

PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

MARCH 14, 2012

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), Cathy Thomas (PDA)

GDD TOTALS AS OF TUESDAY, 3/13/12:

LOCATION	GDD TOTAL
Elizabethtown, Lancaster County	30.5
New Cumberland, York County	31.5
New Ringgold, Schuylkill County	13.5

Welcome to the 2012 Christmas tree scouting season. This is the first report of the season. This report will be published through the end of June and will contain emergence times, other life cycle information and management options for pests found in Pennsylvania and surrounding areas. The scouting updates featured here come from the in-field observations of PDA Integrated Pest Management employees, PDA nursery inspectors, several Pennsylvania growers, and other scouting professionals. Growing Degree day (GDD) recordings from several locations will also be included. It's recommended that the information in this report be used as a supplement, not a replacement to your farm's own scouting and temperature data. Each farm has a unique micro-climate, which means temperature accumulation and pest progression can be different for each farm, even each individual fields.

For growers who are interested in finding information on scouting techniques, the PA IPM Program publication, *Integrated Pest Management for Christmas Tree Production: A Guide for Pennsylvania Growers* is available for free download as a PDF at <http://pubs.cas.psu.edu/FreePubs/pdfs/agrs117.pdf>. This publication may be purchased by calling the PSU College of Ag Publications office at 814-

865-6713, faxing them at 814-863-5560 or sending an e-mail to AgPubsDist@psu.edu and asking about publication item # AGRS-117. Sections of the report will also include links to fact sheets and articles from the publication.

Because of the unseasonably warm temperatures Pennsylvania has experienced in much of 2012, pest activity has gotten off to an early start. In fact, this report was produced one week ahead of the first 2011 report because of the advanced pest activity and GDD accumulation. Growing degree days (GDD) are a measurement of heat accumulations during a 24 hour period. Insect activities throughout the season (such as emerging from overwintering sites, laying eggs, nymphs hatching, etc.) correspond to a range of GDD. (For those interested in tracking growing degree day totals for their own farm, more information can be found at: <http://extension.psu.edu/ipm/program/christmas-tree/ipm-basics/Step3.pdf/view>.)

WHITE PINE WEEVILS

On Thursday, March 8, white pine weevil adults [Fig. 1] were found in an emergence trap in



Figure 1: White Pine weevil feeding on spruce leader [PDA]

Elizabethtown, Lancaster County. Another weevil was found in the same trap on Monday, March 12. A white pine weevil was also found in an emergence trap in New Ringgold, Schuylkill County on Monday, March 12. This is a good

example of how GDD tracking is more accurate when anticipating pest emergence than simply following the calendar. The March 8 emergence is almost 2 weeks earlier than last year's

emergence, but the GDD accumulation falls within the expected range of white pine weevil emergence. When GDD totals fall in the range of 7-58 GDD, white pine weevil adults can be found in emergence traps or feeding on the leaders of host trees (pines, spruces, especially Serbian Spruce, and occasionally Douglas-fir). This feeding results in noticeable clear bubbles of sap. The adult weevils will be emerging from overwintering sites to feed. Those overwintering sites are underneath the leaf litter found at the bases of their host trees. In addition to monitoring the GDD (which measure air temperature) to determine weevil emergence, an additional method of monitoring when weevil emergence will occur is tracking ground temperatures. Weevils will emerge from overwintering sites when ground temperatures average 50°.

The monitoring of these weevils is important because of the severe damage they can cause to a tree. When these tiny (< ½ in.), long-snouted, brown beetles with white spots lay their eggs in the leader of host, the eggs soon hatch into hungry larvae which feed on the vascular tissue of the leader. This feeding ultimately girdles the leader and kills it, causing a very characteristic wilting of the leader, which resembles a "shepherd's crook." [Fig. 2] Once this damage is done, the leader should be removed and a new one retrained, or the tree could be permanently stunted.



Figure 2: Leader damage from white pine weevil [PDA]

The key to controlling this pest is to apply an appropriate insecticide to the upper 1/3 of the trees after weevils are found in the traps, but before they've had a chance to mate and lay eggs. This can happen within 2 weeks of emergence, so growers need to apply the insecticide product before those two weeks have passed, and the sooner the better. It may be wise for growers to apply a second application if weevils continue to be found in traps after the first application. More information on the

pyramid-shaped Teddars traps (baited with turpentine and denatured alcohol) can be found here:

<http://extension.psu.edu/ipm/program/christmas-tree/appendixes/insect-traps.pdf/view>.

ERIOPHYID (RUST) MITES

Rust mites in northern and southern York County have hatched this week. These tiny mites (visible only with aid of a hand lens) were found on Norway spruce.

Hosts trees of this pest include spruces, firs, hemlocks and pines (called sheath mites when found on pines).



Figure 3: Eriophyid Mites [PDA]

Feeding damage from rust mites gives foliage a rusty, silver or faded appearance. On pines, symptoms are a yellowing and also stunting of the needles. Eriophyid mites are cool season mites, becoming active very early in the spring, slowing down in the warmer summer months and reviving in the cooler fall months before laying the final overwintering eggs. The overwintering eggs are faintly salmon colored, about the size of needle stomates, and are clustered together at the base of a needle. When they hatch, the mites are triangular and elongated in shape and peach to off-white in color. If the population is heavy, consider treating with a miticide. Carefully check the label, as not all miticides are effective against eriophyid mites. For more information, visit:

<http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/eriophyid-rust-sheath-mites.pdf/view>.

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>.

The next scouting report will be available March 21, 2012.