PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

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

This week's report includes data from Jim Fogarty (Halabura Tree Farm), Susan Newhart (Acadia Tree Farm), Brian Schildt (PDA), and Cathy Thomas (PDA). The links included in several paragraphs lead to fact sheets from the new PA IPM Program publication, *Integrated Pest Management for Christmas Tree Production*.

As of Tuesday, May 24th, there were 521 growing degree days (GDD) in Elizabethtown, Lancaster County, 499.5 GDD in New Cumberland, Cumberland County, 423 GDD in New Ringgold, Schuylkill County and 157 GDD in Montrose, Susquehanna County. Ground temperatures in New Ringgold, Schuylkill County have fluctuated between 61° F – 65° F.

Crawlers of Elongate Hemlock Scale were beginning to be active this week in some locations in Schuylkill and York Counties. This armored scale pest can be found on Hemlocks, true firs, and Douglas-fir (less common on spruces and pines). Scale feeding causes a yellow speckling to the upper surface of the needles, beginning on lower branches near the trunk of the tree. Scales

Figure 1: Elongate hemlock scale - females and crawlers; EHS damage [S. Gardosik, PDA]

will be found on the undersides of these branches. Female scales are smooth, oblong and amber to brown in color. [Fig. 1] Males are covered with a white, often fuzzy scale covering, the build-up of which can give infested branches a gray, flocked look. Look for bright yellow, oval-shaped crawlers to be moving among the adult scales. When growers find a heavy flush of scale crawlers on the needles, they can begin an insecticide spray program consisting of 3 or 4 sprays, spaced evenly over a 12 week period. http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/elongate-hemlock-scale.pdf/view

In northern York County yesterday, Bagworm larvae were beginning to emerge from their casings on Douglas-fir. Bagworms are pests which affect nearly all conifers. The young bagworms exit the overwintering bags (constructed of needles and silk) to begin feeding on new needles. The larvae leave the bags on strands of silk, which allow them to move to other trees or other

Figure 2: Bagworm casing with exit silks [S. Pickel, PDA]; young bagworms feeding [S. Gardosik, PDA]

areas of the same tree. [Fig. 2] This is often an easy sign to look for when scouting for bagworm emergence. Early feeding simply damages the needles, but as the bagworms grow, they can completely consume patches of new growth. When growers find larvae beginning to feed on the foliage, an insecticide may be applied for control. Growers could consider using a Bt product such as Javelin or DiPel, which is toxic to caterpillars, but not to the many beneficial insects which may be currently found on conifers at this time of the season. Insecticides are most effective while larvae are small. http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/bagworm.pdf/view

In New Cumberland, York County yesterday, eggs were found under a small percentage of Cryptomeria scale coverings on hemlocks. This scale is most commonly a pest of true firs, but can be found on spruces, pines,

Douglas-fir and hemlocks. Like Elongate hemlock scale, feeding from this scale causes the upper surface of the foliage to have a yellow speckled appearance, but there is no flocking associated with this scale. Male and female scale coverings are alike – oval-shaped and off-white. They somewhat resemble a fried egg, because the round yellow scales are visible underneath the oval cover. Tiny yellow, jelly bean shaped eggs will be found underneath the scale covering. Crawlers will emerge about two weeks after the eggs appear. When crawlers are found, an insecticide series of 2-3 sprays may be started at that time. http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/cryptomeria-scale.pdf/view

Figure 3: Female Cryptomeria scale with eggs (cover removed) [S. Gardosik, PDA]

Lastly, on Eastern white pine in Elizabethtown, Lancaster County and New Cumberland, York County, a higher percentage of Pine Needle Scale crawlers were found on the foliage. However, there were still eggs and crawlers found under the scale covers. Because of the drawn out emergence time, growers who need to treat for this pest may need to make two applications of an insecticide, with a week to 10 day interval between sprays. Often, infestations on Eastern white pine are not as severe as hard pine infestations (scotch, Austrian, Mugo, etc.) [Fig. 4]

Figure 4: Heavy pine needle scale infestation [C. Thomas, PDA]

http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/pine-needle-scale.pdf/view

A list of insecticides and miticides registered for use Pennsylvania, prepared by PA IPM Program scouting consultant, Brian Schildt, can be found on the Penn State Christmas tree website: (http://ento.psu.edu/extension/christmas-trees).

The next scouting report will be available June 1, 2011.