Fall Predormant Applications for Prune Aphid Control

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Aphid Egg


UC Statewide IPM Project
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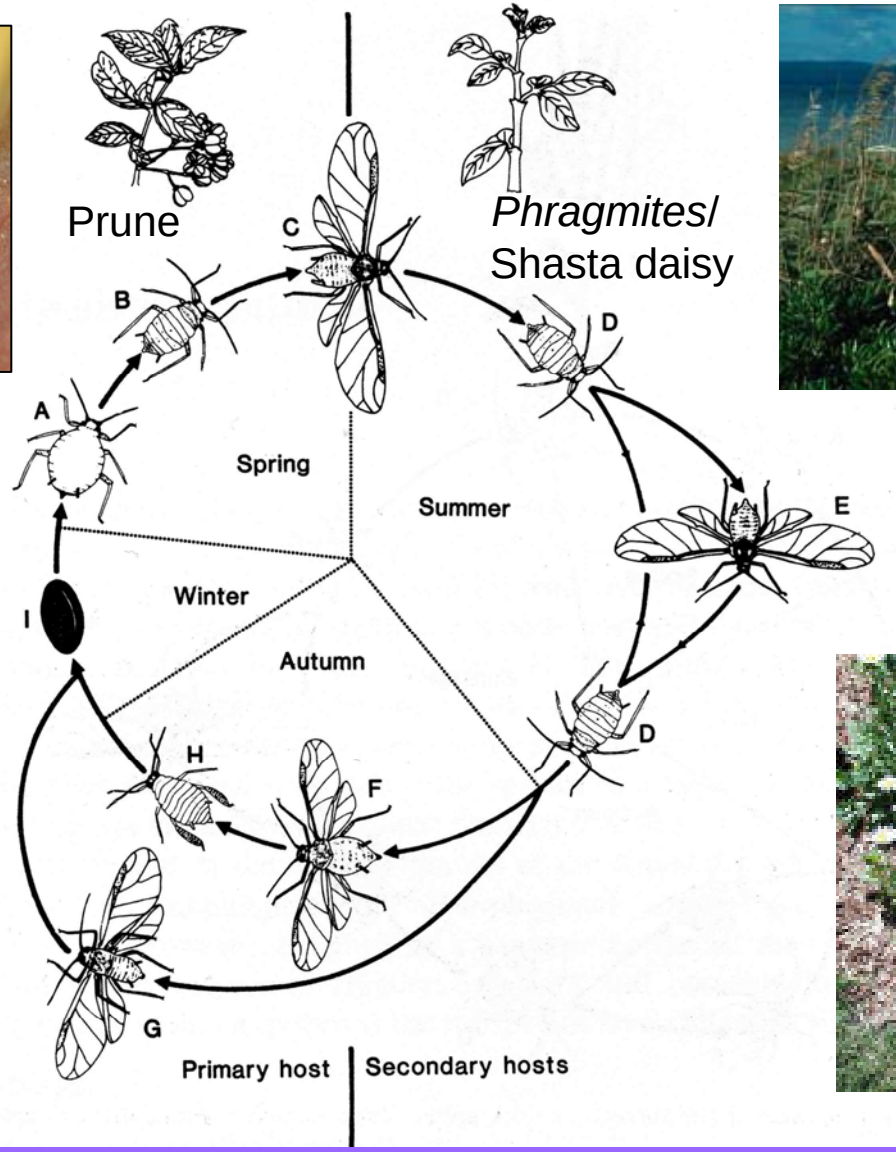
Aphid Life Cycle – Prune Aphids



