PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

FRIDAY, MAY 19, 2017

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

GROWING DEGREE DAY TOTALS FROM 5/18/17:

LOCATION	GDD TOTAL
Elizabethtown, Lancaster Co.	495.5
Indiana, Indiana Co.	402
Montoursville, Lycoming Co.	385.5
New Cumberland, York Co.	555
New Ringgold, Schuylkill Co.	453

** Figures courtesy of www.accuweather.com.*

SPRUCE SPIDER MITE BUILD UP

Growers who didn't make a treatment for spruce spider mites earlier in the season may be noticing a population surge now that temperatures have taken a sharp rise. The life cycle of these tiny brown and red mites, which can take about 21 days to complete in cooler temperatures, can shorten to only 7 days with hotter temperatures. Populations can build quickly when mites can go from eggs to mature, egg-laying adults in 1 week. These flare ups were noticeable on Fraser fir in Dauphin and Schuylkill Counties this week. With the rise of populations numbers, yellow or bronze feeding damage may occur, along with the typical webbing build up. Growers may want to consider making a control treatment of miticide to limit the feeding damage to the new growth. However, since the tender, new needles are still expanding and not hardened off, growers should be very careful about the timing and weather conditions before applying any chemical to the new growth. This new foliage can suffer phytotoxic damage, the possibility of which is amplified in hot, sunny conditions and when the pesticide product has not had a chance to dry before hot, sunny conditions occur.

Stages of spruce spider mite [S. Pickel, PDA]

CRYPTOMERIA SCALE

Growers who have had past issues with Cryptomeria scale, the hard scale pest of true firs, spruces and occasionally other conifers, may want to begin monitoring those populations at this time. In Dauphin County, no female scales were found to have eggs underneath their off-white scale coverings yet, however, the round bright yellow females had started to swell. This is an indication that egg laying is not far off. In the Cryptomeria scale life cycle, male scales mature and fly out from under their scale covers to fertilize the female scales in mid-spring. The female scales swell as egg laying approaches. The female scales lay their eggs in late spring or early summer. Two weeks later, the eggs will hatch into tiny, mobile nymphs, or crawlers, which spread out to newer growth. This crawler stage is important because they are the life stage most easily controlled by insecticides. The other

stages are protected from contact sprays by their hard scale coverings. Crawlers hatch from eggs within a range of 600-800 GDD, which typically falls in early to mid-June.

Like elongate hemlock scale, Cryptomeria scale can be found first on the lower, interior branches of host trees on branches with yellow speckling on the upper needle surfaces. On the underside of these symptomatic needles, scales will be found with oval-shaped white and yellow coverings. A hand lens is necessary to observe these. To see if eggs have been laid yet, growers will need to scrape the scale coverings away using a finger nail or a pin. Underneath, the female scales will be round, bright yellow and plump. Eggs will be much smaller and will look like tiny yellow jelly beans.

Elongate Hemlock Scale

Elongate Hemlock Scale crawler activity continues to increase in Dauphin and Schuylkill on needles of Fraser fir and Douglas-fir. The tiny, bright yellow, oval-shaped crawlers will be found on the undersides of the needles, along with the brown, oblong female scales and shorter, white, waxy male scales of lower, interior branches with gray waxy residue covering the needle surface and the yellow-speckled needle damage. Other hosts include hemlocks, other true firs and spruces.

If the scale population is noticeable and growers wish to take control action, a spread-out insecticide strategy is necessary. Growers can either make 3 insecticide applications with 4 weeks between each application, or 4 applications with 3 weeks between each application to control this pest with a (trials suggest Dimethoate). Another option that some growers have found to be effective (although no official trials have been conducted) is a single application of the systemic chemical spirotetramat (Movento, Kontos).

Fungicide Applications For Disease Prevention

Disease management for Douglas-fir and spruce species continued last week. In Schuylkill County, some farms had finished their 2nd Swiss needle cast preventing fungicide application to Douglas-fir and a first application to Serbian spruce for Stigmina needle cast. Meanwhile in Dauphin County, some farms had already applied 3 or 4 applications. Deciding when to stop making fungicide applications can be a mystery to growers. If foliage is no longer expanding since your last fungicide application and the needles have begun to harden off, growers may be able to stop applications. Weather conditions should also be considered when determining to end or continue fungicide applications, as a cool, rainy season can prolong disease sporulation.

Looking Ahead

Growers should be aware that bagworm larvae could be hatching from bagworm casings soon. Bagworm hatch typically happens between 650 and 750 GDD. The eggs which are inside the brown "bags" which are composed of needle pieces and silk and resemble slender pine cones. The tiny black and gray larvae will exit the casings on threads of silk, carrying them to

needles on other areas of the tree or neighboring trees. When new larvae are observed, it will be time to think about control action with insecticide.

Additional Resource

More information on Christmas tree pests and production is available at the PSU Department of Entomology's Christmas tree site: http://ento.psu.edu/extension/christmas-trees.

The next scouting report will be available Friday, May 26, 2017.