

PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

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GROWING DEGREE DAY TOTALS, 6/26/13:

LOCATION	GDD TOTAL
Mount Joy Twp, Elizabethtown (NE), Lancaster Co.	1,140
Indiana, Indiana Co.*	999
Millcreek, Erie Co.**	915
New Cumberland, York Co.	1099.5

* Figure courtesy of www.weather.com.

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

This will be the last regular scouting report of the 2013 growing season. At this point in the year, much of the pest activity has slowed. There will be one or two special updates later in the summer to alert growers to the emergence of the 2nd generation of the *Cryptomeria* scale.

CRYPTOMERIA SCALE

In Lancaster and York Counties this week, there were still eggs found under some adult *Cryptomeria* scale coverings and there were some active crawlers spotted moving on the needles, although the majority of crawlers had settled. These settled crawlers will quickly develop a light scale covering. If growers have already made the two recommended insecticide applications, but are still seeing a significant amount of active crawlers



Figure 1: *Cryptomeria* scale crawlers [PDA]

about a week after the 2nd applications, they may want to consider making a 3rd application.

Any settled scale crawlers that have not been killed by insecticide applications will continue to develop and mature underneath their scale coverings. Eventually, the nymphs will differentiate as either males (which develop wings) or female (which maintain the circular shape of the nymphs). When mature, the males will exit the scale coverings and fly to fertilize the females, triggering egg production. Once eggs appear under the female coverings, the next generation of crawlers will follow. The growing degree day range for the 2nd generation crawler emergence is 1,750 – 2,130 GDD (based on observations in PA). This event typically occurs in August in Central PA. Growers could see egg development happening in late July. 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>.

ELONGATE HEMLOCK SCALE

Elongate hemlock scale crawlers will likely continue to be active on true fir and Douglas-fir foliage for a few weeks. This pest is best controlled by staggering 3-4 applications though the growing season. Growers who have yet to get control of this pest may be seeing a gray, fuzzy cast over the foliage at the bases of the true firs, Douglas-firs, and hemlocks. These populations can be monitored throughout the course of the season. Growers who find this scale on their trees should make a note to treat with insecticide next season. For



Figure 2: Elongate hemlock scale "flocking" symptom [PDA]

more info on Elongate Hemlock Scale visit:
<http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/elongate-hemlock-scale.pdf/view>.

FLETCHER SCALE

Fletcher scale crawlers were found moving around on the foliage of arborvitae in Schuylkill County this week. The crawlers are tan to peach in color, oval-shaped and very tiny. Look for crawlers to



Figure 3: Fletcher scale with crawlers [John A. Weidhass, Virginia Polytechnic Institute and State University, Bugwood.org]

be moving around the brown, dome-shaped, adult scales on foliage of host trees, which are arborvitae, cedar, hemlock, juniper and yew. The growing degree day range for this crawler emergence is

1029-1388 GDD. This pest secretes honey dew, which can cause a build-up of unsightly, black sooty mold on the foliage. If the scale is a problem, growers can make an insecticide application when they begin to see the tan-colored crawlers moving on the foliage.

For more information on Fletcher scale, visit:
<http://ento.psu.edu/extension/factsheets/pdf/fletcherScale.pdf>.

LOOKING AHEAD

One type of pest that growers may be seeing evidence of now is the spruce gall adelgids.

Damage from these pests will either appear as spiny galls on the tips of new foliage of Blue spruce (Cooley spruce gall adelgid)

or at the base of new foliage of Norway spruce (Eastern spruce gall), or it appears as kinked needles on Douglas-



Figure 4: Eastern spruce galls [S. Pickel, PDA]

fir new growth (Cooley spruce gall). Fall is the optimum time to apply control treatments for spruce gall adelgids. Scouting for this pest can be conducted while conducting routine maintenance in the fields. Typically in the range of 2,800 – 3,000 GDD (usually October), the overwintering nymphs settle at the bases of spruce buds or on the Douglas-fir needles and will remain uncovered until the following spring, when they develop their protective waxy coverings. Dormant oils can be quite effective and safe; however these should not be applied to blue spruce, as they will remove the blue bloom of the needles.

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.