TURFGRASS

Brown Patch on Fescue

We have been receiving numerous reports of brown patch showing up on tall fescue. Though brown patch can show up as distinct spots, it often appears as a more general browning of the turf. This disease is favored by warm night temperatures and extended periods of leaf wetness. If you go outside in the morning and the lawn is covered with dew and the temperature is in the high 60s or higher, conditions are getting right for brown patch. During severe outbreaks, the fungus may invade the lower leaf sheaths and crown and kill plants. But in most cases the turfgrass can recover from brown patch. This recovery may take two to three weeks depending on weather.

There is no way to eliminate brown patch from a lawn. It will persist indefinitely in the soil. Therefore, the disease is not carried from one lawn to another. In almost all cases, the limiting factor for brown patch development is the weather, not the amount of fungal inoculum.

Although you can’t eliminate the fungus, cultural practices – especially irrigation – can help control it. Don't water in the evening; instead, water early in the morning. This will help decrease the number of hours the leaf tissue remains wet and susceptible to infection. The frequency of irrigation is not as important as the time of day you do it. Don't overfertilize, and certainly don't fertilize when brown patch is active. Also, don't get your seeding or overseeding rates too high.

Fungicides can be effective in preventing brown patch, but the two most commonly used products (Heritage and ProStar) are expensive and not available in small quantities to the general public. Homeowners do have access to some effective products including triadimefon (Bayer Fungus Control for Lawns and Green Light Fung-Away), propiconazole (Fertilome Liquid Systemic Fungicide) and myclobutanil (Immunox). Of the three, triadimefon may be the fungicide of choice because it protects the turf longer (3 to 5 weeks rather than 2 weeks). But my suggestion is not to use fungicides unless you want to maintain a blemish-free yard and are
willing to pay for it. In those cases, you would need to be on a preventative spray program, which is very expensive, rather than waiting for symptoms and applying as a curative. That is because these products do not cure an infection already present but are only effective as a preventative. Applications should begin in mid-June and continue through August. Remember that more often than not the turf will recover from brown patch. (WU)

**VEGETABLES**

**Common Smut on Sweet Corn**

![Image of sweet corn smut]

Smut (Ustilago maydis) is a fungal disease of corn that may infect leaves, stems or ears though infections on ears are the most obvious. Immature galls are white and spongy but become brown with dark powdery spores with maturity. Leaf galls remain small but those on the ears or stems can become rather large and will release large numbers of spores when they rupture. This disease is likely to be most severe on plants injured by hail, cultivation or insects and tends to be worse on soils that have had heavy applications of nitrogen fertilizer or manure. Also anything that slows growth such as hot, dry weather or cool, wet weather when the plants are young can result in more infections.

Immature smut galls are considered an edible delicacy known as cuitlacoche in Mexico. They are a high value crop for some growers in the northeast U.S. who sell them to Mexican restaurants.

There is no chemical control for this disease. Crop rotation and a balanced fertilizer program can help minimize this disease. Remove and destroy galls from infected plants before they rupture. (WU)

**Vegetables Produce Flowers But No Fruit**

![Images of watermelon flowers]

If you have vegetables that are blooming but not setting fruit, you may have a problem with flower pollination. There are several possible reasons for this that usually vary by species. However, we do have one condition that can affect several species at the same time and that is
overfertilization. Too much nitrogen causes the plant to emphasize vegetative growth often to the
detriment of fruit production. Overfertilization can lead to a delay in flower production as well as
to a decrease in fruit set among the flowers that are produced.

Squash can have a couple of other problems. First, the early flowers on these plants are usually
all male. The production of both male and female flowers becomes more balanced as time passes.
You can easily tell the difference between the two because only the female flower has a tiny fruit
behind the blossom. If you have both, haven't over-fertilized and still have a problem, make sure
you have pollinators. Look for the presence of bees visiting the plants. If you don't see any, try
hand-pollinating several flowers. Use a painter’s brush to transfer pollen from the anther of the
male flower to the stigma of the female flower. If you get fruit on only those flowers you
pollinated, you need more pollinators. Make sure you aren't killing them with overuse of
insecticides.

Tomatoes are wind pollinated and therefore are not dependent on pollinators. But they have
another possible problem, which is temperature. Tomatoes normally won't set if the night
temperature is below 50 due to sparse production of pollen. They also won't set when night
temperatures are above 75 degrees F and day temperatures are above 95 degrees F with dry, hot
winds. (WU)

FLOWERS

Dividing Iris

Bearded irises are well adapted to Kansas and multiply quickly. After several years, the centers of
the clumps tend to lose vigor, and flowering occurs toward the outside. Dividing iris every three to five
years will help rejuvenate them and increase flowering. Iris may be divided from late July
through August, but late July through early August is ideal.

