



Managing Summer Pests In Turf

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Editor's Note: With summer fast upon us, this timely article by Hank Wilkinson seemed to be a perfect fit for From Across The Country this issue. A call to my good friend and fellow editor, Fred Opperman, netted his kind to permission to share it with GRASS ROOTS readers. It appeared in the April 1996 issue of ON COURSE, the official publication of the Midwest Association of Golf Course Superintendents. Nearly everyone will remember this journal as THE BULL SHEET. The association changed the name this past year—yet another sign of the politically correct times we live in, I guess. That notwithstanding, it is still an excellent journal presented by an equally excellent editor.

Summer pests in turf include diseases, nematodes and insects. The intention of this article is not to give you specific directions for each disease, nematode or insect but instead to give you some general, but very useful, directions for dealing with disease problems.

All turf managers should appreciate the subtle difference between controlling pests and managing pests. Pest control, to me, refers to reducing the population of a particular pest. For example, reducing the population of white grubs by treating them with an insecticide is a form of control. On the other hand, producing strong turf and reducing turf stress through proper fertilization, watering, and the use of insecticides when white grub populations exceed their damage threshold, collectively, are how to manage white grubs so their damage does not become severe. In brief, managing pests does not mean that you try to eliminate them; it means you try to keep them in balance or check.

An excellent example of this is the fungi that degrade thatch. These fungi

are beneficial, but these same fungi also can cause fairy rings, yellow ring and other diseases of turf.

If you eliminate them, thatch will increase, and you will have other problems. The key to managing these fungi is not to allow your turf to grow too fast and encourage the fungi to rapidly destroy the thatch that is produced.

Foliar diseases of summer

These diseases would include dollar spot, brown patch, smuts, and rusts on cool season grasses. All of them primarily attack the leaves and thus can be described as non-killing. I say this because they do not attack and kill the survival structures (crown, rhizomes or stolons) nor do they attack and kill the roots, which could result in death of the plant.

However, that they attack the leaves in the summer results in disease symptoms that seem to last a long time. This observation also suggests a means of managing the severity of these diseases. If the turf is growing, then the severity of these diseases is reduced. The simple reason is that if the leaves continue to extend while being attacked, then through mowing the diseased leaf tissue will be removed, i.e., you see less diseased tissues.

I am not suggesting that the faster the grass grows the better, but instead, keeping the grass growing at a reasonable rate (mowing required at least once a week) will keep disease severity down. This is due to a couple of reasons. First, actively growing turf can tolerate more disease than a weak plant before stress will send the plant into a survival mode; and second, the strong growth will allow the grass to replace the damaged tissue. Thus, when you mow, the grass rids itself of the diseased tissue. Foliar disease severity increases when there is high humidity and/or free moisture.

I would recommend that you water the turf thoroughly enough to keep the root zone moist, but avoid frequent, light waterings that keep the leaves and thatch damp. Mowing turf is an excellent way to reduce the period that leaves are wet because the short leaves are dried by air movement faster than long leaves. Wet leaves are conducive to disease. You will not damage or stress your turf with frequent mowing, but do not make large or sudden changes in the height of cut.

Finally, if the prevailing conditions and the management that you must adhere to allow disease severity to exceed your threshold level of acceptance, then fungicides should be used. I strongly recommend that you make full use of cultural practices to prevent or reduce disease before you elect to use fungicides. I say this because it is better for your turf to be culturally managed than chemically treated. It is unclear how many of the beneficial

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fungi in turf are negatively affected by fungicides, but it is clear that fungi are important for healthy balanced turf. A program that is taking advantage of cultural practices for disease management will also reap the greatest benefits from fungicides. In fact, our research suggests that in a properly managed turf, the use of fungicides can be reduced both in rate and application frequency.

Pythium blight of summer turf

This is the most destructive disease of turf and occurs during the warmest time of summer. It affects all species of grass, can destroy many square feet of grass in hours, and is prone to attack intensely managed turf.

Water and temperature are the main driving forces for this disease, but high nitrogen (greater than 5%) in the leaves also fuels this disease. To manage this disease: water infrequently, keep the turf areas open to circulation so the leaves dry each day, slow down on the amount of applied nitrogen, and know the "hot" spots in your turf where Pythium blight may develop.

Pythium blight usually develops in the same general areas of a turf each year, and the pathogen is spread by moving water. If you are going to use a fungicide to keep the population of Pythium in check, try treating only the "hot" spots. Use a systemic prior to conditions that support the disease. If the disease becomes severe, use a contact fungicide in between applications of the systemic. Also, be sure to change the type of fungicide that you use to avoid potential pathogen resistance.

Summer patch

As the name implies, this is a soil-borne disease that is seen in the summer. However, it actually starts developing in the spring of the year when the soil temperatures are about 21 degrees C two inches beneath the turf. When you see summer patch in June-September, there is little you can do to stop the disease, for most of the damage is done.

The times to manage summer patch are spring and fall. Fortunately, summer patch can only be spread by the movement of infected, living turf.

Thus, it will develop year after year in the same areas. Once you have observed the problem, focus your management on those "hot" spots. In the spring and fall, make sure that your management promotes strong turf growth. Next, consider the use of a fungicide in the spring and possibly the fall. Soil-borne diseases like summer patch, once started, are very difficult to manage without the help of fungicides to reestablish balance in the turf.

Summary

I have only described the most prevalent summer diseases of turf. I strongly recommend that you keep a calendar upon which you record when you observe each disease that affects your turf. Also, be sure to get an accurate diagnosis of the diseases that you observe. Next, identify on a map of your turf areas where the various diseases occur. Take your calendar and area maps to a pathologist and discuss your situation. You will be pleased to find that planning ahead can make the management of disease realistic. ♣



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