



PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

THURSDAY, JUNE 11, 2015

Weekly newsletter compiled by Sarah Pickel, PA Department of Agriculture. This week's scouting data contributors: Jim Fogarty (Halabura Tree Farm), Karen Najda (PDA), Sarah Pickel, Brian Schildt (PDA), and Cathy Thomas (PDA).

GROWING DEGREE DAY TOTALS, 6/10/15:

LOCATION	GDD TOTAL
Indiana, Indiana Co.*	713.5
Montoursville, Lycoming Co.*	752.5
Mount Joy Twp, Elizabethtown (NE), Lancaster Co.	935.5
New Cumberland, York Co.	865
New Ringgold, Schuylkill Co.	950

* Figure courtesy of www.weather.com.

CRYPTOMERIA SCALE

Cryptomeria scale crawlers were seen in several locations this week. In Lancaster, Lebanon and York Counties yesterday and today, flat, oval-shaped, bright yellow crawlers were moving along the needles of several true fir species. In York County today, settled crawlers were also found. In all locations, yellow, jelly bean shaped eggs were also still found underneath the female scale covers. In Schuylkill County yesterday there



Figure 1: Cryptomeria crawlers with adult scale [S. Pickel, PDA]

were a small amount of crawlers found underneath scale coverings among the eggs, and no crawlers were seen moving along the needles. Today, however, in another Schuylkill County location, crawlers were just beginning to move along the needles. Yesterday in Dauphin County, only eggs were found underneath the female scale coverings.

Growers can typically expect crawlers to emerge within a range of 600-800 GDD (with occurrence

taking place closer to 800 in recent years). After laying, Cryptomeria eggs take about 2 weeks to hatch into crawlers. Monitoring the levels of eggs or crawlers present is important when deciding when to make control applications for this armored scale pest of true firs, spruces and occasionally Douglas-fir and hemlock. Cryptomeria scales will be found on the undersides of spotted needles on the lower, interior branches of the tree. To determine if there are still eggs under the adult covering, growers can use a fingernail to scrape the white, oval shaped coverings back to reveal the eggs (or recently hatched crawlers) nestled around the plump, yellow, mother scale.)

Begin control applications when crawlers are found out along the needles. Because crawler emergence is spread out over an extended period of time, two or sometimes 3 applications of an insecticide may be necessary. Some growers, however, have found success with making a single application of the chemical spirotetramat (Movento, Kontos). This has not been tested by research in PA. A second generation of this pest will be active in August. Treatment of this second generation may also be necessary, depending on the success of the first generation treatment.

BAGWORM

Areas that have not yet been treated for bagworm larvae may be seeing a rise in needle damage this week. As larvae continue to grow (and the shaggy, cone-like cases are further built up with the larvae), the amount of damage they are able to cause increases to the point where they are able to strip twigs



Figure 2: Bagworm casing [Eric R. Day, VA Tech, Bugwood.org]

of needles entirely. This pest can be found on any conifer host. It's still possible to get control of this pest with an insecticide application. Larger larvae

are less affected by *Bacillus thuringiensis* (Bt) products, such as Javelin or Dipel.

ELONGATE HEMLOCK SCALE

Crawlers of elongate hemlock scale continue to be active this week in northern Dauphin, Lancaster, Schuylkill and York Counties this week, and some have settled and formed the early scale coverings. This armored scale pest of hemlocks, true firs, Douglas-fir, and spruces has multiple staggered generations throughout the summer, so the typical recommended control series (based on PSU research) is to make 3 applications, beginning at the start



Figure 3: Elongate hemlock scale female and settled crawlers [S. Pickel, PDA]

of crawlers and spaced with 4 weeks between each spray, or to make 4 applications spaced with 3 weeks between each spray. Some growers have found that a single application of the chemical spirotetramat (Movento, Kontos) has been effective. When scouting for this scale, look for symptomatic yellow splotching on needle surfaces on lower, interior branches of host trees. Oblong brown scales (females) and shorter, white, fuzzy scales (males) will be scattered along the undersides of symptomatic needles. The oval-shaped, yellow crawlers will be found around these adult scales. Some may be seen with the beginnings of a tan or white scale covering.

WHITE PINE WEEVIL DAMAGE

In York County this week, white pine weevil damage what evident on Eastern white pine and Norway spruce. On these trees the leader and the upper whorl of branches can be seen to be wilting and turning brown. This damage is often referred to as a shepherd's crook. Cutting these tops out when first seen is recommended. Cut the leader down to the point where the tissue inside the bark is green, not brown. Where the interior



Figure 4: Leader damaged by white pine weevil [PDA]

bark is brown, the white pine larvae have been feeding. Cutting these leaders out now, prevents the larvae from feeding even lower in the main stem. Be sure to take these clippings out of the field so that the larvae won't pupate inside clipped leaders and then move to the ground as adults where they'll overwinter and emerge next spring.

DISEASE UPDATE

In Schuylkill County, the needle lesions of spruce needle rust have begun to dry up, which signals the end of sporulation. These needles are also being cast from the tree. Also, in Dauphin County, the needle lesions of Rhabdochline needle cast have turned black and are dried up. If growers are only concerned with these diseases, then the need for further fungicide applications in the areas may be over.

The end of sporulation for *Rhizosphaera* and *Stigmina* needle casts of spruce and for Swiss needle cast of Douglas-fir, however, is not really clear. Growers have asked me if they could stop making fungicide applications and my answer is "that depends". If the new growth has begun to harden off (twigs turn woody and needles darken and become tough), then you may not need any further applications. If the new growth is still growing and moist conditions persist, it could be that an additional fungicide would be beneficial.

ADDITIONAL RESOURCE

For a list of control options for insect and mite pests, the most recently updated list of Insecticides & Miticides for PA Christmas Tree Pests can be found at the following link:

<http://ento.psu.edu/extension/christmas-trees/publications/2013%20Christmas%20Tree%20Insecticides-Miticides.pdf>.

The next scouting report will be available Thursday, June 18, 2015.