

Controlling The Invasion Of Bermudagrass Into Bentgrass Putting Greens



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Every once in a while a golf course superintendent is faced with a serious problem on the course such as a disease outbreak, an insect invasion or a period of severe weather. Fortunately, these occurrences are usually fairly remote. There is one

nagging problem that is continuously present on golf courses in the south, especially those that have bentgrass greens. The problem is the slow, but inevitable, spread of bermudagrass from the collars or fairways into the greens.

The battle against the invading bermudagrass has been mostly mechanical but some superintendents choose to use chemicals. The profile of the battle zone is detailed in Figure 1. On some courses, the collars are bentgrass and the efforts to control the bermudagrass invasion take place at the collar-fairway line (B). Around greens that have bermudagrass collars, the control efforts take place at the green-collar boundary (A).

The most common of the mechanical devices used to sever the invading bermudagrass stolons is some type of a vertical knife. It may be a gasoline powered edger or a non-powered single disc blade.

The severed invading bermudagrass runners are removed from among the bentgrass plants by hand. If the invading bermudagrass is common, this job is much easier than if it is one of the bermudagrass hybrids such as 328 or 419. Common bermudagrass leaves and stolons are much larger than those of bentgrass or those of the bermudagrass

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Figure 1.



Figure 2.

hybrids. The employee assigned this task may need more training or experience to tell the difference between 328 and bentgrass than he or she would need to tell bentgrass from common bermudagrass.

Another mechanical technique involves the use of a sod cutter (Figure 2). When it becomes necessary, depending on the speed of the bermudagrass encroachment, the outer area of green, if the collar is bermudagrass, is removed with a sod cutter. If the collar is bentgrass, a strip is removed next to the bermudagrass fairway. As anyone who has ever had any experience will testify, cutting and laying sod is not an easy job and many times a great deal of top-dressing is required before the surface is truly smooth again. Of course, for this method of work, a source of clean bentgrass sod must be at hand. This usually means that the golf course would have to have its own nursery.

Common bermudagrass is a prolific seed producer and it is not too hard for seed to be moved from the fairways onto the greens via foot and/or vehicular traffic. The end result is that not only does the bermudagrass invade the sides of the green by runners but may "pop up" anywhere on the green from seed, especially if the green has a weak bermudagrass cover. Many superin-

tendents have their bentgrass greens checked regularly for young bermudagrass plants, but others take another approach.

Checking and removing bermudagrass from bentgrass can be a very expensive item of the labor budget and, of course, some clubs may not be able to afford the labor necessary for the task. On some courses in late summer or early fall, the old contaminated sod is completely removed, the soil mixture is sterilized in place with a material such as methyl bromide and seeded to bentgrass. With good weather the greens may be back in play in two or three months.

There may be a reasonable alternative to all these methods to keep bermudagrass out of bentgrass greens. This method involves establishing another variety of turfgrass between the bermudagrass and the bentgrass. This turfgrass must have several characteristics — it must not be an aggressive spreader; it must be able to be mowed at collar or fairway height; and it must be environmentally adapted to the area.

One of the turfgrasses that best fits these requirements is Emerald Zoysia. The finer leaved Emerald seems to be more desirable than the wider bladed Meyer. Zoysia is very capable of forming and maintaining a dense sod that is fairly resistant to

the invasion of bermudagrass. Another strong point in the favor of Zoysia is the fact that its favorable growth period is much the same as bermudagrass. During the hot periods of the year when bermudagrass is at its highest growth rate, bentgrass growth is nearly at its lowest rate and it is difficult to maintain a high enough density in a bentgrass green to resist bermudagrass invasion.

As indicated in Figure 3, the whole collar may be established in Zoysia or a strip or two of Zoysia sod may be placed just at the outside of the collar (Figure 4). In either event, the battle line against the invasion of bermudagrass has been moved away from the bentgrass and is now separated by a fairly non-aggressive turfgrass, Zoysia.

Zoysia is a turfgrass that has not found a popular use in many parts of the country, but in the south it just may make life a little easier for golf course superintendents that have bentgrass greens. **GB**

Figure 3.



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