
DALLISGRASS

Integrated Pest Management for Home Gardeners and Landscape Professionals

Dallisgrass, *Paspalum dilatatum*, is a perennial grass that was introduced into the United States from Uruguay and Argentina. It is now naturalized in much of the southern United States. In California, dallisgrass is found throughout the state except at high elevations. It has been used as a pasture grass in wet areas or irrigated sites but is primarily a weed in turfgrass, wet roadside areas, irrigation ditch-banks, and in some orchards and vineyards.

PROBLEM

Dallisgrass creates an unsightly clump in turfgrass that can be a problem in golf courses, sports playing fields, and home landscapes. The stiff clump it forms is different in texture from the other grasses in a turfgrass mixture and can present a hazard in sports fields, causing people to fall. It has a faster growth rate than most other grasses in a turf. The flowering shoot (culm) often escapes mowing and springs back up above the rest of the turf, causing problems in golf courses and sports fields.

IDENTIFICATION

Dallisgrass is a coarse-textured grass that grows in a clump and slowly increases in diameter as its shallow, short rhizomes (underground stems) grow outward (Fig. 1). The rhizomes have short internodes (the length of stem between the joints) that look like concentric rings on its surface. As the clump matures, the center may die and a different grass or weed may be growing in its center. In areas of large numbers of dallisgrass plants, they grow together forming almost a solid plant-

ing with uneven texture and poor turfgrass qualities.

The leaves of dallisgrass are fairly wide ($\frac{1}{4}$ to $\frac{1}{2}$ inch) compared to other turfgrasses. If left unmowed, plant leaves will grow 4 to 10 inches long. The flowering stalk grows 14 to 65 inches tall, has hairs at the base of the leaf (ligule), and frequently has a purplish coloration at the base of the stalk. The flower head consists of 2 to 10 racemes (branches near the top of the flowering stalk) that arise from different points along the flower stalk and are often drooping. Each raceme has two rows of flat, egg-shaped spikelets, which contain the seed, along its entire length (Fig. 2).

For information on other troublesome species of grasses, see *Pest Notes* on Annual Bluegrass, Bermudagrass, and Kikuyugrass listed in "References."

BIOLOGY

Dallisgrass produces abundant amounts of seed, which are its primary means of dispersal. Seed usually germinate in spring and summer when soil temperatures are in the 60° to 65°F range and grow to form new clumps. The optimum air temperature range for growth is 80° to 90°F and when temperatures are in this range, plants grow very rapidly. This weed is often found growing in wet areas such as drain ditches, low places, and in turfgrass that is irrigated. It tolerates both sandy and heavy clay soils and, once established, is drought-resistant and frost-tolerant. Dallisgrass does not go off-color in winter like many warm-season grasses. It responds to nitrogen

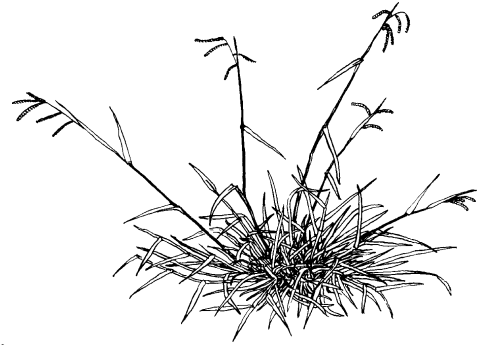


Figure 1. Dallisgrass.

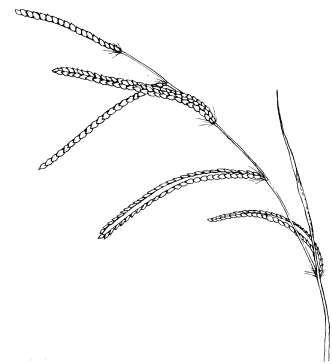


Figure 2. Dallisgrass flower head.

fertilizer and competes well under high fertility.

MANAGEMENT

A major component of dallisgrass management is to prevent new plants from becoming established. In home landscapes, removing young plants by digging them out before they form rhizomes or set seed is the best strategy for control. Mature plants can also be dug out, but they sometimes grow

back if rhizomes are left behind. In professionally managed turfgrass areas, prevention is an important component in managing this weed. When dallisgrass is present in abundance or the plants are located over a large area, it may be necessary to supplement cultural practices with herbicides.

Prevention

Dallisgrass is probably introduced into lawn areas with new turfgrass seed or with new sod. The seed can also be introduced on mowers that have been used in contaminated sites and then moved to weed-free sites. Cleaning a mower after mowing a contaminated site should reduce the chance of invasion into new areas. Inspect sod before taking delivery to make sure dallisgrass is not present. Don't use soil from dallisgrass-contaminated areas to repair low or bare spots in the turf. In spring when new seedlings germinate, minimize the amount of aeration performed on the turfgrass to avoid small open areas where dallisgrass plants might become established.