F – gynopara
G – male
H – ovipara

Yellow Water Traps Used to Monitor Fall Migration by Prune Aphids

Orchards monitored in Red Bluff, Corning (2), Chico, Sutter, Winters, Madera

Sorting through the vast numbers of aphids trapped to find prune aphids

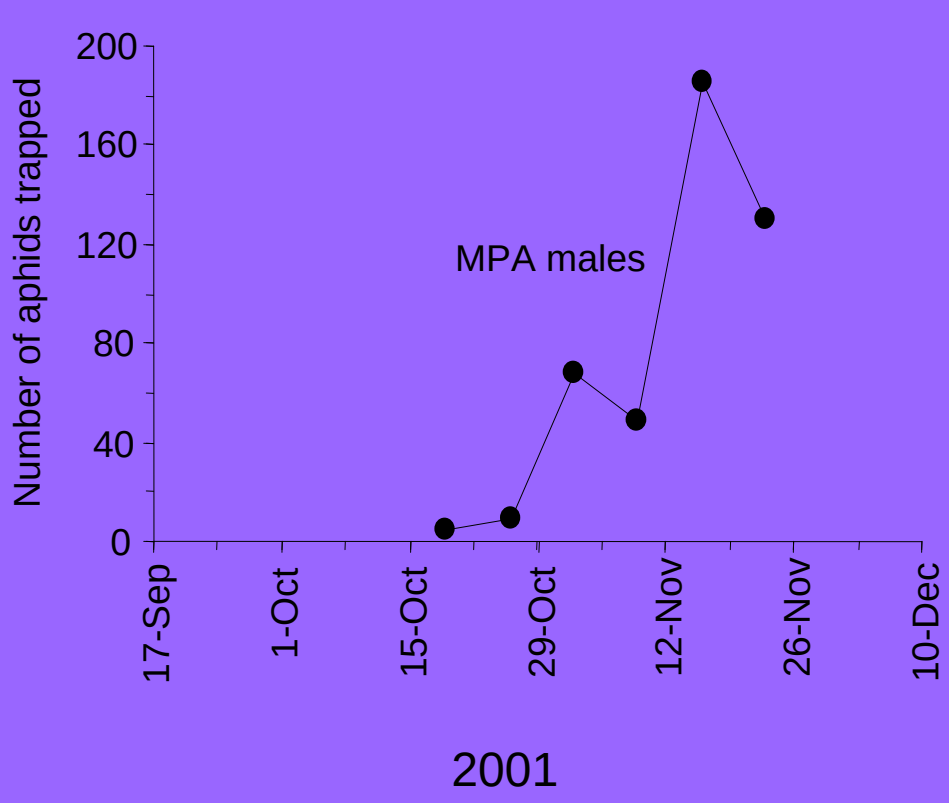
LCPA

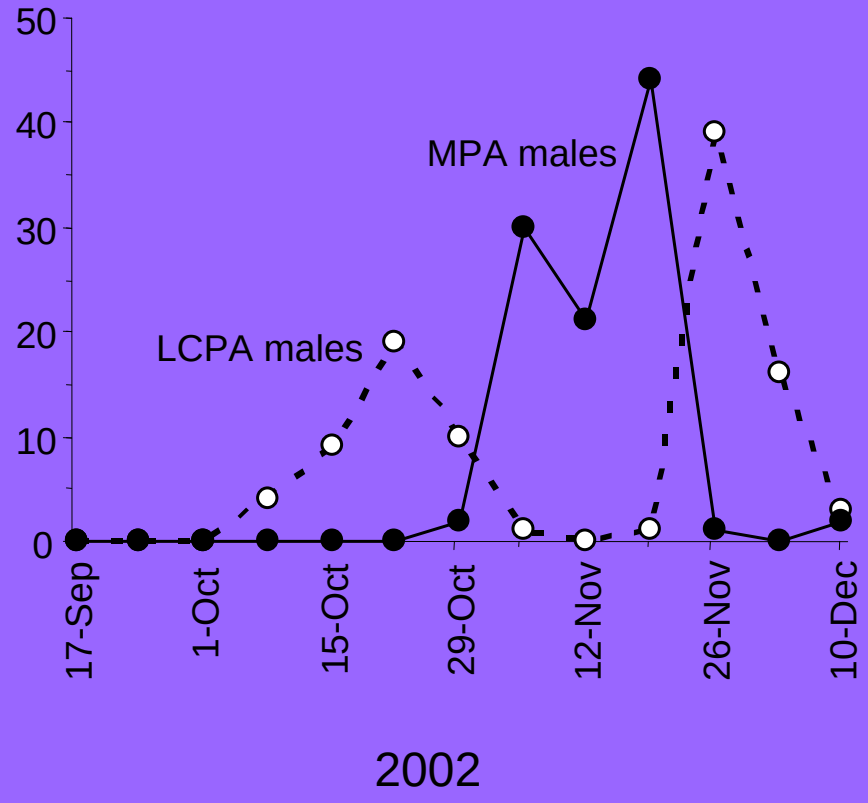
Brachycaudus helichrysi

MPA

Hyalopterus pruni

