

Future Orchards Trial: Final Report

Project title:	Mealy bug control options
Region:	Stanthorpe, Queensland
Contact:	Stephen Tancred
Projective Objective:	To compare insecticide options for the control of mealy bugs in apple trees. Treatments include several insecticides , two water application rates, use of wetters, and programs variations

Outline/method/ (what you did):	<p>Spray programs were applied to a mealy bug infested Sundowner orchard 6 times; 31/10/16, 10/11/16, 22/11/16, 6/12/16, 9/1/17 and 10/2/17.</p> <p>The Dilute (1X) volume ranged from 2,690 to 3,130 L/Ha and concentrate (2X) ranged from 1,250 to 1,480 L/Ha</p> <p>All trees (including untreated) were sprayed with Supracide before greentip and with Mainman in March 2017</p> <p>Mealy bugs were assessed on apple leaves and fruit on 6 occasions; 31/10/16, 21/11/16, 4/1/17, 27/1/17, 2/3/17 and 25/3/17.</p> <p>Data was presented to apple growers at the Orchard Walk on 27th March 2017</p> <p>Growers had the opportunity to inspect the plots at the March orchard Walk, in the presence of Victorian Ag Dept entomologist David Williams and Qld DAF entomologist Peter Nimmo.</p>
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Results Summary

	% leaves with Mealy Bugs					
	31-Oct-16	19-Dec-16	04-Jan-17	27-Jan-17	02-Mar-17	25-Mar-17
Untreated control	50.0	16.0	60.0	82.0	46.5	29.5
Samurai (1X) + Agral	50.0	1.5	7.5	0.0	1.5	1.5
Samurai (2X) + Agral	55.0	6.5	12.0	10.0	8.5	4.5
Transform + Agral (1X)	55.0	1.0	1.5	7.0	0.5	0.5
Movento + Hasten (1X)	60.0	1.5	10.5	1.0	3.5	1.0
Lorsban (1X)	60.0	0.5	5.0	0.0	7.5	7.0
Samurai then Transform then Lorsban + Agral (1X)	65.0	0.0	0.5	0.0	0.5	1.0

	% apples with Mealy Bugs				
	19-Dec-16	04-Jan-17	27-Jan-17	02-Mar-17	25-Mar-17
Untreated control	5.0	11.3	3	45.0	45.0
Samurai (1X) + Agral	1.3	0.0	0	8.8	1.9
Samurai (2X) + Agral	1.3	3.8	0.5	7.5	4.4
Transform + Agral (1X)	1.9	0.6	0	1.3	0.0
Movento + Hasten (1X)	0.0	0.0	0	3.1	0.6
Lorsban (1X)	6.3	0.6	0	8.1	13.1
Samurai then Transform then Lorsban + Agral (1X)	3.1	0.6	0	0.6	0.0



Photos of mealy bug crawlers on apple leaves and adults on immature fruit in January

Implications (What did we learn?)

It was demonstrated that the best way to control Mealy Bugs in apples

1. Start treatments early
2. Use high volume spraying volumes
3. Use a wetter to improve penetration to places where mealy bugs hide
4. Use a program of good insecticides as some are better than other Always follow labels. Do not spray an insecticide more times than is allowed on the label.

How will this impact on the business?

Growers who have patches of orchard with mealy bugs can concentrate control for 2 years (this is usually required) and then can revert to less intensive controls if monitoring indicates low pest numbers

What will we change?

Growers who do not have present control of mealy bug can look at the 4 learnings (listed above) and see where they can change current practices.

What are the road blocks/obstacles to change?

Monitoring is important so that growers know when to intensify their control methods. Not all growers are using monitoring.

Changing practices (eg dilute volume application, or more expensive insecticides, or starting treatment early) is always a challenge for just pockets of problem mealy bug areas in the orchard.