Cultural Control

Because dallisgrass is a perennial plant, persistence is required to kill it with cultural practices. In lawn areas the clumps can be removed by digging. Mowing the turfgrass will not remove dallisgrass, but when turfgrass is mowed at its optimum height, it is better able to resist an invasion of dallisgrass. Also, close mowing decreases shoot vigor and results in lower seed production.

When dallisgrass has been established for some time in the turfgrass, seed will be abundantly present in the soil. In well-established turfgrass, seedlings may not be able to establish, but if there are open areas in the turf, seed will germinate in these areas. If bare areas are present, overseed them with desirable turfgrass species to reestablish the turf.

Dallisgrass is not normally a problem in ornamental areas, but if it does occur, the plants can be dug out and a

mulch laid over the area to control the seedlings. Along roadsides and fences or in orchards and vineyards, the plants can be dug out during summer and left in place for the clumps of rhizomes to dry. As long as all the rhizomes are dug up and dried, the plant will not regrow. New seed will germinate and establish unless they are removed when they are seedlings.

Mulching with organic materials is not very effective for the control of mature dallisgrass. However, if the tops of the plants are removed, laying black plastic or landscape fabric over the area will control the remainder of the plant as well as any new seedlings. Summer solarization will most likely control dallisgrass also. For information on solarization, see the publication *Soil Solarization: A Nonpesticidal Method for Controlling Diseases, Nematodes, and Weeds* listed in "References."

Chemical Control

Where digging out clumps of dallisgrass in turfgrass is not practical, herbicides may be used. Herbicides to control established plants are referred to as postemergent herbicides. These herbicides are either selective and kill only specific weeds, or they are nonselective and kill any plant they come in contact with. To control germinating seed, preemergent herbicides are used.

Established Plants in Turfgrass. The postemergent herbicides MSMA or CMA can be used to control clumps of dallisgrass growing in turfgrass. These herbicides are relatively selective and must be applied two to three times at 3-week intervals in the summer. The turfgrass and dallisgrass should be in good growing condition before application. Also, it is best if the turf is left unmowed for 2 weeks before the first application to get the maximum amount of leaf area to spray the herbicide onto. Withhold irrigation for 24 hours after application. Don't apply these herbicides during hot weather and check the label for rate adjustments during warm weather to minimize the risk of injuring the turfgrass.

Some turf managers have used the nonselective herbicide glyphosate (Roundup) to control dallisgrass in turf. Glyphosate kills both the dallisgrass and the turfgrass, leaving an area of dead turf. To keep the turf vigorous and growing well enough to out-compete germinating dallisgrass seed, the spot needs to be overseeded. Sometimes the dallisgrass is not killed even though the turf is severely damaged or killed, thus requiring a re-treatment. Other nonselective postemergent herbicides are not as effective as glyphosate.

Seed in Turfgrass. Preemergent herbicides can be used in established turfgrass to control germinating dallisgrass seed. Apply preemergent herbicides in late winter or early spring before dallisgrass seed germinate. Herbicides that control crabgrass such as bensulide, pendimethalin, oryzalin, DCPA, prodiamine, oxadiazon, or dithiopyr are also effective on dallisgrass.

Ornamental and Noncrop Areas. In ornamental or noncrop areas, glyphosate can be used as a nonselective treatment to control established plants. Apply glyphosate when dallisgrass is flowering but before seed have been produced. The preemergent herbicides napropamide, pendimethalin, oryzalin, or combinations of benefin plus oryzalin, or benefin plus trifluralin are effective on preventing dallisgrass seed from germinating. Once seedlings appear, then postemergent herbicides are necessary to control them chemically.

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Produced by IPM Education and Publications, UC Statewide IPM Project, University of California, Davis, CA 95616-8620

This Pest Note is available on the World Wide Web (<http://www.ipm.ucdavis.edu>)



This publication has been anonymously peer reviewed for technical accuracy by University of California scientists and other qualified professionals. This review process was managed by the ANR Associate Editor for Pest Management.

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This material is partially based upon work supported by the Extension Service, U.S. Department of Agriculture, under special project Section 3(d), Integrated Pest Management.

WARNING ON THE USE OF CHEMICALS

Pesticides are poisonous. Always read and carefully follow all precautions and safety recommendations given on the container label. Store all chemicals in the original labeled containers in a locked cabinet or shed, away from food or feeds, and out of the reach of children, unauthorized persons, pets, and livestock.

Confine chemicals to the property being treated. Avoid drift onto neighboring properties, especially gardens containing fruits or vegetables ready to be picked.

Do not place containers containing pesticide in the trash nor pour pesticides down sink or toilet. Either use the pesticide according to the label or take unwanted pesticides to a Household Hazardous Waste Collection site. Contact your county agricultural commissioner for additional information on safe container disposal and for the location of the Household Hazardous Waste Collection site nearest you. Dispose of empty containers by following label directions. Never reuse or burn the containers or dispose of them in such a manner that they may contaminate water supplies or natural waterways.

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