Fall Migration by Prune Aphids
Timing of Male Migration





Aphid Control with early November insecticide applications

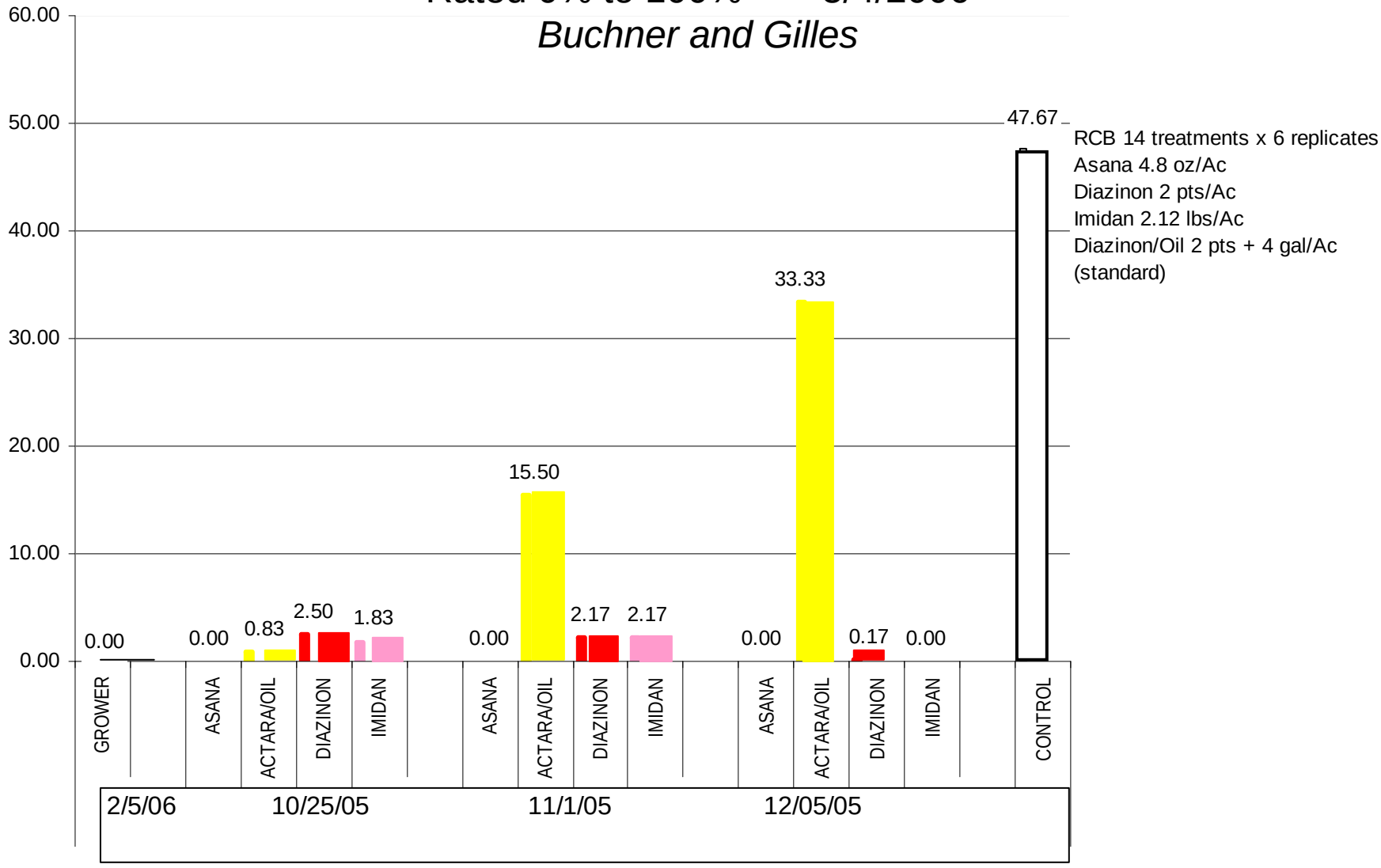
Bill Olson

Treatment	% Trees w/Aphids		%Trees w/Signif. Aphids	
	LCPA	**MPA**	**LCPA**	**MPA**
Imidan 2.12 lbs/Ac	0	0	0	0
Imidan 4.25 lbs/Ac	0	0	0	0
Asana 3 oz./Ac	0	0	0	0
Diazinon 16 oz./Ac	0	0	0	0
Untreated Check	14.4	48.8	0	41.6

