

APPLE: *Malus domestica* Borkhausen, “McIntosh” and “Delicious”

# Comparison of Insecticides Against Woolly Apple Aphid, 2014\*

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Woolly apple aphid (WAA): *Eriosoma lanigerum* (Hausmann)

The purpose of this field trial was to test the effectiveness of two chemicals and a combination of adjuvants with known activity against WAA. Treatments were arranged in a RCB design and replicated three times in “McIntosh” and “Delicious” cultivars. Materials were applied once and included Movento 240SC with LI-700, Movento 240SC with Choice Weather Master, Movento 240SC in combination with both adjuvants and Sivanto with LI-700. (Table 1) Treatments were applied when WAA were first observed. Treatments were applied using an airblast sprayer calibrated to deliver 100 gpa. Two applications of Mesurol 75W (12.0 oz/acre) were applied to the test orchard on 29 May and 16 June to flare populations in the test orchard. WAA were sampled preapplication to determine population levels, as well as 7, 14, 28,

35, and 42 DAT to determine efficacy. Plots were sampled by counting the presence or absence of WAA colonies on 100 terminals in each replicate. Data were transformed and subjected to analysis of variance, and treatment means separated using Student’s *t*-test.

All of the treatments performed well throughout the trial; however, Movento 240SC + LI-700 + Choice Weather Master and Movento 240 + LI-700 appeared to control WAA slightly faster than Movento 240SC + Choice Weather Master or Sivanto + LI-700. As in past seasons, the untreated check plots started losing WAA populations 2–3 wk postapplication. This phenomenon is most likely due to the colonization of WAA predators. Phytotoxicity was not observed in any of the treated plots.

**Table 1.**

Treatment/formulation	Rate amt/acre	% WAA infested terminals						
		24 June	27 June	8 July	14 July	22 July	29 July	5 August
Movento 240 SC+	9.0 oz	3.6a	6.7a	1.7cd	5.0ab	0.0c	0.3b	0.0b
LI-700	32.0 oz							
Movento 240 SC+	9.0 oz	7.3a	7.0a	0.0d	2.7b	0.0c	0.7ab	0.0b
LI-700+	32.0 oz							
Choice weather master	3.0 pt							
Movento 240 SC+	9.0 oz	15.0a	4.3a	3.0bc	2.3b	0.3bc	1.3ab	0.3b
Choice weather master	3.0 pt							
Sivanto	14.0 oz	4.6a	6.7a	5.7b	3.3ab	2.0ab	1.0ab	0.3b
LI-700	32.0 oz							
Check	–	13.0a	11.7a	19.0a	10.7a	2.3a	3.0a	3.3a

Means within a column followed by the same letter are not significantly different (Student’s *t*-test,  $P \leq 0.05$ ). Data were transformed arcsine ( $\sqrt{x}$ ) prior to analysis. All treatments applied 2 July 2014.

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