

Death, Taxes, Merion and Stripe Smut

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They say that in this life the only thing you can be guaranteed of is that some day you will die and as long as you live you will pay taxes. For those of us in the turf world, there is one more thing that can be guaranteed, if you plant "Merion" Kentucky bluegrass you will have a stripe smut problem.

Stripe smut is a systemic disease that is perennial. Once a plant is infected, it will remain so for life. All plants arising from an infected plant via stolens or rhizomes will also be infected with stripe smut. Because of the perennial nature of the disease, re-infection does not have to occur every year, like it does with most other turfgrass diseases. Stripe smut-infected Merion plants are always in a weakened condition and, when placed under stress, they will die. The most common stresses are moisture stress, during the hot dry weather of summer, and dessication during the late winter or early spring.

Stripe smut-infected plants are easily recognized in the cool weather of the spring and fall by the black spore masses of the fungus which can be seen in the veinial areas of the leaves. These spores will eventually rupture the epidermis of the leaf and can be collected on ones finger or handkerchief by rubbing an infected leaf. Careful examination of the infected plant will show it to be stunted, with a poorly developed root system, and a greatly reduced ability to tiller. This tends to give a stripe smut infected turf a clumpy appearance as individual plants are destroyed. Because of the inability of stripe smut plants to produce tillers and fill in the bare spots, these areas are usually invaded by weedy grass like quackgrass, tall fescue, and crabgrass or broadleaf weeds like dandelions, chickweed and knotweed.

Stripe smut can be controlled chemically with the systemic fungicides. (Tersan 1991, Fungo, Cleary's 3336, and Spot Kleen.) However, the control is very expensive and must be repeated every season. To control stripe smut with a systemic fungicide, 8 oz/1000 sq. ft. must be applied dormant and drenched into the soil. This dormant application of a systemic fungicide appears to make Merion, which is normally Helminthosporium-resistant, susceptible to Helminthosporium and consequently a Helminthosporium control must also be applied.

You ask "how can this problem be avoided. The answer is simple. Avoid planting Merion Kentucky bluegrass. That doesn't mean you can plant just any other Kentucky bluegrass because Windsor is equally susceptible to stripe smut and many other varieties are susceptible to Helminthosporium. What you should do is blend three or four of the improved Kentucky bluegrass varieties like Adelphi, Galaxie, Baron, Tuckdown, etc. A blend should prevent complete destruction of a turf area should a new race of the stripe smut fungus develop which might be able to attack any one particular variety of the blend. The probability of a new race of the stripe smut fungus developing which could attack all four varieties is remote.