Because iris clumps are fairly shallow, it is easy to
dig up the entire clump. The root system of the
plant consists of thick rhizomes and smaller feeder roots. Use a sharp knife to cut the rhizomes
apart so each division consists of a fan of leaves and a section of rhizome. The best divisions are
made from a double fan that consists of two small rhizomes attached to a larger one, which forms
a Y-shaped division. Each of these small rhizomes has a fan of leaves. The rhizomes that do not
split produce single fans. The double fans are preferred because they produce more flowers the
first year after planting. Single fans take a year to build up strength.

Rhizomes that show signs of damage due to iris borers or soft rot may be discarded, but you may
want to physically remove borers from rhizomes and replant if the damage is not severe. It is
possible to treat mild cases of soft rot by scraping out the affected tissue, allowing it to dry in the
sun and dipping it in a 10 percent solution of household bleach. Make the bleach solution by mixing one-part bleach with nine parts water. Rinse the treated rhizomes with water and allow them to dry before replanting.

Cut the leaves back by two-thirds before replanting. Prepare the soil by removing weeds and fertilizing. Fertilize according to soil test recommendations or by applying a complete fertilizer, such as a 10-10-10, at the rate of 1 pound per 100 square feet. Mix the fertilizer into the soil to a depth of 6 inches. Be wary of using a complete fertilizer in areas that have been fertilized heavily in the past. A growing number of soil tests show phosphorus levels that are high enough to interfere with the uptake of other nutrients. In such cases, use a fertilizer that has a much higher first number (nitrogen) than second (phosphorus). (WU)

PESTS

Dwarf Spruce Showing Damage from Mites

Though we often assume problems with spruces are due to their poor adaptability to our Kansas climate, there are other pests that we need to be aware of. For example, we are seeing Dwarf Alberta spruces showing damage caused by a couple of cool-season mites. The spruce spider mite (Oligonychus ununguis) and the hemlock rust mite (Nalepella tsugifoliae) are quite small; about the size of a pollen grain and are most active during the spring and fall. These cool-season mites spend the summer as eggs. Therefore, we are seeing the symptoms of bronzing and yellowing of needles showing up later than the damage actually occurred.

Control measures must be done when the mites are active in the spring and fall. To test for an infestation, tap a branch while suspending a white sheet of paper underneath. Specks that move are probably spider mites. Control can be a challenge because the dense growth of these plants makes it difficult to reach all the interior portions of the plant with the miticide. This dense growth also interferes with one of the oldest mite control techniques; a strong spray of water. Mites can literally be knocked off an infested plant if hit with enough force. Unfortunately, effective pesticides are limited. Mites are more closely related to spiders than insects and therefore many insecticides are ineffective. We have a couple of materials that homeowners can use that should help. Horticultural oil and horticultural soaps will control mites directly contacted. Repeat applications will likely be needed. (WU)
Green June Beetle

These large beetles feed on sweet corn, blackberries and peaches. They look much like our common May beetle, or June bug, but have a dull, velvety green color. The underside is more of an iridescent green. These beetles have poor navigational skills and seem to fly until they hit something. They also make a buzzing sound somewhat like a bumblebee. Unfortunately, they are also about the size of a bumblebee and so cause concern for many gardeners even though they cannot harm people. However, as noted above, they may damage crops.

So, how do we control them? A number of general use insecticides, including Sevin and malathion, may be used to discourage their feeding. Sevin has a two-day waiting period between spraying and harvest on sweet corn and a three-day waiting period on peaches. But there is a seven-day waiting period for Sevin on blackberries, so malathion, with a one-day waiting period, may be a better choice. (WU)

Walnut Caterpillars

If you notice leaves disappearing from walnut trees, it may be walnut caterpillars. Walnut caterpillars attack primarily black walnut, pecan and several species of hickory trees, but may also attack birch, oak, willow, honey locust and apple trees.

Walnut caterpillars overwinter as pupae underground beneath host trees. In late spring, moths emerge and deposit egg clusters on lower leaves. By the end of June, newly emerged and gregarious larvae skeletonize leaves. Larger hairy, brick-red larvae consume greater amounts of leaf tissue, and nearly matured gray larvae devour entire leaves, including petioles.

When disturbed, larvae will arch their bodies in what looks like a defensive move. Larvae will crowd together on the lower parts of trees to molt and leave an ugly patch of hairy skins. Mature larvae, 2 inches long, descend or drop to the ground where they enter the soil to pupate. A second generation occurs soon, creating the overwintering pupae.

Removing leaves with egg masses is a common way to control walnut caterpillars. This may be impractical with large trees or when too many infested leaves are present. Bands of tree Tanglefoot may be used to snare larvae as they migrate to main branches or the trunk to molt. Insecticides such as permethrin (numerous trade names) malathion or cyfluthrin may provide the most practical means of control. (WU)
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