

Evergreen Issues: Weather and Bagworms

By: Kelly Feehan, Extension Educator

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There have been evergreens suddenly developing off color and turning brown. This is most likely winter and spring desiccation injury.

There is also concerns about bagworms. While bagworms have begun to hatch, we would not see damage from bagworms yet. However, it is time to begin control where needed.

Evergreens have had a double weather whamy. During warmer than average temperatures in February and March, moisture was lost from green needles and could not be replaced by roots in frozen or cold soils. This was followed by a dry spring and then above average temperatures and extreme winds.

These conditions increase the rate of transpiration which results in increased moisture loss from needles. If the moisture is not replaced quickly, or the needles and twigs lose moisture faster than roots can replace it, desiccation injury occurs and branches or trees can die.

Evergreens growing in open exposed sites, near pavement or light colored houses, and those planted in the last five years are most susceptible. Container grown evergreens that were fairly large when planted may have girdling roots and are at higher risk; as are evergreens that are planted to deep.

Other than placing a three to four inch deep layer of organic mulch, like shredded wood chips, in a ring around the tree that extends beyond the dripline and keeping the soil moist, there is not much to do. Once an evergreen or a branch turns completely brown, it will not recover. Do not apply fertilizer to stressed trees.

Many evergreen owners are concerned about bagworms. On evergreens that had one to two inch long overwintering bags attached to twigs, now is the time to think about control. Other evergreens should be monitored for signs of bagworms.

Bagworms overwinter as eggs inside female bags attached to trees. Once eggs begin to hatch in June, insecticide control can begin. Upon hatching, bagworms are only about one-eighth of an inch long and difficult to detect. Don't expect to see large worms crawling around your tree when monitoring in June and even July.

The general rule of thumb is if you have evergreen trees that have last year's bags hanging on them, and you were not able to pick all of them off over winter, control should be considered. This insect can kill spruce, Arborvitae, Juniper and pine.

In June, when bagworms are small, *Bacillus thuringiensis* (kurstaki) and spinosad are bioinsecticides that can be applied to foliage to kill young caterpillars as they feed. Biorational insecticides kill caterpillars without harming natural enemies. They must completely cover foliage and be consumed by small bagworms to be effective.

After the month of June, when bagworms are larger, conventional insecticides need to be used. These include malathion, acephate, carbaryl, bifenthrin, and permethrin. Thorough coverage of the tree is also needed with these products.

Preventive or systemic insecticides containing dinotefuran are applied to soil. However, these must be applied weeks before eggs hatch, hence it is too late to use these products. And most systemics need to be applied by a certified pesticide applicator.

The other issues we see in evergreens are fungal blight diseases. It is too late to apply fungicides for these diseases. Most will not kill an evergreen in a single season or even a few seasons. The key with these is to positively identify which disease your tree has to know when the correct time for control is next spring.