



PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

WEDNESDAY, APRIL 16, 2014

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

GROWING DEGREE DAY TOTALS, 4/15/14:

LOCATION	GDD TOTAL
Indiana, Indiana Co.*	56.5
Montoursville, Lycoming Co.*	50.5
Mount Joy Twp, Elizabethtown (NE), Lancaster Co.	71
New Cumberland, York Co.	60.5
New Ringgold, Schuylkill Co.	74.5

* Figure courtesy of www.weather.com.

BALSAM TWIG APHID

Today in northern York County, balsam twig aphid stem mothers were found on Canaan fir foliage. Balsam twig aphids are a pest of only true firs.



Figure 1: Balsam twig aphid stem mother [S. Pickel, PDA]

Their feeding is what causes a twisting or kinking of a season's new needles. The accepted growing degree day range for balsam twig aphid egg hatch is 30-100 GDD. Pale green stem mothers hatch from overwintering eggs, which are oblong and covered with silver filaments. The eggs will be found on the underside of twigs close to needle bases. Once the stem mothers hatch, they will move to the undersides of needles to begin feeding. Stem mothers will give birth to live young, which will move into the opening buds and will feed on the newly developing needles, causing them to kink.

When scouting for this pest, look on the underside of twigs close to last season's damage. The stem mothers will be feeding on the needles and often are distinguished by a bubble of honey

dew excreted from their posterior end. (A hand lens is helpful when scouting for this, but they can be seen with the naked eye.) Another method of scouting for balsam twig aphids is to hold a paper plate or clip board underneath a branch showing damage while tapping the top of the branch. This will dislodge any aphids present onto the flat surface.

The best time to control balsam twig aphid is after the stem mothers have hatched, but before bud break occurs and aphid nymphs have had a chance to slip inside the developing buds. One application of horticultural oil or of a traditional insecticide will be effective after the eggs have hatched. For more information, visit:

<http://extension.psu.edu/pests/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/balsam-twig-aphid.pdf/view>.

WHITE PINE WEEVIL

White pine weevils continue to be caught this week in traps monitored in York and Schuylkill Counties this week. Some growers have already made their first control application for this pest. Adults can begin laying eggs within a week of emergence, so it's important to apply controls within that time range once weevils have been found in traps (or on leaders). Growers can apply an insecticide to the upper 1/3 of the trees to prevent damage, and then if weevils continue to be found in traps after the first application, a second may be made in 7-10 days. For more information, visit:



Figure 2: White pine weevil adult [PDA]

<http://extension.psu.edu/pests/ipm/program/christmas-tree/pest-fact-sheets/shoot-and-branch-injury/white-pine-weevil.jpg/view>.

PALES WEEVILS

In traps in Lancaster and York Counties, Pales weevils are also being caught in Tedder's traps. The feeding damage of these mottled brown



Figure 3: Adult pales weevil [PDA]

weevils ($\approx 1/2''$) can cause flagged lateral branches on a number of hosts, including pines, Douglas-fir, true fir and spruce. Pales weevils need fresh stumps of Scotch pine to complete their life cycles, so removal of Scotch pine stumps or treatment of the stumps with a

registered insecticide before the weevils can lay their eggs (7-121 GDD) can prevent a problem with this pest. For more information on this pest, visit:

<http://extension.psu.edu/pests/ipm/program/christmas-tree/pest-fact-sheets/shoot-and-branch-injury/pales-weevil.jpg/view>.

SPRUCE SPIDER MITE

At this point in the season, growers should be on the look-out for spruce spider mite hatch. These mites can be expected to hatch within the range of 50-121

GDD. As of this morning at a farm in southern York County, there had been no hatch of eggs on Fraser fir, or on arborvitae in Schuylkill County.

Spruce spider mites can be

found on any conifer, but especially preferred hosts are spruces; Fraser, Canaan and Balsam firs; and also arborvitae. They overwinter as round, red eggs on the stems of twigs. When they hatch, brown and red colored mites will be found moving on the undersides of needles. Spider mites will feed on the foliage, causing yellowed or brown discoloration which is



Figure 4: Spruce spider mite eggs and adults [B. Schildt, PDA]

concentrated near the needle bases. Control of spruce spider mite should occur after the majority of mites have hatched. For more information on this pest, visit:

<http://extension.psu.edu/pests/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/spruce-spider-mite.pdf/view>.

DOUGLAS-FIR BUD BREAK APPROACHES

In Lancaster County, the buds of Douglas-fir are beginning to swell and lighten in color. These are indications that bud break will soon occur. Bud break of Douglas-fir is important to note because 1) both Rhabdocline and Swiss needle cast diseases will become active at that time and can infect the newly expanding needles and 2) Douglas-fir needle midge will be emerging and laying eggs inside the opening buds. For this reason, growers should be ready to make their fungicide applications when bud break begins, and if needle midge is a problem, should also be ready to apply an insecticide at the time of, or just prior to, midge emergence. Needle midge traps should be set out at the bases of trees which previously showed damage. Homemade emergence traps are simple to construct and should be monitored regularly to determine when the midge first emerge. For more information on Douglas-fir needle midge trap construction, visit: <http://extension.psu.edu/pests/ipm/program/christmas-tree/appendixes/insect-traps.pdf/view>.

HELPFUL RESOURCES

A list of Pennsylvania's registered miticides and insecticides (*2013 Insecticides and Miticides for Christmas Tree Pests*) can be found on Penn State's Christmas Tree Website, <http://ento.psu.edu/extension/christmas-trees>.

The PA IPM Program publication, *Integrated Pest Management for Christmas Tree Production: A Guide for Pennsylvania Growers* is available as a free PDF download at

<http://pubs.cas.psu.edu/FreePubs/pdfs/agrs117.pdf>. To purchase this publication (# AGRS-117), call the PSU College of Ag Publications office at 814-865-6713, fax them at 814-863-5560, or send an e-mail to AgPubsDist@psu.edu.

The next scouting report will be available April 16, 2014.