

DEALING WITH THAT DEAD SPOT IN YOUR RIO GRANDE VALLEY LAWN

Do you have an area of your lawn that is dying? Does it look like it needs more water, and when you water, the grass dies out even more? The cause of the problem could be a root rot disease caused by a fungus. The name of this disease, is “take-all patch” and is caused by the fungus with the tongue-twisting moniker, *Gaeumannomyces graminis* var. *graminis*. Based on samples sent to the plant disease diagnostic clinic, in College Station, it is by far the most prevalent disease of St. Augustine grass and bermuda grass. These are the two most commonly grown turfgrasses in the Lower Rio Grande Valley. Yet this disease is under-recognized as the cause of dead patches in our lawns. It is often misdiagnosed as a different disease, such as “brown patch”, which is caused by the fungus, *Rhizoctonia solani*. Brown patch and take-all patch are similar in that they both result in dead areas in lawns. However, the fungi that cause these diseases have quite different treatment recommendations, including the fungicides that are effective against them.

Conditions that favor disease development.

These ‘patch’ diseases differ in the time of year they appear. Brown patch is a problem in the winter months, during periods of cool, wet weather. As the temperature increases in the spring, the grass recovers from this disease. Take-all patch is noticed in the spring, when temperatures increase, and the affected grass does not recover during the hotter months. Take-all patch fungus probably grows year-round, rotting grass roots, but the damage is not noticed in the winter months because of the reduced water demand by the grass.

These diseases also differ in the parts of the grass they infect. Take-all patch fungi cause only the roots to rot. The grass stolons, or runners, are not affected, but they can be covered with the fungal growth of this organism, giving the plant a dirty appearance. Brown patch fungi cause only the leaves to rot. The leaves develop a brownish appearance and are easily pulled from where they are attached to the stolon. To determine which fungus is causing the dead ‘patch’ in your lawn, be sure to check around the outer edges of the dead area, as this is where the fungi are most likely causing new infections. If the grass has been dead for some time, it may not be possible to determine which disease is present. Check pieces of grass where the leaves are dying, but the stolons are still green. You may need to check several pieces in order to be sure.

Disease diagnosis.

If you are unsure about the diagnosis, collect a sample for examination by a plant disease diagnostic clinic or a Texas Certified Nursery Professional at your local nursery. Take-all patch can be difficult for a clinic to diagnose because of poor samples. With the ideal sample, the stolons are green, as are the leaf blades, but the roots are rotted. Often, there is a black or brown “grungy” coating on the stolon near the node. Make sure the sample has a lot of these, because this is where the diagnostic structures of the fungus can be found. Contact your county agricultural

extension office for details on how to collect samples and for the address of the Texas A&M Plant Disease Diagnostic Clinic in College Station. The diagnosis costs \$20.

Cultural causes of disease development.

The appearance of either of these 'patch' diseases indicates something is wrong in the management of your turfgrass. Improper management can put your grass under stress and increase disease susceptibility. A change in management is needed to reduce the stress, but the practices differ for each disease.

Brown patch is favored by wet foliage, so changing the time of watering from evenings to early morning will help by reducing the amount of time the foliage is wet. High levels of nitrogen also favor brown patch, so cutting back on fertilizer will help.

Take-all patch is favored by frequent watering, e.g. with automatic sprinklers that are activated on a daily basis for a short period of time. This fungus likes moist soil conditions. Additionally, frequent watering leads to shallow-rooted grass that becomes more easily stressed by drought and less able to withstand the loss of roots from rot. To encourage grass to put down deeper roots, lawns should be watered when they start to wilt and show discoloration. One inch of water should be applied within 1-2 days at the start of wilting. In the winter months, the frequency could be between 1-2 weeks, while in the summer months, the frequency could be as little as five days. There is no fixed schedule to watering and people should experiment with their watering frequency, by trying to drag it out for as long as possible between waterings. **Thus, a key management strategy for take-all patch is to water the turf more heavily, but less frequently.** This strategy will also help grass withstand drought conditions.

Fungicides.

Fungicides are an important component to managing both 'patch' diseases, but they need to be used in combination with altered management practices. The correct diagnosis of the cause of the 'patch' disease is important for fungicide control because the fungicides that are effective against take-all patch are not effective against brown patch and vice versa. In fact, take-all patch was recognized as a result of the failure of recommended fungicides to control brown-patch. The fungicides that are effective against take-all patch are Rubigan (fenarimol), Banner (propiconazole), and Bayleton (triadimefon), but only Bayleton is readily available at garden supply stores. Brown patch is controlled by fungicides, that have formulations containing PCNB or chlorothalonil. **Be sure to read the label for details on applying the fungicide or hire a professional lawn disease care specialists.**

Lawn maintenance and repair.

When take-all patch has been diagnosed and steps have been taken to manage it, the recovery of dead areas will take a long time (i.e. months). As for what to do with bare soil patches, one could choose to wait for stolons from unaffected areas to grow over them, mindful of possible problems with weeds, or one could re-sod portions of the lawn. Although the fungus is soilborne, new pieces of sod should not be affected if they are properly maintained. Proper watering of the new sod will help keep it healthy. **A well maintained lawn will not need fungicide applications to keep disease out.**

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