

# PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

## MARCH 28, 2012

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

This week's scouting data contributors:

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### GDD TOTALS AS OF TUESDAY, 3/27/12:

LOCATION	GDD TOTAL
Elizabethtown, Lancaster County	149.5
Hallstead, Susquehanna County	107
New Cumberland, York County	153.5
New Ringgold, Schuylkill County	129.5

For growers who do not have a recording thermometer, but are interested in finding the growing degree days for their own town, The Weather Channel Online provides a growing degree day calculator. (See link below.) By filling in your zip code, base temperature of 50°, a start date (I suggest Feb. 1), an end date (today's date) and a year, the calculator will provide the growing degree day total based on local temperature records. To be clear, this figure is not as precise as an on-farm monitor, which is specific to your farm's unique micro-climate. It is, however, an option for growers not monitoring temperatures at all.

- The Weather Channel Growing Degree Days Calculator:  
<http://www.weather.com/outdoors/agriculture/growing-degree-days/>.

### SPRUCE SPIDER MITES

In New Ringgold, Schuylkill County this week, spruce spider mite adults were active on Colorado blue spruce and arborvitae. In one block, the population was approximately 90% hatched. On one farm in southern York, spider mites were just beginning to hatch on Fraser fir. Spider mites

typically emerge within a range of 50-121 GDD, but some fields may be cooler than others causing egg hatch to be slower than in other fields.

These mites can be found on a number of conifer hosts – firs, spruce, Douglas-fir, arborvitae and others. Fraser fir seems to be a favorite host.

When scouting for this pest, growers should look for a yellowing or browning at the base of the foliage in the interior of the tree. Using a hand lens, look on the undersides of the twigs for tiny, round, red eggs which will be found along the twig surface between the needle bases.

[Fig. 1] The hatched spider mites will be red at first and then will darken to brown and salmon or orange. [Fig. 2] They can be found moving along the needle or the twigs. One helpful method of scouting for spider mites is to use a tap test:

hold a white surface (paper, clipboard, paper plate) underneath a branch and tap the branch once or twice. Spider mites will appear as tiny red specks which will be moving along the surface. If 10 or more mites are found per branch, growers may want to consider

making a control application. An application of horticultural oil or miticide should be applied after the large majority of eggs have hatched. Check the link found at the end of the report for miticide



Figure 1: Spruce spider mite eggs on Fraser fir [PDA]



Figure 2: Spruce spider mite adult [R. Lehman, PDA]

options. For more information on spruce spider mite, visit:  
<http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/spruce-spider-mite.pdf/view>.

### BALSAM TWIG APHID

On Fraser fir in Elizabethtown, Lancaster County, stem mothers of balsam twig aphid have just begun to hatch from the overwintering eggs. This is the pest that causes the curled needles at the tips of true fir foliage. The silvery, football-shaped



Figure 3: Balsam twig aphid stem mother with honeydew droplet [PDA]

overwintering eggs can be found on the undersides of twigs at the bases of the needles. The stem mothers are oblong, greenish-gray and are often made noticeable by the clear, shiny droplets of honeydew they excrete. [Fig. 3] The stem mothers will

feed on the foliage until the buds begin to break and they give birth to new nymphs which will enter the opening buds. This is the generation which causes the curling damage. If a noticeable population of stem mothers is found, growers can apply horticultural oil or an insecticide to prevent the stem mothers from reproducing. This should be done prior to bud break. Another management option is to apply controls in the fall targeting the overwintering eggs. Growers in North Carolina and some in PA have had success with this. It's important to note that applying controls this coming fall will not prevent damage from this season's aphids. For more information on this pest, visit:

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

### OTHER PESTS

White pine weevils are still being found in traps in Lancaster County. Growers who made an insecticide application for this pest should continue to check weevil traps. If weevils are found in a field that was already sprayed, this could mean that another spray is necessary.

Cooley spruce gall adelgids, the pest which causes kinked needles on Douglas and pine cone like galls on Colorado blue spruce, have already begun to wax over with the white, cottony, protective wax. This is a sign that it is too late to get adequate control of this pest this spring. The time to control this tiny sucking pest is in the fall when the overwintering nymphs have settled. This is also the case with Eastern spruce gall adelgid, the pest of Norway spruce.  
<http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/adelgid.pdf/view>.

Overwintering nymphs of Balsam woolly adelgid have also begun to wax over in Susquehanna County on Fraser fir. This pest of true firs can be found on the trunk and twigs. They feed on the bark and cause a gouting or swollen growth of twigs and buds and may also cause trunks to become brittle. This pest can be controlled when the next generation crawlers emerge from the wax (typically in May). More information on Balsam woolly adelgid can be found here:  
<http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/shoot-and-branch-injury/balsam-woolly-adelgid.pdf/view>.

### LOOKING AHEAD

Growers may be noticing a heavier occurrence of Swiss and Rhabdocline needle casts of Douglas-fir. The higher presence of these diseases this season is related to the wet weather the northeast experienced last spring. The moisture provided the perfect conditions for disease development. Fungicide applications will be very important this season to prevent further spread of these diseases. Growers should be ready to make applications at the first sign of bud break. Since other plants have blossomed early this season, growers can expect to see bud break of Douglas-fir and other conifer species earlier than usual as well. Look for more information on these diseases in reports to come.

For your reference, the *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 on Wednesday, April 4, 2012.