

KENTUCKY BLUEGRASS DISEASE CONTROL MADE EASY

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The easiest way to control diseases of Kentucky bluegrass is through the use of cultivars which offer the best disease resistance and the use of sound cultural practices on the resistant cultivars. The major diseases are Helminthosporium (melting-out, leaf spot) caused by Helminthosporium vagans, Fusarium blight, caused by Fusarium roseum, and stripe smut caused by Ustilago striiformis. The minor diseases are powdery mildew caused by Erysiphe graminis, the rusts caused by Puccinia spp. and fairy ring caused by various fungi mostly in the class Basidiomycetes.

First, let's dispose of the minor diseases. Powdery mildew is a problem on some Kentucky bluegrass varieties (i.e. Merion, Baron, Fylking) when they are grown in the shade. Solution: avoid planting susceptible varieties in the shade, instead use Kentucky bluegrass cultivars like Warren's A-34 and Nugget, which are shade adapted. The rusts are a problem on slow growing turfs, usually due to the lack of nitrogen fertility. The rust problem can be eliminated by increasing the amount of nitrogen or the frequency of nitrogen application so the turf is mowed at least once a week. This leaves only fairy ring as an unsolved problem. Fairy ring is really not a disease problem in the sense of a pathogen attacking a grass host; it is simply a fungus growing in the thatch or organic matter the body (mycelium) of which is hydrophobic and forms a water-impervious layer. Consequently, where the main body of the fungus is, the turf dies from lack of water. The only control is to remove the fairy ring along with the contaminated soil and replace with clean soil, or else fumigate the area. Fairy rings are most often found in turf areas where tree branches, roots or trunks have not been removed or where they have been used as fill. Avoiding such practices will help prevent the development of fairy rings.

I am sure most of you do not consider Helminthosporium to be a major problem in Kentucky bluegrass. It is not a major disease problem because of the many Helminthosporium resistant cultivars which have been available for many years. "Merion's" popularity and wide use can be directly attributed to the fact it was the first and only Helminthosporium resistant cultivar available for many years.

Today, Fusarium blight and stripe smut receive all the notoriety as the major diseases of Kentucky bluegrass, however, if it were not for the many Helminthosporium resistant cultivars which are available, Fusarium blight and stripe smut would not be as important as they are today. Helminthosporium would have eliminated the desirable Kentucky bluegrasses long before Fusarium blight and stripe smut had a chance to be a problem!

What are the best Helminthosporium resistant cultivars?

There are many cultivars which have excellent Helminthosporium resistance, but this disease cannot be looked at alone. Fusarium blight and stripe smut must also be taken into consideration. Merion and Windsor have excellent resistance to Helminthosporium but are very susceptible to stripe smut and Fusarium blight. Fylking, Nugget and Pennstar likewise have excellent resistance to Helminthosporium but all are highly susceptible to Fusarium blight. Using any of these cultivars will result in an unsatisfactory turf.

Rather than trying to list all the Kentucky bluegrass cultivars that are susceptible to stripe smut and Fusarium blight, it is better to accent the positive and list

what appears today to be the varieties with the best resistance to all three diseases:

Adelphi
Majestic
Galaxy
Touchdown
Parade
Baron

Since blends give added strength to a turf, especially against such diseases as stripe smut, a blend of 3 or 4 of these Kentucky bluegrass cultivars would be ideal.

This is not to say that these cultivars will always remain resistant or that some new disease won't come along and destroy them. However, based on our present knowledge these are the best available varieties. At least there is a chance to have a disease free turf using these disease resistant cultivars, no such chance exists when you use the disease susceptible cultivars like Merion, Fylking, Pennstar, Nugget and Windsor.