

PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

APRIL 11, 2012

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GDD TOTALS AS OF TUESDAY, 4/10/12:

LOCATION	GDD TOTAL
Elizabethtown, Lancaster County	175
Hallstead, Susquehanna County	110
New Cumberland, York County	199.5
New Ringgold, Schuylkill County	143

BUD BREAK



Figure 1: Douglas fir bud break [S. Pickel, PDA]

In Cumberland, Lancaster, and York Counties this week, bud break was beginning on Douglas-fir. Buds that are close to breaking will increase in size and will lighten in color, becoming light tan or green. The ends will eventually open, allowing the pale green tips of new needles to push out. As soon as these needles are exposed through the

bud sheathes, they are vulnerable to infection by disease.

Norway spruce has also begun to break bud in Northern York County. Watch for other spruce to follow quickly.

NEEDLE CASTS

Growers of Douglas-fir should be preparing to make preventative fungicide applications for Rhabdocline and Swiss needle casts at this time.

Because the overly-wet weather last spring was favorable to the development of needle casts, there has been a heavier

than usual presence of these diseases this season. These diseases cause two distinctly different



Figure 3: Swiss needle cast [T. Olson, PDA]

symptoms on the needles of Douglas-fir (the only host). Rhabdocline resembles rust-colored paint splatches on the upper and lower surface of the needles. Needles infected with Swiss will begin browning from the tip of the needle and will have a

peppering of small black fruiting bodies on the underside of the needles, resembling black powder. Growers should begin their fungicide treatments when they notice bud break beginning in a block of trees. The timing of bud break may vary between farms and fields, so growers may need to vary their spray schedule for these farms accordingly. Make



Figure 2: Rhabdocline needle cast [S. Pickel, PDA]

peppering of small black fruiting bodies on the underside of the needles, resembling black powder.

a first application at the time of bud break, a 2nd one week later, a 3rd application two weeks after the 2nd and a 4th application 3 weeks after the 3rd.

If you have further questions about these diseases, please see last week's report and reference the article at the end of the report by PDA Pathologist, Tracey Olson.

DOUGLAS-FIR NEEDLE MIDGE

This is also the time when growers should be thinking about making control applications for



Figure 4: Douglas-fir needle midge [USDA Forest Service Archive]

Douglas-fir needle midge if they noticed damage from this pest last season. This tiny, orange, fly-like insect can infest the needles of Douglas-fir at the very start of bud break. The adults emerge from their overwintering sites from under the trees to mate and then lay eggs inside

the newly opening bud sheaths. When larvae hatch from the eggs, they will borrow into the needle. The larvae will feed and develop inside of the needle and will cause a gall to form in the middle of the needle. The expanding needles will appear kinked and swollen. The gall will begin to yellow and will then turn brown.

In Cumberland and Lancaster County, midge have not yet been found in emergence traps, but growers can be looking for what resembles orange gnats hovering around Douglas-fir buds. One application of insecticide at the time of midge emergence (typically coincides with Douglas-fir bud break), should control the population. For a list of labeled insecticides, view the 2011 Insecticides and Miticides link found at the end of the report. For more information on Douglas-fir needle midge, visit:

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

ROOT ROT & J-ROOTING

One thing that growers may be noticing in their fields this year is a dying-off of Douglas-fir trees. I have had a number of questions about this issue. Because of the very wet growing season we



Figure 5: Phytophthora root rot infestation [B. Schildt, PDA]

experienced in Pennsylvania last year, it seems that some growers are seeing symptoms of Phytophthora root rot on their farms. Many times, the trees did not appear to be unhealthy until this Spring and the decline happened very rapidly. The disease, which may have been present in the field, had the opportunity to develop and infect the trees thanks to the excess water found in many fields. Unfortunately, this disease spreads through the soil and there is no cure for it. It is likely that trees replanted in these locations will become infected as well. For more information on Phytophthora root rot, visit:

<http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/stem-and-root-injury/phytophthora.pdf/view>.



Figure 6: J-rooted tree. [T. Olson, PDA]

One condition that can advance the effects of the disease is J-rooting. This is the condition of a tree whose tap root is turned and pointing back up to the soil line. This may occur when mechanical planters fail to place trees at the correct depth with the tap root pointing straight down. This condition weakens the tree and can make it more vulnerable to diseases. Making adjustments to mechanical planters to ensure proper planting depth may help to prevent this condition.

OTHER PESTS

In Loganville, York County, spider mite hatch increased this week. There were fewer than 25% of overwintering eggs left. Growers should wait until the majority of the overwintering eggs have hatched to get the best level of control from their miticide applications.

In York and Lancaster Counties, Eriophyid (Rust) mites were still active this week. As these populations build, growers may notice a rusting or fading of the foliage color. The earlier these mites are controlled, the less chance there is for them to cause damage to the trees.

LOOKING AHEAD

In Northampton County, needles infected with Spruce needle rust on Colorado blue spruce were showing signs of swelling. This swelling of infected areas is a sign that the infection will soon rupture the surface of the needles and release spores. The blue spruce buds are not yet breaking in Northampton County, but as soon as they do, the needle rust fruiting bodies will be capable of spreading the infection to the new growth. For more info, visit:

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

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 18, 2012.