

Pests and Diseases

Have you ever walked out to your garden and seen that your plant looks a little odd? It could be that your plant now has a powdery white coating, the leaves appear a rusty color, or that most of leaf has disappeared and now all that's left is the veins. These are all signs of insects and diseases attacking your plant. That powdery white coating on your plant is a fungus known as powdery mildew and that rusty color is a fungal disease known as rust. The veins being the only thing left of the leaves on your plant is a sign of an insect like Japanese Beetles. These problems can cause serious damage to your plant if left untreated, but we can help you find the treatment you need to keep your plants healthy.

Most Common Insect Problems

The most common problem that your plant faces will vary by species, however there are a few insects that affect a large variety of plants that you should be aware of.



- Japanese Beetles – These are a pest that you have probably seen even if you didn't realize what it was. They are beetles with coppery brown wing covers with white patches of hair at the edges of their backs. They damage turf, leaves, and flowers and feed on over 350 species of plants. The adult beetles feed on the soft tissues of leaves leaving behind the veins and mid rib giving them a skeleton like appearance. The grubs feed on the roots of turf and ornamentals causing additional damage to the plants. There is one generation a year and the adults emerge in late June or early July and can be seen into September.
 - Control – Well established trees and shrubs can generally tolerate the beetle damage with little impact on leaf emergence the next year. However repeated, severe defoliation can increase the susceptibility of the plant to other problems. You can protect smaller plants by covering them with ¼ inch or less mesh or by hand picking off the insects. Another way to protect your plants is through insecticides. There are several different insecticides that can be used but some can't be used on certain species. For example, there is a systemic insecticide that cannot be used on lindens. You also need to consider how you plan to use the plant because some insecticides cannot be used on edible plants.
- Eastern Tent Caterpillar – These pests can be recognized by the white masses that are seen in the forks of trees in early spring. The caterpillars come

out in early morning, evening, or at night to



feed before returning to their nest where they spend the warm days. They will also remain in the nest if it is rainy or cold and the nest will grow as the caterpillars grow. The caterpillar overwinters as an egg and emerges around bud break. They leave the nest to feed on new foliage but return when not feeding. The caterpillars are hairy, black with a white stripe down the back, brown and yellow lines along the sides, and a row of oval blue spots on the sides. The adults are a reddish-brown colored moth that lay eggs on small branches that will overwinter.

- Control – The easiest time to control this pest is early in the season. You can remove the egg masses in winter by pruning out branches or crushing them off the branch. You can also spray the trees with dormant oils to suffocate the eggs and stop them from hatching. In early spring you can wear gloves and remove small tents before much damage is done. A larger web can be removed with a broom or stick and disposed of with the caterpillars by crushing, burning, or burying them. If the caterpillars are less than 1 inch long you could also use an insecticide to kill them and prevent further damage.
- Aphids – Aphids are a soft bodied insect that feeds on plant sap. They also excrete a sugary substance called honeydew which attracts ants to the plant and supports the growth of a fungus called sooty mold. There are several different aphid species, but the ones that are the biggest concerns in WI are the green peach, melon, potato, and soybean aphids. Aphids cause reduced plant vigor, stunting, and deformation of plant parts. They are also the vectors of several viruses like mosaic viruses.
 - Control – Aphids can be controlled through the use a predatory insects like lacewing

larvae, syrphid larvae, parasitic wasps, and ladybugs. Aphids can also be controlled through the use of insecticides but it should be noted that green peach and melon aphids have shown some resistance to several insecticides.

Most Common Disease Problems

Just like with insects, you will see different diseases with different plant species. However, there are a few common diseases that will affect several species for you to be aware of.

- Powdery Mildew – This is a disease that can affect trees, shrubs, annuals, perennials, houseplants, and agricultural crops. While this disease can infect many trees and shrubs, it will not affect conifers (evergreens). This disease is easy to recognize due to its powdery white appearance on leaf surfaces and stems. The disease is caused by fungi found in plant debris or on infected plants. It is important to note that the fungi are host specific (the fungus causing powdery mildew on your lilac is not the same one causing powdery mildew on phlox). For most trees and shrubs this disease is non-lethal, but on some like roses and ninebarks it can cause severe leaf loss and tip dieback.
 - Control – The best control method is to plant powdery mildew resistant plant varieties. Aside from planting resistant varieties you can control powdery mildew with a fungicide containing dinocap, dithiocarbamates, myclobutanil, triadimefon, triforine, sulfur, or thiophanate methyl.
- Anthracnose – This is the name of several fungal diseases that affect the foliage of woody ornamentals. Just like with powdery mildew the fungi that cause these diseases can be found in leaf litter and are host specific, but with the ideal disease conditions (cool and moist weather) the disease could develop on other trees. Symptoms of this disease can vary depending on the infected species, but a general symptom of the disease is irregular spots and dead areas along the veins of leaves.
 - Control – Once again prevention is the best control method. This disease can be prevented by removing and disposing of fallen leaves in autumn. Once again, this disease is more cosmetic and won't kill your tree unless it has been repeatedly defoliated. Fungicides can be used to control this disease and need three treatments. The first should be at bud break, the second when leaves are half expanded, and the third when leaves are fully expanded. The fungicides used for treating this disease should contain copper, chlorothalonil, or mancozeb. To avoid the fungi developing resistance to the fungicide you should alternate with at least two active ingredients.
- Blackspot – Blackspot is a common disease that affects roses. This disease can be recognized by circular lesions that can be up to ½" in diameter. They often have feathery margins and are brown to black in color. The disease will first appear during periods of wet weather when rose leaves are first emerging. The disease infects lower leaves first but can spread to the whole plant. Severe instances of the disease can lead to yellowing of leaves and severe defoliation.
 - Control – As I mentioned with several diseases above the best method for control is prevention. In the case of blackspot this can be done by planting varieties with high levels of resistance to blackspot. If you have varieties of roses that have a history of severe blackspot you can treat them with fungicides containing mancozeb, chlorothalonil, triforine, thiophanate-methyl, myclobutanil, ziram, sulfur, azoxytrobin, propiconazole, copper, or neem oil.

If you have a plant that you notice looks unhealthy and you don't see the symptoms on this list or have more questions, feel free to ask one of our staff members for help.