It's Beginning To Look A Lot Like: Aphids?

Dealing with the Media and Other Problems Associated with Cinara Aphids

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The article in the *CHARLOTTE OBSERVER* that ran on December 3, 2004 with the above title ("It's Beginning to Look a Lot Like: APHIDS?" with the added by-line "'Hum-bugs' hiding in N.C. trees") got a lot of attention. Unfortunately, there were enough Cinara aphids in trees in 2004 that people did pay attention. With another warm harvest season, Cinara aphids – also called the giant conifer aphids – were a big problem.

I wrote about post-harvest pests including Cinara aphids in an article in the Spring 2000 issue of LIMBS & NEEDLES entitled, "Unwanted Hitchhikers." That was following the 1999 season in which there were problems with Cinara aphids and also spider mites and rust mites. Due to the torrential rains this fall, we've had few spider mite problems on harvested trees recently. I was hoping the hurricanes would take out the Cinaras as well, but they didn't.

So, what do we know about Cinara aphids? This group of aphids are found throughout the conifer forests of North America and Europe. There are 200 known species. We don't know which species we have in Fraser fir in western North Carolina, and in fact it is very difficult to identify this group to species. That's why we just lump them all together. Different species of Cinara aphids will attack pines, firs, spruces, junipers, cypress and other conifers.

Cinara aphids live in large colonies and are often protected and "farmed" by ants that feed on their honeydew. Wasps are also attracted to this honeydew, and this can be one way that growers find the aphids in their trees. Ladybeetles and other predators are also attracted to these aphids as they are large and a good food source. Because of this, Dr. Jim Baker, former ornamental entomology specialist at NCSU, called them the "gypsies of the insect world." They don't stay in one place very long because they will be preyed upon.

I have observed Cinara aphids almost every month of the year. In fact, they are hardest to find in the heat of the summer. I've seen them in January near the parkway in Jackson County when the nights are getting into the low 20s. Very cold temperatures don't affect them, though they do lay eggs and become more dormant when the fall gets cold in November. In the spring they seem to be easiest to find in the terminal and trunk. In the fall they seem to be found in the lower branches.

We have more problems with Cinara aphids when temperatures don't get cold in the fall. Aphids can be found on trees when they are being harvested. In fact, I don't think the problem is that the Cinara aphid eggs are hatching in people's homes – rather I think that some live aphids are on the trees at harvest and these will produce live young, greatly increasing the numbers once the tree is in a warm environment.

In fact, when Christy Bredenkamp, the county extension agricultural agent for Jackson and Swain Counties and I went to Florida in 1999, one of the store managers that we spoke with said the infested tree in his store had a few large aphids and a lot of little ones. Of course, he thought they were ticks as people often do. When I collected trees that same year that had Cinara aphid eggs on them and put them in the greenhouse at the Mountain Horticultural Crops Research Station in Fletcher, they never did hatch. But put those live aphids in a warm house, and they will produce live young as almost all aphids do.

We had a case of an aphid infested tree that was close to home this past year. Bryan Davis' Christmas tree that he got from his own field had Cinara aphids. Many of you know Bryan. He is the IPM technician in Ashe, Alleghany and Watauga Counties, and he's very good at finding bugs in Christmas trees. He never saw the aphids until he was taking the tree down after Christmas. Then his wife asked him about them, and he saw literally hundreds of aphids on his own tree. He was lucky. Because the tree was so fresh, the aphids never moved off of it into the house. Aphids probably only move off the tree once it starts to dry out and is no longer a good food source for them. Lesson learned? These aphids are very hard to find in trees. A few can easily pass through the hands unknowingly of the best tree growers.

Unfortunately, we had blocks of trees in 2004 that didn't

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have just a few trees infested with aphids as we typically see, they had hundreds. One grower in Mitchell County said he cut a block of 1,000 trees and every one was heavily infested.

