



PA CHRISTMAS TREE SCOUTING REPORT

- Monday, April 16, 2018

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

GROWING DEGREE DAY TOTALS FROM 4/15/18:

LOCATION	GDD TOTAL
Elizabethtown, Lancaster Co.	52.5
Indiana, Indiana Co.	46
Montoursville, Lycoming Co.	32.5
New Cumberland, York Co.	60.5
New Ringgold, Schuylkill Co.	47

* Calculation via www.accuweather.com began March 1.

Welcome, readers, to the 2018 edition of the Christmas tree scouting report. This weekly newsletter reports on insect and disease pest activity as it occurs in the tree farms of south central Pennsylvania, as well as reporting on Growing Degree Day (GDD) totals for a few locations across the state of Pennsylvania. Growing Degree Days allow farmers to track the progression of temperatures through the growing season and use that information to determine a pest activity timeline. For the pests mentioned in the scouting report, I'll be sharing a range of GDDs when the pests typically become active. This information can help growers time their monitoring and control efforts. For growers wishing to find out the specific GDD total for their farms, I'd recommend searching online for the helpful websites and smartphone apps that will calculate totals by zip code. One of those is Syngenta Greencast Online: <http://www.greencastonline.com/growing-degree-days/>.

By this time last season, most of the locations I reported on had accumulated well over 100 GGD. This has been an overall much cooler spring, however this weekend's weather gave us a jump in GDDs. This should also speed along pest activity. Below is some information on pests to be looking for at this time.

WHITE PINE WEEVIL

In the early part of the growing season, adults of this wood boring beetle pest feed on and lay their eggs in the leaders of several conifer host species. These hosts include pine species (especially its name sake Eastern white pine),



Adult weevil on spruce leader.

[Credit: Sandy Gardosik, PDA]

spruce species (Serbian, Colorado blue, Norway, etc.), and Douglas-fir. Adult beetles are small (about $\frac{1}{4}$ inch) and mottled brown. They emerge from their overwintering sites in the needle litter under previously damaged trees around a range of 7-58 GDD. The eggs will be laid within two weeks of adult emergence and subsequent mating. The larvae that hatch from those eggs feed

on the wood inside the leaders and will completely kill the leaders, leaving the top whorl/whorls of the tree brown and wilted. The best way to prevent this damage is to determine when the adults have emerged and prevent the egg laying with the application of an insecticide treatment to the upper 1/3 of the host trees. In addition to tracking GDD, there is an effective trap that can help determine the time of weevil emergence. Pyramidal Teddars traps (available at Greatlakesipm.com), which have a small plastic trap at the top and are baited with turpentine and ethanol, should be placed near previously damaged trees. Insecticide application can be timed soon after weevils are found in the traps. Last week, there was a single white pine weevil found by Jim Fogarty in a trap in Schuylkill County. Although traps being monitored in York and Dauphin County have not captured any weevils yet, after the weekend's warm temperatures, it can be expected that weevils will be active. Growers who have had damage in previous seasons may want to consider making an application.

RUST MITES

This specific type of Eriophyid mites feeds on several species of conifer (pines, spruce, hemlocks and firs). Feeding causes an overall rusted or grayed look to needles. These cool-season mites overwinter as tiny pale or peach eggs clustered at the base of the needles and hatch in a range of 7-22 GDD. The mites are very tiny, cone shaped and are pale peach or white in color. Treatment with a miticide can occur after most of the eggs have hatched. It



is important to make sure that rust mites are listed on the label of the product used, because not all miticides are effective on these mites (including hexythiazox, or Savey) Active mites were found last week on spruce in northern York County.

FIR PESTS TO WATCH FOR

Two pests that growers should start to look for after a jump in warm temperatures are two important pests of true firs: Balsam twig aphid and spruce spider mites. Both pests are tiny and feed on the underside of host needles. Balsam twig aphids are pale green, pear-shaped pests that hatch (30-100 GDD) from silvery oblong eggs found on the twigs at the needle base. Feeding of this pest causes the new growth to curl. Spruce spider mites are smaller in size and orange/brown in color. These mites hatch (50-121 GDD) from tiny round eggs that will be found along the underside of the twigs. The damage from these mites cause a yellowing/browning of foliage starting from the needle bases. The easiest way to scout for both pests is to tap branches over a white paper plate or clipboard. The green aphids and orange mites show up very clearly on this surface. If timed right, an insecticide application made after hatch but before bud break could potentially get good control of both pests. Look for more information on both these pests in future weeks.



SPUCE NEEDLE RUST SCOUTING



While growers are in their spruces digging up trees for spring orders or conducting scouting for insect and mite pests, they may also want to keep an eye out for spruce needle rust symptoms. Over the winter, the symptom of this disease has become more pronounced and is now easier to distinguish. At this time of year, the disease presents as yellowed

bands around last season's needles, with some orange coloration inside the bands. This disease of Colorado blue and Serbian spruce was observed this week in York County. In fields where this is found, growers should be making plans to make a few applications of protective fungicides beginning at the time of bud break. More information on this disease will be shared as bud break approaches.

Next week's scouting report will be available on Friday, April 20.