

Cinara Aphids – A Real Catch 22

By Jill R. Sidebottom, Area Extension Forestry Specialist

Cinara aphids are bad, but at least we didn't have bats! Did you hear about the bats in a Christmas tree sold in California? A woman decorating a tree felt something prick her. She thought it was just a cone on the tree. The next morning there was a bat on her ceiling above the tree. The tree farm where she bought her tree uses bats for insect control.

Fortunately, no trees from NC made national news this past year. But we did see a lot of problems with post-harvest pests in 2006, especially with *Cinara* aphids. And it is a real *Catch 22*. That is the 1961 novel by Joseph Heller. *Catch-22* can be defined as a contradictory or self-defeating course of action. *Cinara* aphids in Christmas trees are bad for business. You treat for *Cinara* aphids and have pesticides on trees going to market which are bad for business too.

Cinara aphids have always been around. These are the big, dark colored aphids found in colonies often in the early spring or the fall. Virginia pine tree growers have treated preventatively for these pests in their harvested trees for many years. Until recently most Fraser fir growers haven't worried as much about these pests.

Unfortunately, since 2004, *Cinara* aphids numbers have continued to increase. We're seeing more fields with *Cinaras*, and higher numbers in individual fields.

Why the increase? This may be one we can blame on global warming. These aphids have always been more common during the colder months, though I've seen them in the field every month of the year. They live quite happily when nighttime temperatures dip into the twenties. This winter we've observed *Cinaras* surviving up until the very coldest weather experienced in late January, early February that seemed to kill many individuals. In those instances, the temperatures were in the teens and single digits. The last couple of years we haven't had very cold temperatures prior to harvest and the *Cinara* aphids have remained active.

How often do we get temperatures in the single digits before harvest? Almost never.

We are in the southern-most region for wholesale Christmas tree production in North America. We will always have more problems with *Cinara* and other post harvest pests than other areas of the county.

According to one tree lot operator in the Charlotte area, almost all the Frasers he is getting have a few aphids on them. In his opinion, the *Cinara* aphid is causing upscale homeowners who can afford large artificial trees to move away from the real tree.

And people are noticing. There was even a nationally syn-



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icated cartoon, "Lio" on December 22 that showed a Christmas tree with snakes, bats and spiders. At least I hope they are spiders and not *Cinara* aphids!

There were a lot of trees treated the fall of 2006 for *Cinara* aphids in western North Carolina. People who used Di-Syston, or Dimethoate, Talstar or Astro (permethrin) with a hose or mistblower all seemed to have pretty good control. However, there were a few escapes reported – in other words sprayed trees where aphids ended up surviving.

What do we know about *Cinara* aphids? They are found in colonies that are tended by ants during the growing season. Typically they have spotty distribution in the field until the numbers increase to almost every tree. Colonies move around. Bryan Davis has flagged infested trees only to return a few weeks later to find that tree clean and another previously clean tree down the road with high numbers. Primarily the aphids lay live young. I've only seen eggs in a few instances, and both of those were at high elevation farms. Occasionally you find eggs or winged individuals. Typically when you find a colony there will be a few large aphids and lots of little ones. These are the live young that are being produced in a short period of time.

So what's a grower to do? If some people complain about *Cinara* aphids, others will complain about pesticides on Christmas trees. You can go out and scout and walk right past them. This fall we were lucky enough to have a lot of wasps and yellow jackets that alerted growers that the aphids were in their trees.

Should all harvested trees be treated for these pests? That's a question each individual grower will have to answer. But consider that even with treatment there will be escapes. Treatments will only reduce, not eliminate the problem.

I think a better solution would be shaking trees. You wouldn't shake all the aphids out of a tree, but you could identify trees with aphids that way.

Education of our retailers is also important. The NCCTA has done a good job with their retailer newsletter to try to keep folks updated on all retailer problems including post-harvest pests. But each grower needs to talk to their buyers individually to make sure they know about the problem and what to do about it if they have it.

