

Apple Maggot Control Year 2



Dave Combs & Harvey Reissig

Orchard History

Commercial block of Jonagold in Wayne Co, NY

Site of 2010 insecticide trials

Adjacent to abandoned orchard and woods

High AM pressure in 2010, carried over to 2011

Grower agreed to cooperate with experiment in
again in 2011



2010 Experiment

First Apps went on 6 Jul

Blocks of 9 trees (3x3)
replicated 3X

Applications were made
at 14d intervals, 4
sprays applied in total

AM traps were hung in
the UTC to monitor
populations and
checked weekly

Harvest evals were
conducted 1 Sep

2011 Experiment

First Apps went on 19 Jul

Blocks of 16 trees (4x4)
replicated 3X

Applications were made
at 7d intervals, 6
sprays applied in total

AM traps were hung in
the UTC to monitor
populations and
checked weekly

Pre-harvest evals were
conducted 20 Aug

Harvest evals were
conducted on 23 Sep

2011 Trial

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

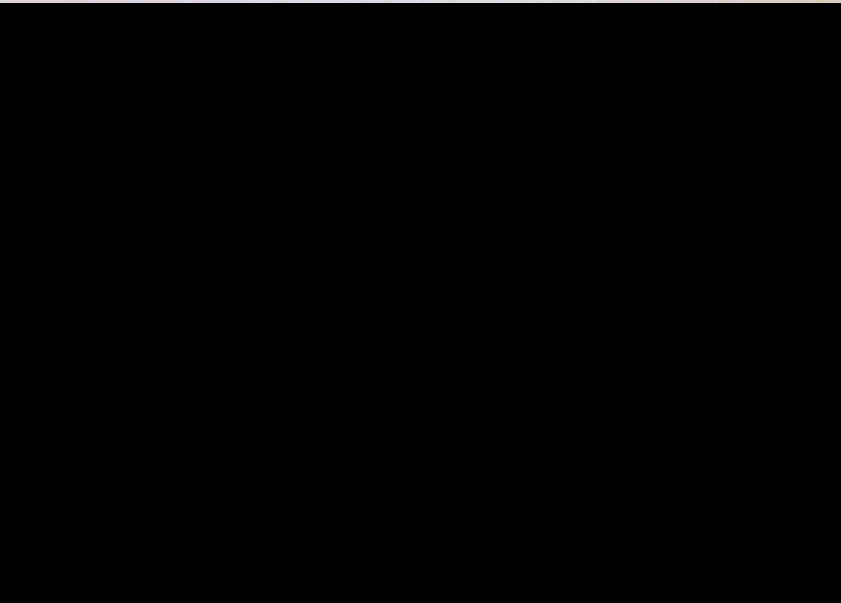
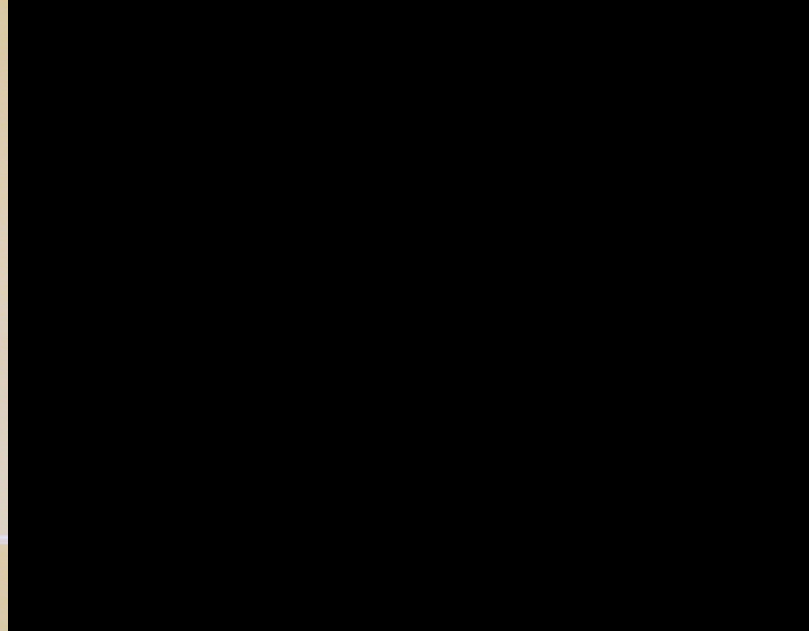
Applications were made at 100gpa with air-blast equipment

