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Written by Wally Richards.

#### NEW THREATS TO GARDENERS

Last season a number of gardeners lost potato and tomato crops to an insect called the potato psyllid which releases a toxin into the plants and causes the young potatoes or tomatoes not to grow much larger than a marble. My suggested treatment is a combination of Neem Tree Granules and sprays of Neem Tree Oil.

Cluster flies have also been found in their thousands in various regions of New Zealand. They winter over in areas such as in the roofs of houses, emerge in the warmer weather and lay eggs in the soil near earthworm burrows. The maggots hatch out and find an earthworm where they feed on it, killing the worm. There can be 4 generations of cluster flies each season. This is devastating to our friends the earthworms. The trick is to control the pests in their adult form during the winter months.

Now a new problem has been reported to me recently and that is the guava moth, *Coscinoptycha improbana* Meyrick (Lepidoptera: Carposindae), which was first found in Kaitaia in May 1997. The insect is a native of Australia, where it is commonly seen in autumn feeding on the flesh of ripening guava fruit.

MAF suggests that guava moth arrived in New Zealand between 1995-97 after being blown across the Tasman during favorable winds that also saw several other new Australian species arriving. Another possibility is that guava moth arrived in coastal Northland in infested fruit from a trans-Tasman yacht.

There is little knowledge about this pest as in Australia it has not been a major problem. In New Zealand it is quickly becoming a major problem and one reader from the Waikato alerted me as they had found damage to their fruit crops this past season.

The problem is far worse than just guava fruit being affected, as the moth has a big range of host fruit it likes.

Guava moth infests fruit all year round. Its hosts include yellow guava and feijoa in autumn, citrus (lemon, mandarin, orange, grapefruit) throughout winter/spring, and loquats in spring, plums and peaches, nashi pear in summer, and macadamia nuts from summer through early winter.

This is really bad as the populations keep on building all year round which means more fruit is ruined and the spread of the pest will carry on south into new regions.

The Tree Crops Association concedes that the guava moth is just one of 20-30 new plant pests reaching New Zealand each year, but claims there are defects in the response of MAF Biosecurity that need to be addressed. Members are particularly concerned at the response time over this moth and the huge increase in eradication costs for the painted apple moth because of delays in implementing that programme.

#### First Moths Not Acted Upon:

The first moths were reported in 1997 but MAF didn't become involved until 1999.

Karyn Froud (Tree Crops Association) says it's unfortunate they weren't alerted earlier, but even then, the Australian experience suggested the moth was 'no big deal.' In Australia it is considered a backyard pest only, not a threat to commercial orchards.

We now know that this moth has the potential to be a very major pest to emerging subtropical crops in New Zealand," she said. "It has definitely had a devastating effect on macadamias.

So far it has only affected backyard citrus and not commercial crops."

Gordon Lees, (Tree Crops Association) however, says commercial organic mandarin orchards in Northland have been affected and these crops have been shipped around New Zealand, though not exported. He claims about 50 percent of the Northland orchards inspected by BioGrow in 2002 showed some degree of infestation.

Karyn says she can understand the frustration of tree croppers but she can also understand why MAF made the decision not to go for eradication on the information available at the time.

"HortResearch now hopes to get funding for bio-control research but it may take 6-10 years before an agent can be introduced. Collecting infested fruit at harvest and removing it from the orchard is another control possibility. The guava moth pheromone is also available from most grower suppliers."

#### Nuts Totally Destroyed:

With plums and feijoas, there is little external evidence of infestation in the early stages and it's not until someone bites into a fruit that the damage is discovered. Sharp eyes may detect pin prick holes when the caterpillar first enters the fruit, later the fruit is discoloured and you can see 1mm holes where the mature grub has exited.

But with organic macadamias it acts as a boring insect and can totally destroy the nut.

The larval form is small, growing to about 8-10mm and turning pink as it matures. The moth probably has a short life of just a few days before laying eggs, offering only a short period for control, but multiple cycles of the moth are likely to occur in northern regions. The small exit holes have detritus similar to codlin moth.

Organic growers remain particularly at risk. One trial of spraying Cold Water Surf<sup>TM</sup> has seen infestation markedly reduced while unsprayed feijoas were badly infested with the caterpillar.

Systemic insecticides will probably work for conventional growers, providing this is acceptable for export markets. Is this what the commercial growers are relying on?

One grower has reported that Orthene has reduced infestation to negligible proportions in feijoas - however care will be needed to ensure that resistance does not develop.

The above extracts are from web pages of Tree Crops Association and MAF.

I have also heard that in at least one instance, fruit in a supermarket had to be withdrawn because of the internal damage inside; what appeared on the surface, as perfectly good produce.

There is great concerns about the moth reaching the Hawkes Bay orchards.

At this time likely it has only reached down as far as the Waikato but likely to spread through the rest of the North Island in the next year or so and then across the strait to the South Island.

Also if people are buying fruit from a contaminated area and taking effected fruit home to any part of NZ then it could only be a year or so before outbreaks are found anywhere.

My suggested possible means of control for home gardeners would be to try the **Neem Tree Granules under the tree, sprayed with Neem Tree Oil at 25 ml per litre**. (This may help on some types of trees)

Using the pheromone traps to catch the male moths would give you the time of activity and thus the right time to spray, which you could apparently try the Cold Water Surf or sprays of **Neem Tree Oil**.

Because the pest can be in operation all year round on various fruit and nut crops it could

be a year round battle for those with a good selection of different fruit trees. The moths are also attracted to light and suitable traps could be used.

The question is going to arise; who is going to take a bite of a fruit to find grubs inside?

Problems ring me at 0800 466464 (Palmerston North 3570606)