

Forsyth County Extension and Simon G. Atkins Community Garden
BERMUDA GRASS CONTROL WORKSHOP

INTRODUCTION

Bermudagrass (*Cynodon dactylon*) is a plant that is grown as a turfgrass or as forage for livestock, but it also can be an invasive weed. It was introduced from Africa (not Bermuda) in 1751 and is widely spread throughout the southwest and southern United States.

Bermudagrass also has many other common names including couchgrass, devilgrass, wiregrass, or dogtooth grass.

Improved hybrids of bermudagrass (Tifgreen, Tifdwarf, Tifway, Santa Ana) with fine leaves and a longer season of dark green color have been developed specifically for use as turfgrass. These hybrid varieties do not produce seed, whereas common bermudagrass produces seeds that remain viable in soil for at least 2 years.

LIFE CYCLE AND GROWTH HABIT

Bermudagrass is a low-growing, wiry perennial that has two types of shoots: those aboveground (stolons) and those belowground (rhizomes). The stolons and rhizomes are capable of rooting in the soil, thus creating new plants as they grow out from the original plant or when they are cut and left on moist soil. In areas where the soil has not been disturbed, rhizomes are shallow (1 to 6 inches). But where the soil has been spaded or tilled deeper than 6 inches, or in sandy soil, under sidewalks, and against solid structures such as building foundations or walls, the rhizomes may be deeper than 6 inches.

MANAGEMENT

Bermudagrass is not an easy weed to control, especially when it must be controlled selectively within an already planted turf, garden, or landscaped area. It can be managed nonchemically with a persistent program of removal, or over large areas by cultivation and by withholding water during the summer to desiccate the stolons and rhizomes. Solarization of the soil using clear plastic, using mulches of black plastic or geotextile landscape fabric can also be effective over large areas if light is excluded. Control with herbicides requires careful timing and often more than one application.

Cultural Control

Although bermudagrass tolerates some drought, it grows best when irrigated. If the area where the bermudagrass is growing can be dried in summer without injuring any nearby ornamentals, withhold water to dry the stems and rototill or spade the area two or three times during summer months. This will bring rhizomes to the surface where they dry out. Raking to remove rhizomes and stolons will also help. If water is applied during the process or it happens to rain, the remaining bermudagrass will regrow. A single, deep (down to 6 inches) cultivation may be adequate to bring the majority of shoots to the surface, but the time required to dry the remaining rhizomes still buried in the soil will add additional weeks to months. Be careful not to cultivate bermudagrass if the soil is moist or the weed will spread, because cultivation chops the stems into segments and each segment becomes a new plant. While cultivating and drying can effectively kill established plants and rhizomes, they do not kill seeds in the soil.

Mulching

Mulch can be used in a variety of ways to manage bermudagrass. Black polyethylene applied over bermudagrass to prevent sunlight from reaching the plant can effectively control established plants. Mow and irrigate the grass, place the plastic over the plants, and leave it for at least 6 to 8 weeks in summer. Placing plastic over bermudagrass in winter will not control it. Be sure that the plastic remains intact without holes, or bermudagrass will grow through the holes and survive. If ornamentals are planted in holes in the plastic, bermudagrass control is reduced.

Mulching with products such as wood chips is not effective against bermudagrass because the weed can push up this mulch. If organic landscape (geotextile) fabrics are used under the mulch, however, control can be achieved. The fabric must be overlapped so the stolons do not grow between the fabric sheets. If holes or gaps are present in the fabric, control will be reduced because bermudagrass is likely to grow through the holes.

Solarization

Clear plastic mulching (solarization) is effective for eradication of bermudagrass plants and seed if it is applied during periods of high solar radiation. 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 polyethylene over the area. The plastic should extend roughly 2 feet beyond the bermudagrass stolons to make sure the infested area is covered; it must be maintained intact for 4 to 6 weeks. Shade will reduce the effectiveness of solarization because it limits the amount of radiation. Solarization works most effectively when there is no slope in the land or if there is, the slope has a south or southwest exposure. Temperatures are not as high under plastic placed on a north-facing slope; consequently control is not as effective. After solarization, do not cultivate the area deeper than 3 inches to avoid bringing weed seed into the upper soil layer.

MATERIALS LIST FOR MECHANICAL METHODS FOR CONTROLLING BERMUDA GRASS WORKSHOP

- 1-BLOCKS, BRICKS, WOOD FRAME TO SECURE EDGES OF MATERIALS
- 2-CLEAR PLASTIC SHEETING 4 MIL THICK
- 3-BLACK PLASTIC SHEETING 4 MIL THICK
- 4-NEWSPAPERS- LARGE QUANTITIES TO COVER 10 X 10 SQUARE 10 SHEETS THICK
- 5-CORRUGATED CARDBOARD TO COVER 10 X 10 SQUARE (LARGE APPLIANCE BOXES WORK WELL)

Four test plots will be set up.

Plot 1 is a solarization plot using clear 4 mil plastic.

Plot 2 is a mulch plot using black 2 mil plastic.

Plot 3 is a mulch plot using corrugated cardboard.

Plot 4 is a mulch plot using newspaper at 10 pages thick.

PROCEDURE

1-Mow the grass closely.

2-Water the plot well.

3-Dig a 4-6 inch trench around the edge of each plot marked with orange flags.

4-Spread the test material over the plot and place blocks in trench on top of the test material, making sure to cover plot completely.

Test plots will be monitored each week for 8 weeks. Test plot materials should not be walked on or disturbed over the 8 week period.

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