Applications were made on 19 Jul, 26 Jul, 1 Aug, 8 Aug, 16 Aug and 23 Aug

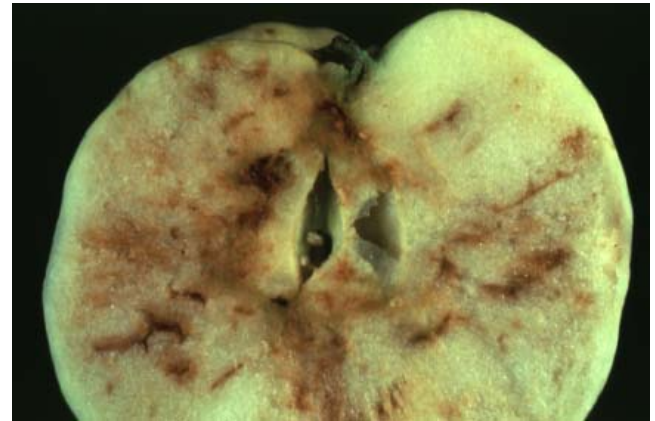
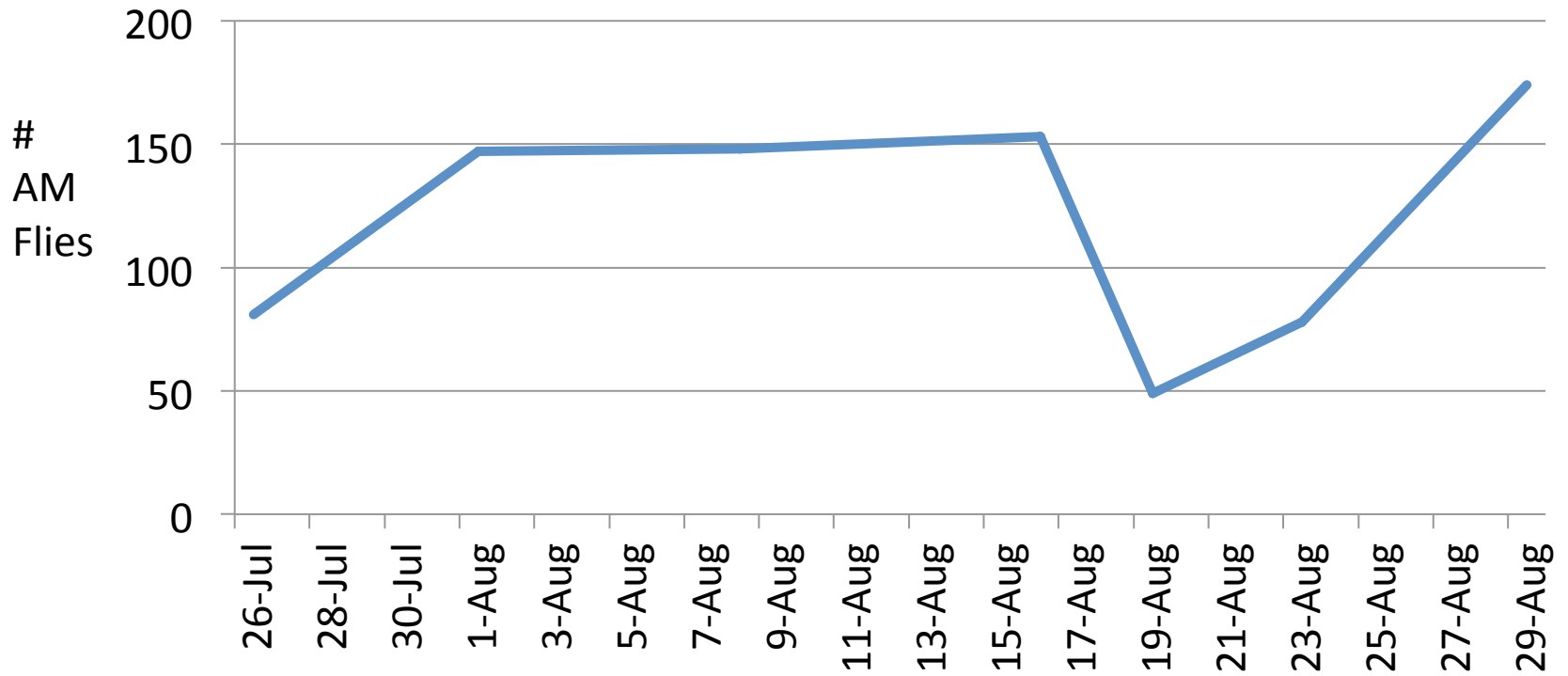
Pre-Harvest evaluation taken on 30 Aug

