial to till the ground 10 days after an application to allow rhizomes and stolons to begin re-growth before further applications.
Glufosinate (Finale®)	Several applications may be needed 3 to 4 weeks apart. It may be beneficial to till the ground 10 days after an application to allow rhizomes and stolons to begin re-growth before further applications.
Pelargonic Acid (Scythe®)	This is an organic herbicide that kills only the top of the plant. Because it does not kill the roots, use it along with tilling, consistent monitoring and pulling. This product requires at least an entire season with constant vigilance in combination with tilling and monitoring to be effective.

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