

Woolly Apple Aphid Control in Orchards

Woolly apple aphid (*Eriosoma lanigerum*) is on the increase in a number of orchards and becoming a serious pest particularly in young orchards. Where populations are high, infestations can cause formation of galls on branches which reduce tree vigour especially in young orchards and also can also be a severe nuisance to pickers at harvest time due to contamination of fruits and foliage with honey dew and wax.

The rise in woolly aphid numbers is likely related to changes in pesticide programmes now used in orchards. Top fruit growers implementing an Integrated Pest Management programme in their orchards today have moved away from broad spectrum organophosphate and carbamate pesticides which gave incidental control of woolly aphid, to a more sustainable approach of managing pests by combining biological, cultural, physical and chemical tools in a way that minimises economic, health, and environmental risks.

Woolly aphid is easily recognisable as the aphid itself is brown to greyish purple in colour and produces conspicuous secretions of white woolly wax as in photographs below.



Earwigs, ladybirds and the parasitic wasp, *Aphelinus mali* are important natural enemies of woolly aphid and usually regulate populations to below damaging levels. Where woolly aphid is a problem, artificial housings, (for example pastic bottles with the bottom removed and packed with cardboard) should be

provided for earwigs in orchards. The use of pesticides harmful to earwigs and other natural enemies should be avoided.

Orchards should be inspected for the pest (i.e. for the colonies that produce conspicuous masses of white woolly wax) at the end of blossom, early June and again in mid-summer.

If a grower counts woolly aphid numbers on more than 5% of the fruit trees immediately after blossom, an application of **Flipper**, which is a fatty acid in a 2% solution, will control aphids. This will also increase future control options by reserving other insecticides for control of pests later in the season. If 10 - 20% of flowers are already open, it is best to postpone the application post-blossom. For woolly aphid apply concentration of 2% with good coverage is essential. An intensive orchard will require a volume of 300-400 l water/ha, and a classic canopy 600-800l water /ha or even more if very large canopy.

Flipper is known to complement the use of *spirotetramat* or 'Batavia' as it provides quick 'knockdown'. Flipper works by direct contact reducing the numbers of woolly aphids very significantly and quickly.

Growers should follow up the initial inspection with an early June assessment to once again determine woolly aphid levels in their orchards. At least 25 trees per orchard should be inspected. If one or more trees in the sample has woolly aphid, in the extension growth, like photograph below, the economic threshold for spraying will have been reached and treatment with an insecticide can be justified.



Photographs courtesy of Bayer

A high volume spray applied should be applied in late May or early June which should reflect the period of migration of woolly aphid from old wood to new shoots. Top fruit growers are advised to walk their orchards to determine when the woolly aphid is migrating to the new shoots.

This is the critical time for control using *Spirotetramat*, 'Batavia' which is a unique insecticide used for sucking pests and giving excellent control of woolly aphid.

If you would like further information on woolly aphid, please contact Kieran Lavelle, Senior Horticulture Development Adviser, CAFRE by e-mail; kieran.lavelle@daera-ni.gov.uk or mobile telephone 07990575893.