Rusty Grass

What do car rust and turf rust have in common?

You can't stop either one, once they start!

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It is that time of the year when your workers and golfers are going to turn up a bit orange after walking or playing on the turf. The orange color is the result of microscopic spores produced by a fungus, named after the Italian scientist, Dr. Puccinia (English pronunciation puck-sin-e-ah or Italian pronunciation poo-chi-nia). The orange spores are very, very tiny, similar in size to pollen grains. We all know pollen; it can bring on allergenic responses. Rust spores are similar in shape and surface features to pollen grains. It will surprise you to learn that most people are not allergic to rust spores; however, it never hurts to keep an eye on your workers or golfers after operating in the rusty grass. The biggest problem with rusty turf is that your clothes and equipment develop an orange tint. Rust spores are marvels of nature, designed to survive heat, drought and exposure and equipped to attach to most surfaces for a free ride.

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Rust fungi grow in most living plants, including turf. However, the life cycle of a rust fungus is complicated. Many rusts not only produce orange spores, but black, brown or colorless spores as well. You do not often see these because they are fewer in number and harder to see than the orange or rust-colored spores. Rust fungi are very old fungi and existed long before America, Europe or the Middle East civilizations developed. They are known to have existed before recorded history. Ah, you say, how can I know they existed before recorded history? Well, rust fungi have been found as fossils, history "recorded" by nature. The bottom line is, the rust fungi have been around a long time and they "know" how to survive. This means that humans must learn to live with them and not try to eliminate them.

Each spring, the rust fungi start their growth cycle. Some attack grasses in the spring while others attack bushes like barberry growing as a hedge. We do not often notice them in the spring, but as the summer progresses, the fungi all start attacking and growing in grass leaves. By August and September, when it is normally hot and dry, the grass is growing slowly, and this allows the fungus enough time to produce billions and billions of rusty spores before you mow your lawn. When you do mow or walk in turf, you stir up the spores and the air and you can turn rust-colored.

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In Illinois, rust diseases are generally not a problem that requires an involved control program. However, managers of those turfs that develop

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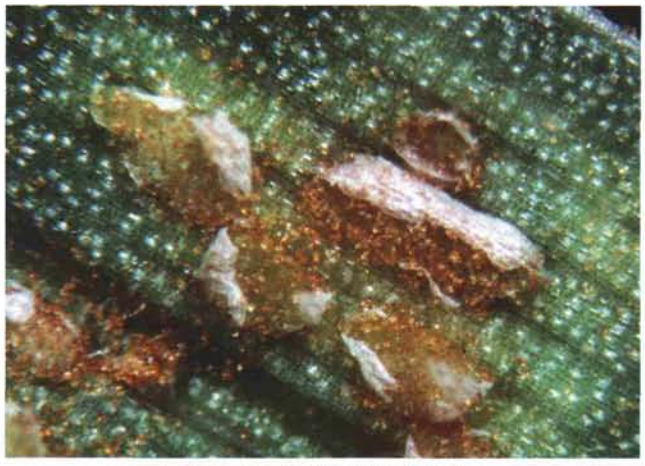

A close-up look at rust spores.

severe rust disease in the fall might want to consider a more aggressive program that involves cultural and chemical approaches. In addition, when selecting a grass (seed or sod), pay attention to the rust resistance offered. Rust disease is very important for grass seed production in the Northwest region of the United States because the grass is allowed to grow tall and long, and the environment there is conducive to severe symptom development. As a result, turf breeders try to select grasses with good rust resistance. If your major concern is managing the problematic rust spores and not the turf disease, here are a few pointers.

What can you do to reduce the amount of rust spores?

Keep your grass growing and mowed in the summer.

Give your turf enough water and fertilizer to keep the leaves growing. This means you will have to mow it all summer, but it reduces the time the fungus has to develop before the leaf is cut off. Mow the grass at least once per week. Once the leaf is cut off, the fungus will die.

Irrigate your lawn/turf before you play on it or mow it.

Lightly wetting the grass leaves will prevent the spores from puffing up when you mow it or run on it. This is also a good idea if you want to reduce the amount of orange spores in an athletic field. A light wetting should not interfere with the game.

Allow more light and more wind.

Trimming trees, removing old bushes or whatever you can do to improve the amount of light that reaches your turf and the amount of air circulation will help reduce the severity of rust diseases.

Apply fungicides!

There are a number of fungicides that can be applied to reduce the infection of rusts, but remember, rust infection starts in early summer and continues through the early fall. Therefore, if you have had a rust problem in the past and feel that fungicides are needed, I would suggest that you limit your applications to those problematic areas. This will reduce the cost and amount of fungicides that you will have to invest in. Note that I do not recommend this. I prefer not to see fungicides applied to turf for the management of rust diseases. It is costly, adds a toxin to the leaves and you have to do it repeatedly during the summer to get good control. In addition, the rust is only a problem if you do not like the color!

Select good grass seed or sod.

Some grasses are less prone to fungal attack or better resist summer heat and drought. You should always use premium-quality grass seed or sod as these varieties often develop less rust disease. Keep this in mind for new turf establishment or overseeding.