

PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

2010, Report 5: April 21, 2010

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

This week's report includes scouting information from: Jim Fogarty (Halabura Tree Farm), Karen Najda (PDA), Susan Newhart (Arcadia Trees) Brian Schildt (PDA), and Cathy Thomas (PDA).

Growing degree day totals as of Tuesday, April 20 were 133.5 in New Ringgold, Schuylkill County, 210 in Elizabethtown, Lancaster County, and 212.5 GDD in New Cumberland, Cumberland County. As of Monday, April 19, there were 101 GDD in Montrose, Susquehanna County.

This week in Adams County, a few crawlers of elongate hemlock scale were found on Fraser fir. The majority of female scale covers checked had eggs underneath, and a few had a combination of eggs and crawlers. Hosts of this armored scale include true firs, hemlocks, spruce, Douglas-fir and pines. Female scales are brown and oblong. Male scales are smaller and covered with a white waxy coating. Bright yellow, oval-shaped crawlers, or nymphs that hatch from eggs laid by the female [Fig. 1], are the vulnerable stage of this pest. When crawlers are found moving on the foliage on the bottom portion of the tree, growers may want to consider applying an insecticide. One spray program that has been tested in Pennsylvania uses Dimethoate in a schedule of 3 applications with 4 weeks between each application, or 4 applications with 3 weeks between each application. [There is a 24(c) Special Local Needs supplemental label for Pennsylvania that users must have to use Dimethoate 4E. This can be found at the PSU page: <http://ento.psu.edu/extension/christmas-trees/information/24-c-labels>.] For other insecticide options, the *2010 Insecticides and Miticides Update for PA Christmas Tree Pests* can be found at the site:



Figure 1: Elongate Hemlock Scale female with crawlers (L); A heavy population on Fraser fir (R) [Sandy Gardosik, PDA]

<http://ento.psu.edu/extension/christmas-trees/scouting-reports>. Follow label recommendations for treatment options.

Douglas-fir needle midge may be active this week. Midge were spotted last week in Cumberland County. Growers may find these delicate, orange fly-like pests hovering around or landing on the opening buds of Douglas-fir. [Fig. 2] The first insecticide spray should have been applied just before or at the first sign of bud break. If midge continue to be seen in the block, a second insecticide application can be made two weeks after the first.



Figure 3: Female Douglas-fir needle midge [Sandy Gardosik, PDA]

Tiny black-purple nymphs of pine bark adelgid have been found on the newly expanding candles of white pine in Adams County this week. [Fig. 3] In Schuylkill County, eggs were still found under the white woolly wax produced by the adults. There were no nymphs found in Schuylkill County. The main host of pine bark adelgid is Eastern white pine; Scotch and Austrian pine may also be hosts. This sucking insect covers itself with white wax, which may resemble snow and can be found on the bark of pines at the bases of needles, twigs and branches. Not typically considered a major pest, populations may be kept in check by natural predators. If populations are heavy, insecticide applications may be made when the nymphs are exposed on the candles. Insecticide applications made at this time, though will also kill many of the beneficial insect predators.



Figure 2: Pine bark adelgid nymphs on new growth of white pine [Sarah Pickel, PDA]

Growers in much of the state should have begun their fungicide sprays for Rhabdochline & Swiss Needle Casts, as Douglas-fir has broken bud in many counties. Because last

year there was a very cool, wet spring, farms may be seeing heavy amounts of these two diseases this year. The best control may be attempted by following a fungicide spray schedule of three fungicide sprays, with the second spray applied one week after the first, and the third spray applied two weeks after the second. If Swiss needle cast is present, a fourth fungicide spray should be applied three weeks after the third application.

In Schuylkill County this week, spruce needle rust continues to sporulate, or release spores, as susceptible spruce hosts, Colorado blue and Serbian, are breaking bud. In Berks County, samples of spruce needle rust taken late last week were swollen, but not yet sporulating. Across the state, fruiting bodies will continue to mature and eventually burst as spruce hosts break bud and moist weather conditions are present. [Fig. 4] A fungicide spray program will protect the newly expanding foliage.



Figure 4: Spruce needle rust sporulating [Paul E. Hennon, USDA Forest Service, Bugwood.org]

Balsam twig aphids were still feeding on the foliage of true fir this week in Schuylkill County. There still is time to control this pest with insecticides if fir buds have not begun to open yet, however sprays made at this time will also kill off beneficial predator insects. These insects help to control the aphid population. [Fig. 5]



Figure 5: Ladybeetle larva feeding on Balsam twig aphid [Cathy Thomas, PDA]

spruce and the Cooley spruce gall adelgids on Blue spruce and Douglas-fir are becoming more noticeable because of the tufts of white waxy fringe that they develop at this time of the year. [Fig. 6] Unfortunately, the wax that helps them become more obvious also makes them invulnerable to insecticide sprays. The time to treat these pests is in the fall after the black overwintering nymphs have settled or the early spring before they develop the wax.



Figure 6: Cooley spruce gall adelgids on Douglas-fir [Cathy Thomas, PDA]

The next scouting report will be available April 28, 2010.

Lastly, I've had some questions about control of the spruce gall adelgids. Both the Eastern spruce gall adelgid on Norway