

Effects of Hot Weather on Pests of Garden Plants

By Larry Caplan, Extension Horticulture Educator, Vanderburgh County, IN

For the Evansville Courier and Press, July 30, 2017

Weather does not only affect plant growth directly, as I mentioned in this column last week. Weather can also affect pests that harm our plants, including insects and their relatives, diseases, and weeds.

Spider mites are a great example. These are not true insects, which have three body parts and 6 legs; mites are arachnids, and have two body parts and eight legs. In warm weather, spider mites reproduce quickly, and the warmer it is (within reason), the faster they reproduce. When daytime temperatures run at 95 degrees, the mite population can double in half the time it takes when the daytime temperatures are only 75.

Mites also like dry weather, mainly because a heavy rain can wash them off the plant. These near-microscopic arachnids often can't climb back onto the plant after a storm. In fact, an excellent control measure for mites is to spray your plants with a hose at least twice each week. Other control measures include spraying with insecticidal soap (NOT dish detergent!) or bifenthrin.

Fungal diseases are greatly affected by weather. Every disease has its own optimum temperature where it is most infectious. Apple scab infection occurs when the temperature is cool and the leaves are wet; fire blight on apple is most prevalent when the weather is warm and wet.

Powdery mildew is an extremely common disease in mid-summer, and can be found on practically every garden and landscape plant. In general, the greatest degree of infection occurs when temperatures are cool and the humidity is high. Unlike other diseases, such as leaf blight on tomatoes, actual moisture on the leaves is not required for infection; in fact, spores of some powdery mildew fungi are killed and germination is inhibited by water on plant surfaces for extended periods of time.

Managing disease infections can be a challenge. We can't control the rain, so prolonged rainy periods in the spring often lead to massive outbreaks of the disease later in the season. However, improper irrigation can cause what could have been a mild outbreak to become a massive epidemic. Watering late in the day or evening allows the foliage to stay wet all night, which is a perfect condition for fungal spores to germinate and enter the plant. Watering early in the morning is better, because the leaves will dry off as soon as the sun rises. One heavy soaking per week is less likely to promote disease problems than watering every day.

Even weeds can take advantage of weather. Warm season weeds like to grow when the temperatures are high. Crabgrass, spurge, and Bermudagrass love the warm weather, and are growing vigorously now. What makes these weeds more troublesome is that many of our lawn species are cool-season grasses, like Kentucky bluegrass. These weeds are coming on strong at exactly the same time as our best weed control – a good, thick lawn – are shutting down and going dormant.

You can learn more about pest problems and how to control them this fall during my Master Gardener class. Contact my office at (812) 435-5287 to receive a registration packet, or more information.