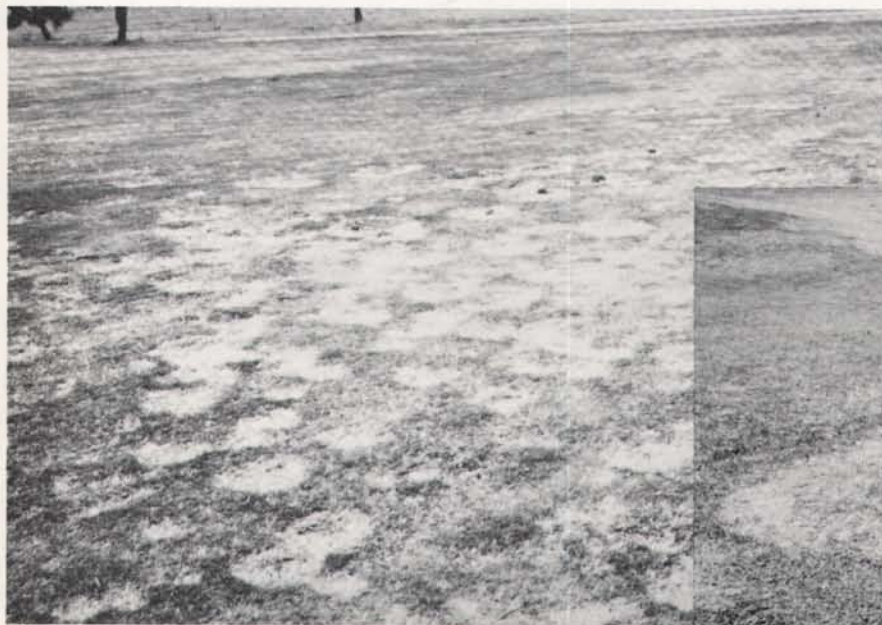


Springtime First Aid For Bermudagrass



Spring dead spot appears as circular dead spots from six inches to two feet in diameter.



Brown patch kills large circular patches of bermudagrass from three to 20 feet in diameter.

Bermudagrass remains unbeaten as a natural surface for sports fields in warm climates. No grass tolerates traffic or recovers better than bermudagrass because of its extensive rhizome and stolon system. During most of the year, it has relatively few disease problems and competes victoriously with weeds.

However, some problems and diseases do occur on bermudagrass. Athletic field managers should be aware of these problems to manage their fields effectively.

Late winter and early spring are especially important times to manage bermudagrass. The ravages of winter weather and use become visible at this time. Quick action is needed to bring the bermudagrass back to health for spring and summer sports. These problems are more severe in the northern range of adaptation of bermudagrass, near or in the transition zone.

One common solution to winter dormancy of bermudagrass has been overseeding with perennial ryegrass. This decision should be based on when the field is used. Newer perennial ryegrasses have better color and performance than older perennial or annual ryegrasses, but they also tend to compete

more with the bermudagrass as it comes out of dormancy in the spring.

If the field is used primarily for summer sports and fall football, overseeding is not necessary. Restricting field use in September during football season to overseed is difficult. If the field is not used heavily from December through April, why go through the phase-out of perennial ryegrass in the spring? It only complicates matters and takes the focus away from bermudagrass in the spring when it needs the most attention. Dyes can conceal the dormant tan color of bermudagrass during special events.

If the field is used for baseball in the winter and spring, then overseeding is a good idea. Damage to the dormant bermudagrass can be severe, certainly more severe than competition from perennial ryegrass in the spring would be. Again, the trick is finding a slow period in the fall to overseed without disrupting events.

Tools exist to discourage the ryegrass as bermuda comes out of dormancy. Mechanically the ryegrass can be knocked back by lowering the mowing height or verticutting. If the ryegrass persists, treatments with Kerb or MSMA/Sencor can be applied in the sum-

mer to restore the turf to pure bermudagrass.