Final Harvest evaluation taken on 23 Sep

'Stinkbug' damage found in 2010 was not present in 2011



AM on 3 VBS





N
2D 3D Road Aerial
W E
S
⊕
⊖
↺
↻
⏪

50 feet 20 m

© 2010 Microsoft Corporation © 2010 NAVTEQ © AND
Pictometry Bird's Eye © 2010 Pictometry International Corp
Pictometry Bird's Eye © 2010 MDA Geospatial Services Inc.

2010 Treatments

Actara 25W 5.0 oz/A

Avaunt 30WDG 5.5 oz/A

Calypso 4F 6.0 oz/A

Altacor 35W 4.5 oz/A

Delegate 25W 6.5 oz/A

Guthion 50WSB 1.5 lb/A

Assail 70WP 3.4 oz/A

Untreated Check

2011 Treatments

Calypso 4F 8.0 oz/A

Assail 30SG 8.0 oz/A

Delegate 25W 7.0 oz/A

Altacor 35W 4.5 oz/A

Guthion 50WSB 3.0 lb/A

Untreated Check

Apple Maggot Sting Damage

(9/1/10)

Pre-Harvest (8/30/11)

Treatment	Rate/A	% Sting	% Sting
Calypso 4F	8.0 oz	19.3 a(6.0 oz)	17.7 a
Assail 30SG	8.0 oz	17.8 a(3.4 oz WP)	18.0 a
Delegate 25W	7.0 oz	26.7 a(6.5 oz)	7.3 a
Altacor 35W	4.5 oz	18.0 a(4.5oz)	7.0 a
Guthion 50W	3.0 lb	15.3 a(1.5lb)	9.3 a
Untreated Check		19.0 a	6.7 a

Means within a column followed by the same letter are not significantly different

Apple Maggot Tunnel Damage

(9/1/10)

Pre-Harvest (8/30/11)

Treatment	Rate/A	% Tunnel	% Tunnel
Calypso 4F	8.0 oz	2.0 a(6.0 oz)	7.0 bc
Assail 30SG	8.0 oz	5.9 ab(3.4 oz WP)	2.0 c
Delegate 25W	7.0 oz	9.0 ab(6.5 oz)	11.0 bc
Altacor 35W	4.5 oz	5.3 ab(4.5oz)	24.7 b
Guthion 50W	3.0 lb	5.3 ab(1.5lb)	4.7 bc
Untreated Check		19.0 a	47.3 a

Means within a column followed by the same letter are not significantly different

Apple Maggot Damage 11'

Treatment	Rate/A	<u>8/30</u>	<u>9/23</u>	<u>8/30</u>	<u>9/23</u>
		% Sting	% Sting	% Tunnel	% Tunnel
Calypso 4F	8.0 oz	17.7 a	24.3 a	7.0bc	2.7 b
Assail 30SG	8.0 oz	18.0 a	16.0 ab	2.0 c	2.0 b
Delegate 25W	7.0 oz	7.3 a	14.3 ab	11.0 bc	12.3 b
Altacor 35W	4.5 oz	7.0 a	10.3 b	24.7 b	25.3 ab
Guthion 50W	3.0 lb	9.3 a	16.0 ab	4.7 bc	10.0 b
Untreated Check		6.7 a	4.7 b	47.3 a	51.3 a

Means within a column followed by the same letter are not significantly different

RESULTS

Higher AM pressure in 11'

Increased rates and applications in 11' did not drastically increase control of tunneling at harvest from that found in 10'

Increased rates reduced stings in the Altacor and Delegate plots from 10'

Not a dramatic increase in tunneling after the pre-harvest sample was taken

Calypso and Assail appear to have ovicidal/larvicidal activity

Delegate and Altacor appear to be less effective in preventing both stings and tunnels

Thanks

Burnap Farms

Eve Farm Services

Alex Walbridge – Summer Asst

All Companies who donated materials