

PITTSBURGH, PA, September 19, 2013 **/24-7PressRelease/** -- The Christmas and nursery tree industry in Pennsylvania is under increasing pressure due to an influx of invasive pests, but researchers from the Pennsylvania IPM Program are helping growers gain better control while reducing pesticide applications.

Cut Christmas trees and landscape conifers are important specialty crops in Pennsylvania and in the country. Pennsylvania ranked fourth in the nation for sales of Christmas and evergreen trees in a 2007 USDA/NASS survey. According to Cathy Thomas, Pennsylvania IPM coordinator at PDA, scale pests from Asia such as Elongate hemlock scale and Cryptomeria scale cause a lot of damage to hemlock and fir trees. "Fraser, canaan, and balsam firs see the most damage and are all important Christmas tree varieties in Pennsylvania," says Thomas. "Each of these scales has two generations per year, with adults having a waxy, armored-like covering. This makes these scales difficult to control with pesticides, which often causes growers to make excessive pesticide sprays."

A group of growers expressed interest in finding an alternate method of control, since broad-spectrum pesticides often kill off natural predators of the scales. For this project, Thomas and project team members Sarah Pickel and Brian Schildt focused on finding alternative methods of controlling Cryptomeria scale using IPM.

IPM, or integrated pest management, is a highly effective alternative to excessive pesticide applications. IPM aims to manage pests -- such as insects, diseases, weeds and animals -- by combining physical, biological and chemical tactics that are safe, profitable and environmentally compatible.

According to Pickel, the goals of the project were to establish a conifer scale warning system through scouting and weather data, and educate growers through a one-on-one training with an IPM specialist regarding scale life cycles, scouting, growing degree-day accumulation and record keeping. "We also held IPM informational seminars for participating growers to learn about current pest information and research while recommending the use of biocontrols, reduced-risk products and sustainable techniques used in an IPM system," Pickel explains.

After working on this project for two growing seasons, growers expressed increased knowledge about IPM and a reduction of broad-spectrum, traditional pesticides. "This project has shown that a combination of native beneficial arthropods, compatible soft pesticides and released parasitoid wasps for biological control can come together for a safe, yet effective pest control program," says Pickel. "There was also education about other Christmas tree pests as they were discovered in the field, such as White pine weevil, spruce spider mite, pine bark adelgid,

and Eriophyid mites."

Pickel says there was some hesitation on the part of the project team to recommend pest management solutions when they were uncertain of the outcomes. "Not having experience with releasing biocontrols in a conifer plantation was risky, but knowing that the technique had worked in many other settings and situations made the step less daunting. The growers embraced the process and were pleased to find that there was a pesticide free option for pest control."

For more information on Christmas tree pest management, go to the Penn State Christmas Tree Web site at <http://ento.psu.edu/extension/christmas-trees>. For weekly Pennsylvania Christmas tree scouting reports go to <http://extension.psu.edu/ipm/program/christmas-tree/scouting-report>.

In addition, PA IPM's Integrated Pest Management for Christmas Tree Production is available and is the first manual customized for Pennsylvania conditions that describes pests commonly found in the Northeast and Mid-Atlantic regions. Hard copies of the manual can be obtained through the Publications Distribution Center by calling 814-865-6713, e-mail [AgPubsDist@psu.edu](mailto:AgPubsDist@psu.edu), or by filling out the order form at web site [http://pubs.cas.psu.edu/orders\\_CAS.asp](http://pubs.cas.psu.edu/orders_CAS.asp) (specify publication AGRS-117 on the order form). A free PDF copy of the publication can be downloaded from Web site <http://pubs.cas.psu.edu/FreePubs/pdfs/agrs117.pdf>.

The Pennsylvania IPM program is a collaboration between the Pennsylvania State University and the Pennsylvania Department of Agriculture aimed at promoting integrated pest management in both agricultural and urban settings. For more information, contact the program at (814) 865-2839, or Web site <http://www.paipm.org/>.