Winter damage weakens the bermudagrass making it vulnerable to spring diseases such as spring dead spot and brown patch. Cold weather damage is most common in high-use areas: the center of football fields and the goal area of soccer fields. Areas that are shaded in the winter from nearby evergreen trees or buildings are frequently damaged by cold weather. Poor drainage or compacted soil compound winter kill and spring disease problems.

Cold damage can be reduced by using the most cold tolerant varieties of bermudagrass. Midiron and Vamont are known to be more cold tolerant and should be used in the northern range of bermudagrass adaptation. Common bermudagrass and many of the improved varieties such as Tifway will usually do well in more southern locations.

Good basic turf management is one of the best defenses against cold damage. Proper fertilization, with recommended rates of potassium and low rates of nitrogen in the late summer and fall, will increase the winter hardiness of bermudagrass. Turf managers are moving away from 3-1-1 fertilizers and are using instead fertilizers with

a 1-1 nitrogen to potassium ratio with applications of phosphorous as needed. Lower rates of nitrogen combined with aerification and vertical mowing during the growing season prevent the accumulation of thatch and help reduce the severity of spring dead spot.

Severe weed competition can slow the recovery of cold-damaged bermudagrass. A regular weed control program is therefore an important factor in bermudagrass recovery in the spring.

Some damage should be expected, however, during unusually cold winters. Turf managers should evaluate the damage early in the growing season to initiate a program to help the grass recover as early as possible in the summer. Damage from cold weather usually appears as large irregular-shaped dead areas or areas that recover slowly in the spring. Shaded areas and badly worn areas suffer the greatest losses.

The next greatest threat to bermudagrass in the spring is spring dead spot. This disease appears as small circular dead spots from six inches to two feet in diameter as bermudagrass resumes growth. It generally does not attack young bermuda, but instead starts to appear in turf when it is three to four years old. This disease occurs most often in the northern range of bermudagrass adaptation and following unusually cold winters.

Weeds take advantage of these dead spots to get established while the bermudagrass slowly recovers. The disease

often recurs in the same spots as they enlarge for three to four years. Some grass will survive in the center of the spots after two to three years resulting in small dead rings of turf. The disease usually disappears after three to four years, but may develop in other areas as the turf ages. Bermudagrass which has been overfertilized and developed excessive thatch appears to be more susceptible to spring dead spot.

The fungus *Leptosphaeria narmari* has been indicated as the cause of spring dead spot in some places. This fungus attacks the roots and causes the disease during cool weather in the fall or winter.

The fungicide benomyl has been used in some states to counter the fungus. However, it must be applied at high rates in the fall to areas that were previously affected to obtain results for the following spring. Benomyl is currently labelled for this use in only certain states.

Brown patch has been observed on some bermudagrass fields in recent years. This disease, caused by the fungus *Rhizoctonia solani*, appears as large circular brown patches from three feet to more than 20 feet in diameter. These patches become evident as bermudagrass starts to green-up in the spring or during cool wet weather in the fall before it goes dormant. The fungus kills the new shoots near the soil surface where they are attached to the stolons. A ring of dying shoots is often present at the edge of the patches during cool, wet weather. These

shoots can be easily pulled from the stolons.

Brown patch can make a bermudagrass athletic field unsightly in early summer, but the grass usually recovers during the hotter weather and good growing conditions of summer. Fungicides have not given satisfactory control of this disease. A good turf management program that provides good soil drainage, proper fertilization and weed control has helped prevent this disease and encouraged recovery in affected patches.

Fairy rings are another fungus that sometimes develop on athletic fields. The large circular rings of very green or dead grass or rings of mushrooms grow from a few inches to several feet in diameter during the year. Once established, these rings remain for many years. Mushroom-type fungi that grow on organic matter in the soil cause this problem. These fungi damage the grass by releasing extra amounts of nitrogen or toxic substance from organic matter in the soil. They also are known to make the soil hydrophobic so that water will not penetrate the soil surface.

