

PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

2011, Report 7: May 5, 2011

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 3rd, there were 246.5 growing degree days (GDD) in Elizabethtown, Lancaster County, 240.5 GDD in New Cumberland, Cumberland County, 176 GDD in New Ringgold, Schuylkill County and 55 GDD in Montrose, Susquehanna County. Ground temperatures in New Ringgold, Schuylkill County were 56 - 58° F this week.

This week in New Ringgold, Schuylkill County, the orange fruiting body structures of Spruce Needle Rust, or Weir's Cushion Rust, were swollen and breaking the



Figure 1: Spruce needle rust sporulating [T. Olson, PDA]

surface of Colorado blue spruce and Serbian spruce needles. [Fig. 1] When scouting for this disease, look for yellow/orange bands on the lower portion of the tree. These are best seen on cloudy, overcast days. Control for this disease requires several preventative fungicide applications, beginning with an application at bud break. Repeat application 2-3 times with a week between each spray, until symptomatic needles

have cast or new needles are hardened off. Currently, less than 2% of Colorado blue spruce and Serbian spruce trees have broken bud in the New Ringgold area. Find more info at:

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

In other areas of the state, bud break is progressing. In Lancaster, York and Adams Counties, buds of Norway, blue spruce and Serbian spruces are pushing out. Also in Adams County, buds of Fraser fir are beginning to break. Fraser bud break signals the end of the control period for Balsam twig aphid. When aphids are able to get into the buds of true firs, they will feed on the new needles and cause the typical curling damage. In counties where bud break has not begun, there may still be time to get control. In northern counties, such as Susquehanna, bud break has not yet begun for most conifer species.

In areas where Douglas-fir buds have broken, growers who have had damage from Douglas-fir needle midge in the past, should have made their first application of insecticide. [Fig. 2] The female midges often begin to



Figure 2: Douglas-fir needle midge damage (Fall) [S. Gardosik, PDA]

lay eggs inside the buds when the buds have just begun to open. At this time in the season, rain and wind conditions can make it difficult to make pesticide applications.

Growers who may have been delayed with an insecticide

application for needle midge should still make an application. Emergence of this pest can occur over several days to a week. For this reason, in cases with heavy damage the previous season, it is recommended that a second application of an insecticide be made a week to 10 days following the first.

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

In Orrtanna, Adams County last week, spruce spider mite populations were 100% hatched from the overwintering eggs. At this stage in the season, when temperatures are still relatively cool, spider mite populations can thrive and increase rapidly. An adult female mite is capable of laying 30-40 eggs in her short

lifetime. In tree blocks which have had a mite problem, a miticide, insecticide or horticultural oil application made at this time of the year may prevent a steep population increase, which would most definitely lead to foliage damage.

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

Growers of Douglas-fir should remember to keep up with their series of fungicide applications for Rhabdocline and Swiss needle casts. The series is as follows: 1) a spray at bud break, 2) a spray one week after the 1st, 3) a spray two weeks after the 2nd and 4) a spray three weeks after the 3rd. It's possible to forget a 3rd or 4th application when waiting for weather conditions to be appropriate, but a missed spray could open the trees up to infection. This is especially in the case of Swiss needle cast, which has a prolonged period of infection that is deterred by a 4th application of a fungicide. [Fig. 3]



Figure 3: Swiss needle cast [B. Schildt, PDA]

Rhabdocline –

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

Swiss -

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

One last pest to be watching for at this time is Pine needle scale. Within the next week or two, growers may be seeing the burgundy-colored crawlers of this armored scale moving around on the needles of Eastern white pine, Scotch pine and other pine species.



Figure 4: Pine needle scale adult and crawlers [S. Gardosik, PDA]

The adult scales are cottony-white and elongated and will be found along the length of the needles. [Fig. 4] This pest is typically more of a problem on Scotch pine, but in some cases can be quite heavy on white pine as well, causing some discoloration of the needles and reduced plant vigor. The best time to achieve control of this pest is when the crawlers are active on the needles. A horticultural oil or insecticide applied at that time, during the appropriate weather conditions will be effective in controlling this pest.

<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 May 11, 2011.