

Orchard History

Commercial block of Jonagold in Wayne Co, NY
Traditionally has AM damage at harvest
Adjacent to abandoned orchard and woods
Grower agreed to cooperate with experiments
in 2010, 2011, 2013





2013 Field Trial

- Treatments of insecticides were applied shortly after first fly caught in area (19 Jul)
- Blocks of 12 trees (4x3) were arranged in a RCB design and replicated 3X
- Applications were made at 14d intervals, 4 sprays applied in total
- Harvest evals were conducted 12 Sep by picking and inspecting fruit

Methods

Damage assessments were rated as a 'sting' if puncture did not exceed 1/8" and 'tunnel' if breakdown from larval tunneling was present

Applications were made at 150gpa with air-blast equipment

Applications were made on 19 Jul, 30 Jul, 12 Aug and 27 Aug

What appeared to be stinkbug damage in 2010 was not present in 2013

All insecticides used were commercially available combination materials, registered in NYS

<u>Insecticide Combo's</u>

Voliam Xpress (Lambda cyhalothrin 4.6%, Rynaxapyr 9.2%)

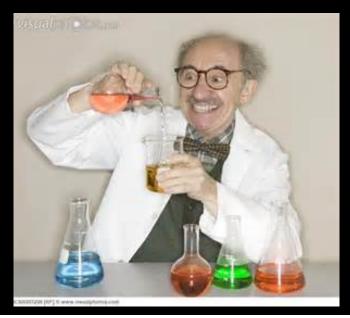
Voliam Flexi (Thiamethoxam 20.0%, Rynaxapyr 20.0 %)

Agri-Flex (Abamectin 3.0%, Thiamethoxam 13.9%)

Endigo ZC (Lambda cyhalothrin 9.5%, Thiamethoxam 12.6%)

Leverage 360 (Cyfluthrin 10.5%, Imadicloprid 21.0%)

Calypso 4F – used as growers standard



AM Stings

<u>Treatment</u>	Rate/A	% AM Stings
Voliam Xpress	12.0 oz	3.3 bc
Voliam Flexi	7.0 oz	4.0 bc
Agri-Flex	8.5 oz	8.3 ab
Endigo ZC	6.0 oz	3.0 c
Leverage 360	2.8 oz	4.0 bc
Calypso 4F	8.0 oz	11.3 a
Untreated Ched	4.3 bc	

Means within a column followed by the same letter are not significantly different (Student's t Test, $P \le 0.05$). Data was transformed arcsine (Sqrt x) prior to analysis

AM Tunnels

<u>Treatment</u>	Rate/A	% AM Tunnels
Voliam Xpress	12.0 oz	0.7 c
Voliam Flexi	7.0 oz	2.3 bc
Agri-Flex	8.5 oz	3.7 ab
Endigo ZC	6.0 oz	0.7 c
Leverage 360	2.8 oz	0.3 c
Calypso 4F	8.0 oz	2.0 bc
Untreated Chec	7.7 a	

Means within a column followed by the same letter are not significantly different (Student's t Test, $P \le 0.05$). Data was transformed arcsine (Sqrt x) prior to analysis

Total AM Damage

Treatment	Rate/A	% AM Stings	% AM Tunnel
Voliam Xpress	12.0 oz	3.3 bc	0.7 c
Voliam Flexi	7.0 oz	4.0 bc	2.3 bc
Agri-Flex	8.5 oz	8.3 ab	3.7 ab
Endigo ZC	6.0 oz	3.0 c	0.7 c
Leverage 360	2.8 oz	4.0 bc	0.3 c
Calypso 4F	8.0 oz	11.3 a	2.0 bc
Untreated Chec	k	4.3 bc	7.7 a

Means within a column followed by the same letter are not significantly different (Student's t Test, $P \le 0.05$). Data was transformed arcsine (Sqrt x) prior to analysis

RESULTS

- * Few significant differences in stings
- * Calypso 4F seemed to increase stings, but did reduce tunnels compared to UTC
- * Treatments containing a pyrethroid controlled tunnels better, but similar to UTC in % stings
- * Unless other pests present, may be better using single ai materials
- * Trees were noticeably bronzed for ERM damage at harvest

Thanks

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Alex Walbridge – Summer Asst
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