Fungicides are not effective in controlling fairy rings. Rototilling the soil in the affected areas and replanting healthy grass has been most effective in eliminating some fairy ring problems. Aerification of the soil and frequent irrigation will help reduce the damage from fairy rings in some cases. Do not incorporate large amounts of organic matter in the soil or bury organic debris such

continued on page 36

Sometimes Big Isn't Better

Discover the Mid-Size Walker Mower



Accepted practice in the lawn maintenance business has been to use the BIG commercial rider mower for open areas and walk-behinds for trimming. Now maintenance operators all across the country are discovering a new, fast efficient way to mow landscaped areas. For many jobs the maneuverable MID-SIZE WALKER MOWER does the whole job saving time, labor, and equipment investment. And Walker offers high productivity without sacrificing a quality cutting job, sure to please the most discriminating customer.

Walker Mfg. Co., 1839 E. Harmony Road, Dept. GM, Fort Collins, CO 80525 • (303) 226-1514

as building materials or stumps in areas to be used for athletic fields.

Helminthosporium diseases sometimes occur on bermudagrass and cause leafspot and root rot type diseases. The leafspot diseases are usually more prevalent during the late summer and early fall and do not appear to cause severe damage to bermudagrass. A good healthy turf should be able to tolerate the damage from leafspot. Root and crown rot caused by these fungi

may cause damage on bermudagrass at times. Fungicides can be used to control these diseases, but a good management program remains the best control.

Dollar spot is often seen in the late summer or fall on bermudagrass and especially on turf that is deficient in nitrogen. Spots are light brown to tan and are one to four inches in diameter. An application of nitrogen will help the bermudagrass recover from this disease. The diseased leaves will be mowed off as the grass grows. However, avoid applying more nitrogen than is needed at the

particular time of year so that the winter hardness of the turf is not reduced.

Another threat to bermudagrass is the nematode. These tiny worm-like pests are a major problem in the southeastern United States during the summer where bermudagrass is grown on very sandy soils.

Symptoms of nematode damage are poor growth of turf following proper fertilization and irrigation and a thinning of the turf. These symptoms may be present over the entire field or in isolated patches. The roots of the bermudagrass will be short, stunted and brown rather than white and long.

The most damaging nematode is the sting nematode which is limited to the sandy soils of the southeast. Treatment with nematocides will give good results if the sting nematode is causing the damage.

Other factors cause symptoms similar to nematode damage so soil assays from suspected areas are needed to confirm nematodes as the cause. Public and private laboratories will do these assays in most states.

Nematicides are very toxic chemicals and most are not labelled for use on turfgrasses. If a nematicide is labelled for use on athletic fields in your state, be sure it is applied by a licensed applicator and that the specified waiting period is allowed before using the field.

EDITOR'S NOTE: Leon Lucas is professor of plant pathology at North Carolina State University, Raleigh, NC.



Many southern athletic field managers face sparse turf in the spring suffering from diseases, winterkill and compaction.



THE PROFESSIONAL'S CHOICE
... SINCE 1922

BEAM CLAY IS THE RED BASEBALL MIX USED BY PROFESSIONAL TEAMS ACROSS THE U.S.A. AND CANADA SPECIAL MIXES FOR PITCHER'S MOUNDS, HOMEPLATE AREAS & WARNING TRACKS.

BOTH AVAILABLE IN BULK OR BAGS

CALL TOLL FREE:

(800) 247-BEAM
IN N.J.

(201) 637-4191

PARTAC PEAT CORPORATION

KELSEY PARK
GREAT MEADOWS, N.J.
07838

PARTAC®
GOLF COURSE
TOP-DRESSING



AMERICA'S PREMIUM TOP-DRESSING

HEAT TREATED

CONTROL THATCH
PROMOTE HEALTHY TURF
& SMOOTH PLAYING SURFACES