One observation I made in 2004 is that not all but many of the fields that had high Cinara aphid numbers had little ground cover going into the fall. Ground covers can provide habitat for natural predators that will feed on the aphids. Not having a ground cover may allow the aphid numbers to climb.

Now we aren't the only state that has Cinara aphids on Christmas trees. But when you think about it, western North Carolina has the southern-most wholesale production of Christmas trees in North America. If anyone is going to have Cinara aphids, we are. And though someone somewhere in western North Carolina has a problem with Cinaras every year, they are going to be a worse problem in warmer falls.

So what can we do about Cinara aphids? They are easy to kill, if you can get a pesticide to them. Most Virginia pine Christmas tree growers in the eastern part of the state treat all of their marketable trees every year for this pest as Cinaras are much more common on pines. But, even with these applications a few aphids will still survive on a few trees. If a Fraser fir Christmas tree grower used a mistblower some aphids would probably be missed. Treating trees in the fall for balsam woolly adelgid with a high-pressure sprayer might be a good option in some fields, but not every field needs BWA treatment. And do we really want to treat all of the 6-7 million trees harvested every year with a high-pressure sprayer just in case they have a few aphids on them? Bugs in trees bring bad press but so would pesticides in trees.

Should we just take our licks every few years? 1999 and 2004 were bad years for Cinara aphids. But 2005 may not be. I don't know how many growers have told me, "I've grown Frasers for twenty-five years and never had a problem." Most people don't have problems year after year. In fact, I've only followed one field that had a serious Cinara aphid problem two years in a row. Usually it's hit or miss.

One thing to do is be prepared to talk with customers if you are the one that has Cinara aphids in 2005. If you do have problems with Cinara aphids or other post-harvest pests such as spider mites or preying mantis, direct your customers to the web site: http://www.ces.ncsu.edu/fletcher/programs/xmas/postharvestpests/index.html

The following are some talking points to remember about Cinara aphids. Assure people that Cinara aphids will not harm pests, houseplants or children. They do not bite and they don't carry disease. Cinara aphids are a nuisance, like ants at a picnic, but you don't stop having picnics because of a few ants. Fraser fir Christmas trees in western North Carolina are grown in natural settings and nature includes bugs. We use integrated pest management to control insect pests, which means we only use pesticides when absolutely necessary.

Most people are very reasonable about this problem, but we have had some people that were very unreasonable. You can always give them my name and phone number and I would be happy to try and give them a little clearer perspective about this problem.

Here are some further recommendations to help reduce the likelihood that Cinara aphids will be a problem:

If you see wasp activity or ladybeetles in your trees in the fall, check it out. There might be Cinara aphids. Beat the foliage over paper to see if any aphids fall out.

Make sure all the men harvesting Christmas trees on your farm can recognize Cinara aphids. These aphids leave a purple stain on fabric. Tell your help to take notice if they see purple on their hands or gloves.

If you find Cinaras in the field while harvesting, stop and treat for them. Two good choices of products for control are Astro and Provado because both have low toxicity and are household insecticides. Provado is more expensive but it does not have an odor. Both have a 12-hour re-entry interval so trees can be sprayed one day and harvested the next.

Shake all trees. You might not be able to shake all the aphids out of the tree, but you'll know that tree has them and can deal with that tree.

If you have a tree lot, consider hosing down and washing each tree as it is put out on display. This will wash off aphids and will also wash off pollen and dust which are common allergens.

Have information about Cinara aphids, like a hard-copy of the above website on hand to give out to customers.

Cinara aphids are a pest problem, but they are also a marketing problem. We need to work together to decide the best way to handle the problem. I would appreciate your guidance on how best to handle media questions. Earl Deal is heading up a new committee with NCCTA called the public education committee. This is one of the public relations issues the committee will be dealing with. If you have ideas, talk with Earl or volunteer to be a member of this committee.

And if you see Cinara aphids in your trees any time this year, let me and your county extension agent know. Hopefully 2005 will be a ho-hum year for the hum-bugs Cinara aphids!