

PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

MAY 30, 2013

Weekly newsletter compiled by Sarah Pickel, PA
Department of Agriculture.

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GROWING DEGREE DAY TOTALS, 5/29/13:

LOCATION	GDD TOTAL
Conoy Twp, Elizabethtown (SW), Lancaster Co.	755.5
Mount Joy Twp, Elizabethtown (NE), Lancaster Co.	501.5
Hallstead, Susquehanna Co.	300
Indiana, Indiana Co.*	482
Millcreek, Erie Co.**	452
New Cumberland, York Co.	488
New Ringgold, Schuylkill Co.	472.5

* Figure courtesy of www.weather.com.

** Figure courtesy of Ruth Benner, PSU Cooperative Extension, Erie.

CRYPTOMERIA SCALE

Eggs of Cryptomeria scale were beginning to be found underneath 25%-75% of adult female scales this week in Lancaster, York and Schuylkill Counties. These bright yellow, jelly bean shaped eggs can be expected to hatch into bright yellow, oval-shaped crawlers in approximately two weeks. Crawler emergence, which is the life stage that is most susceptible to insecticide applications, typically takes place within the range of 600-800 GDD. This armored scale pest can be found on numerous species of conifers, but seems to prefer true fir species. They cause speckled, chlorotic (yellowed) damage to foliage, beginning in the lower interior



Figure 1: Cryptomeria scale with eggs underneath its covering [B. Schildt, PDA]

branches of trees and working outward and upward as the population increases. The scales, which can be found on the underside of symptomatic needles, are round and yellow, but are covered by an oval-shaped, white covering. There are two generations per year, with the second generation of crawlers emerging within the range of 1,750-2,130 GDD (early to mid-August in PA).

If growers have found an infestation of this pest, chemical control would be advised. An insecticide application should be made when crawlers are moving along the foliage. A second application made 7-10 days later is recommended. If crawler emergence continues after the second application, a third spray may be necessary. For more information on Cryptomeria scale, visit: <http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/cryptomeria-scale.pdf/view>.

BAGWORM

In York and Schuylkill Counties this week, a few bagworm larvae were found inside a small percentage of cases of evergreen bagworm. Cases checked in northern Dauphin County still contained only eggs. These brown, shaggy case or bags can be found on any species of conifer. Larvae will continue to hatch inside the cases, and they can be expected to emerge from those cases within a few days to a week. These tiny, brown and gray larvae will descend from the cases on strands of silk to begin feeding on the new needles of lower branches on the current host tree or neighboring trees. Growers can monitor for larval hatch by opening a few cases from their fields with pruning

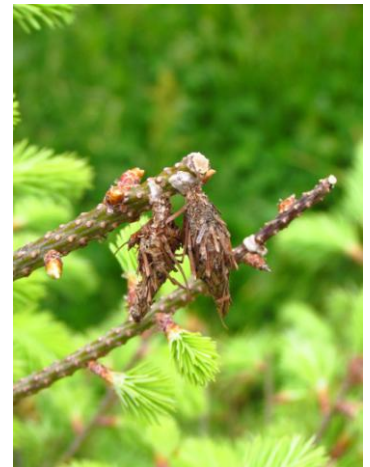


Figure 2: Bagworm casings [S. Pickel, PDA]

shears. Inside the cases, eggs and larvae will be sheltered inside the "shell" of the dead mother's body (a black caterpillar-like insect). Insecticides for bagworm control should be applied after the larvae emerge from the cases. The chemicals are most effective when applied while the larvae are still small. A single application is typically effective. For more information, visit: <http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/bagworm.pdf/view>.

ELONGATE HEMLOCK SCALE

Crawlers of elongate hemlock scale were not yet seen moving on the needles of Fraser fir in



Figure 4: Elongate hemlock scale females with crawlers [PDA]

Dauphin County this week. This means that the bright yellow, oval-shaped crawlers will soon be emerging and moving along the undersides of needles of host trees. To scout for this crawler emergence, growers should look at the preferred host trees (true firs, especially Fraser fir, and Douglas-fir), on the undersides of lower, interior twigs. The crawlers will be moving on the undersides of needles around the female scales, which are oblong, brown and very often covered with a white wax which seals them to the needles, and the male scales, which are shorter, white and covered with waxy filaments.

