

Bermudagrass Infestations in Cool-Season Turf

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Bermudagrass (*Cynodon* spp.) is an aggressive warm-season perennial that is a major turfgrass species in warm climates throughout the world. It spreads by rhizomes, stolons, and seed (except for improved hybrids) and its northern range as a turf species is the transition zone. Bermudagrass thrives in areas of moderate to high moisture, high sunlight, and daytime temperatures of greater than 95°F (35°C). Do these conditions sound familiar? For many turfgrass managers around the world, these conditions often exist in the middle of summer, including areas that grow cool-season turf year-round.

If you have these types of conditions, chances are bermudagrass is a weed of cool-season turf. Bermudagrass can be a major weed of bentgrasses, fescues, bluegrasses, and perennial ryegrass. In many areas of the world where bermudagrass is grown as a turfgrass species in fairways and roughs, and bentgrass is utilized on putting greens, bermudagrass encroachment into the bentgrass in summer seems like a runaway train.

Can Bermudagrass be Killed with Herbicides?

The answer to this question is yes, bermudagrass can be killed, but in practice it is seldom killed. Why? Because for complete bermudagrass kill, herbicides must be applied a minimum of twice, and usually three to four times. To put it another way, killing bermudagrass requires several herbicide applications and lots of patience. It is also easy to be tricked into believing bermudagrass is dead when in fact, it is still alive. For instance, **an application of glyphosate (Roundup Pro[®], Touchdown Pro[®], etc.) may cause the above-ground growth to brown out and totally disappear, but regrowth from rhizomes and stolons will occur months later or perhaps the following summer.** So how do you get rid of bermudagrass?

Nonselective Herbicide Programs to Kill Bermudagrass

If bermudagrass has infested cool-season turf, or if you are trying to kill bermudagrass where turf is not growing, one option is to use a nonselective herbicide. Among weed scientists, glyphosate (Roundup Pro[®], Touchdown Pro[®],

etc.) formulations are generally considered to be the most effective. Of course, glyphosate will also kill cool-season turfs. Therefore, the use of glyphosate will involve reseeding or reestablishing the turf once the bermudagrass has been killed. **During periods of active growth in mid-summer, bermudagrass should be sprayed with approximately 2 pounds of active ingredient/acre (2.2 kg ai/ha) or if spot-spraying, use a 2% to 3% solution of glyphosate. Wait for bermudagrass regrowth and re-apply at the same rate. To ensure good kill, this should be repeated a third time.** Dr. John Boyd, weed scientist at the University of Arkansas, has found that tank-mixing glyphosate plus fluazifop (Fusilade[®]) is very effective for control of bermudagrass. Dr. Boyd found that two applications of glyphosate (2 lb ai/a or 2.2 kg ai/ha) plus fluazifop (0.38 lb ai/a or 0.42 kg ai/ha) was as good as three applications of glyphosate at 2 lb ai/a (2.2 kg ai/ha).

Selective Herbicide Programs to Kill Bermudagrass

Selective control of bermudagrass is even more difficult than nonselective control. **Best results in cool-season turf include repeated applications of fenoxaprop (Acclaim Extra[®]) at 0.09 lb ai/a (0.1 kg ai/ha) at four-week intervals throughout the summer. In most climates, three to four applications can be made in the summer. The area should be monitored the following summer.** If bermudagrass comes back (and there is a good chance this will occur), reapply fenoxaprop as in the previous summer.

Additional research has shown that tank-mixing triclopyr ester at 1 lb ai/a (1.1 kg ai/ha) with each fenoxaprop application will enhance the control of bermudagrass. This will also provide broadleaf weed control. However, care should be taken when using triclopyr ester in the summer. Ester formulations are volatile and surrounding plants can be injured. In addition, turf discoloration may be worse and, of course, this can only be done in turfgrass species that are tolerant to both fenoxaprop and triclopyr. One last word of caution, this program cannot be applied to bentgrass putting greens because neither fenoxaprop nor triclopyr are registered for this use. 