We have enough eyes in the field that we know region-wide if *Cinaras* are abundant each fall or not. County agents did a great job in 2006 getting the word out to growers to get in their trees and scout and treat if need be. So pay attention to these reports and get out in your trees at least twice in the fall to check go-to-market trees. That's a good first step. Then decide early enough in the fall so that any pesticide treatments are made at least a month before harvest to reduce problems with pesticide residues.

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The best 22 families in the Piedmont Training Center orchard have been identified. These selections were grafted onto rootstocks for inclusion in the new seed orchard being established at the Stump Farm site in Morganton. Approximately one-half of this seed orchard was established in January 2007, with the remaining acres to be established next winter. In conjunction with this seed orchard, an open-pollinated progeny test and a demonstration planting of the included families was also established at the Stump Farm site. Data collected from this and other progeny tests will provide information to further upgrade this seed orchard. This new seed orchard is expected to start producing commercial quantities of seed in 8 to 12 years. Until that time, the North Carolina Division of Forest Resources will continue to collect improved Eastern White Pine seed from the seed orchard at the Piedmont Training Center site in South Carolina. Seed collection in this orchard will continue to be by individual family. This will allow the Division to capture the largest genetic gains possible from this seed orchard for deployment to the growers. 

NEEDED:


Used retail lot supplies – display stands, drilling machines, tents, vexar balers, lights, inflatable Santas or Snowmen, wreath machines, etc. Call Pam Johnson at 828-733-3348 or 863-699-5842.

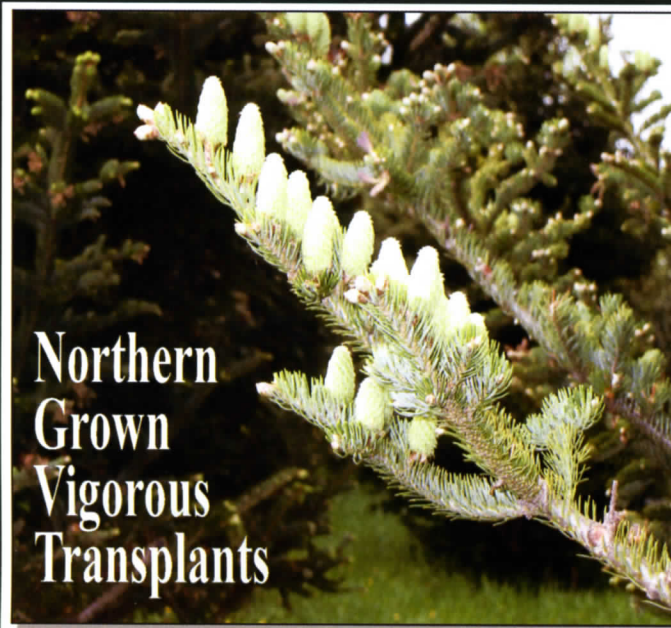
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Information about *Cinara* aphids is available on the web. Information for growers is at <http://www.ces.ncsu.edu/fletcher/programs/xmas/ctnotes/cinara.html>. Information for the homeowner is at: <http://www.ces.ncsu.edu/fletcher/programs/xmas/postharvestpests/>

This year we plan on following fields that have *Cinara* aphids to track their numbers. We also plan on interviewing growers who have this problem to determine if their insect management practices have changed over the last few years. Grower treatments for *Cinaras* will be monitored this fall to determine how well they work. I also plan on visiting tree lots in the Charlotte area this Christmas to learn how tree lot operators are handling this problem.

Cinara aphids have always been around and they aren't going away. As our customers become more urban, their tolerance of pests will continue to decline. It will take all of us working together to monitor for these pests and keep harvested trees as clean as possible.

Recommendations for the use of chemicals are included in this publication as a convenience to the reader. The use of brand names and any mention of commercial products or services in this publication does not imply endorsement by the North Carolina Cooperative Extension Service nor discrimination against similar products or services not mentioned. Individuals who use chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Be sure to obtain current information about usage and examine a current product label before applying any chemical. For assistance, contact an agent of the North Carolina Cooperative Extension Service in your county. 



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