The standard control application recommended by Penn State research should begin when crawlers emerge and is either a series of 3 applications with 4 weeks between each application, or 4 applications with 3 weeks between each application (trials suggest Dimethoate). Some growers, however, have tried a pre-bud break basal trunk application of Safari, as recommended by research from Connecticut's Ag Experiment Station. More information on Elongate Hemlock Scale can be found at: <http://extension.psu.edu/ipm/program/christmas->

[tree/pest-fact-sheets/needle-discoloration-and-injury/elongate-hemlock-scale.pdf/view](http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/elongate-hemlock-scale.pdf/view).

PINE NEEDLE SCALE

Crawler emergence of pine needle scale in Cumberland, Dauphin and York Counties continues to be slow this week. There are more crawlers found under the white, oblong, adult scales covers, but there are still a larger percentage of eggs. In the Elizabethtown area of Lancaster County this week, nearly all the eggs have hatched into crawlers. Growers will probably want to wait to make an insecticide application until a greater amount of the oval-shaped, paprika-colored crawlers are found on moving or settled on the needles. For more information on this pest, visit: <http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/pine-needle-scale.pdf/view>.



Figure 3: Pine needle scale with crawlers [S. Gardosik, PDA]

NEEDLE CASTS AND NEEDLE RUSTS

Growers should be continuing to make their fungicide applications to protect new foliage of Douglas-fir against Rhabdocline and Swiss needle casts. If growers of Colorado blue spruce have had an issue with Rhizosphaera or Stigmina needle casts or Spruce needle rust (this disease also affects Serbian spruce), they these growers should also remember to be continuing their fungicide applications as the spring progresses. The spray schedule for Rhabdocline and Swiss needle casts of Douglas fir is as follows: 1st application at the time of bud break, 2nd application one week after the first, 3rd application two weeks after the second and 4th application three weeks after the third. The spray schedule for Rhizosphaera & Stigmina needle casts is as follows: 1st application when new shoots are ¾ in long and a 2nd application three weeks after the first. For spruce needle rust, begin fungicide applications at bud break and continue with weekly applications while new growth is tender or until last year's infected needles have dropped.

INSECTS OF INTEREST: PERIODICAL CICADAS

There has been a great deal of media attention this year on the mass emergence of Brood II of the 17-year cicadas, an insect phenomenon of



Figure 5: 17-year periodical cicadas on Douglas-fir in Dauphin County [S. Pickel, PDA]

eastern North America. These insects began emerging this week in Dauphin County. They are similar to, but smaller than the dog-day cicadas that are common each year at the end of summer. These insects spend 17 years underground and migrate above ground in their final nymphal stage to molt (typically in a tree) into a winged

adult. Adults are about 1½-2 inches long, with black bodies, red-orange eyes and clear wings with orange veins. The purpose for this coordinated emergence is for the adults to mate. Male cicadas will be producing their loud “songs” to attract their mates. After mating, females will lay eggs in slits they cut into small tree branches. They will lay their eggs in numerous tree species, but fortunately for Christmas tree growers, conifer species are not preferred hosts! So, while growers may find cast skins or newly emerged adults perched in their tree blocks, when it comes time for egg laying, these insects will most likely move on to other tree varieties. There should be no need for control action. For more information on periodical cicadas, visit:

<http://ento.psu.edu/extension/factsheets/periodical-cicada>.

HELPFUL RESOURCES

A list of Pennsylvania's registered miticides and insecticides, entitled *2011 Insecticides and Miticides for Christmas Tree Pests*, can be found at the Penn State Christmas tree Website, <http://ento.psu.edu/extension/christmas-trees>.

A great source for in-depth pest information and scouting suggestions is the PA IPM Program publication, *Integrated Pest Management for Christmas Tree Production: A Guide for Pennsylvania Growers*, available for free download (<http://pubs.cas.psu.edu/FreePubs/pdfs/agrs117.pdf>) or for purchase from the PSU College of Ag Publications office (phone: 814-865-6713, fax: 814-863-5560, e-mail: AgPubsDist@psu.edu). Ask for publication item # AGRS-117.

The next scouting report will be available June 6, 2013.