Tehama County – % of Tree Affected by LCPA

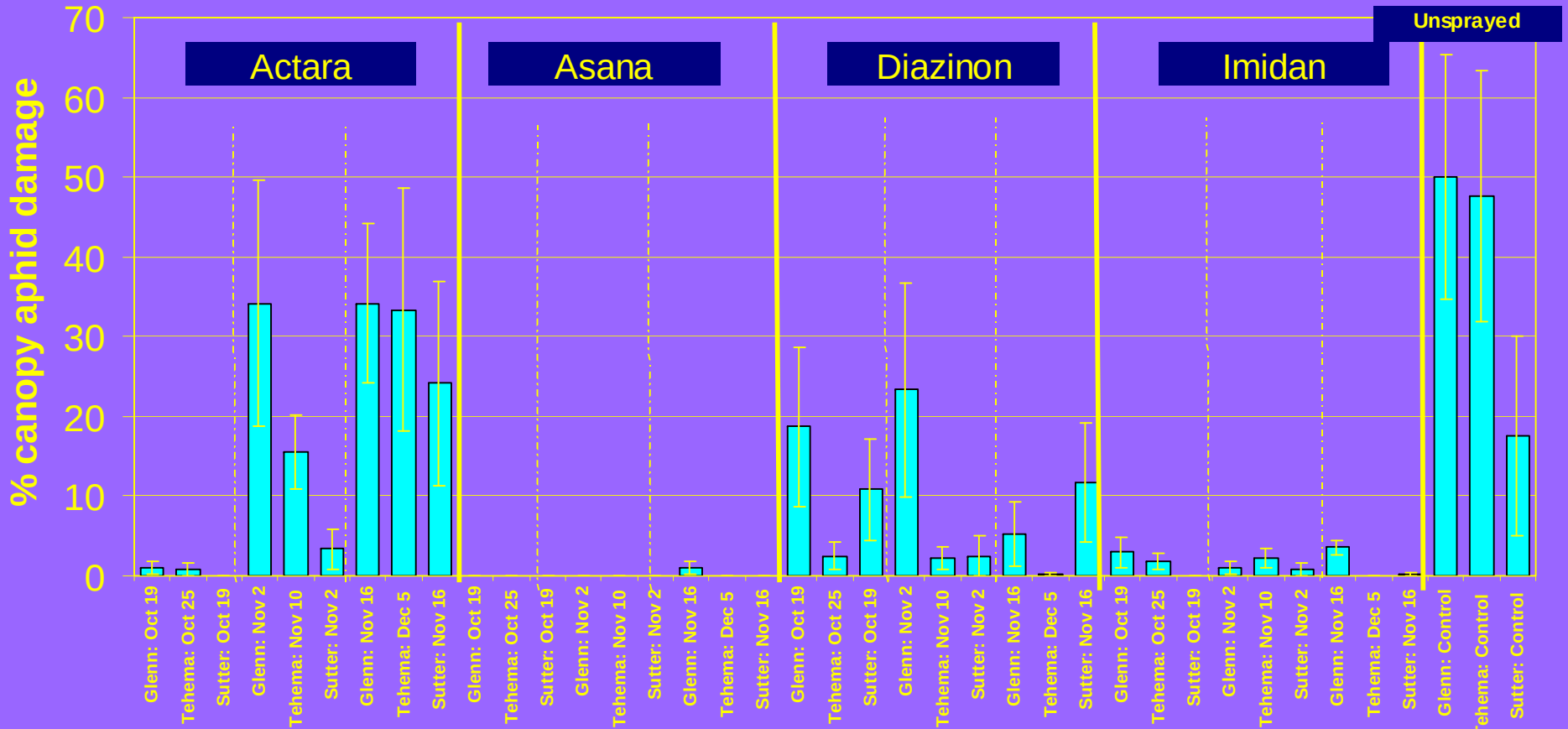
Rated 0% to 100% — 5/4/2006

Buchner and Gilles



RCB 14 treatments x 6 replicates
Asana 4.8 oz/Ac
Diazinon 2 pts/Ac
Imidan 2.12 lbs/Ac
Diazinon/Oil 2 pts + 4 gal/Ac
(standard)

Overall Study Results for LCPA – 2006



Affect of spray timing, location, and pesticide on Leaf Curl plum aphid damage to mature prune canopies. Separate spray trials were established in Fall 2005 in Tehama, Glenn, and Sutter counties and evaluated in Spring 2006. Data bars represent means of individual trial locations and spray dates for pesticides appearing at the head of graph. Bars = ± 1 S.E.

Speed Sprayer Trial 2005

Orchard 1:

- 20 acres Imidan 2.4 lbs/Ac applied 11/10/05
- Asana 4.8 oz/Ac applied 11/10/05

- No aphids observed in either plot
- 3.08% PTB for Imidan, 0% for Asana
- No scale – rated 2/07

6/26/06

Speed Sprayer Trial 2005

Orchard 2:

- Imidan 2.2 lbs/Ac applied early November
- Asana 6.0 oz/Ac applied early November
- Untreated control

- No aphids for Imidan or Asana – Almost 100% untreated
- PTB –Imidan 1.08%, Asana 0.42%, Control 0.50%
- SJS – Asana 2%, Imidan 1%

6/26/06

Option 1: Reasons to take a chance and skip a dormant treatment:

1) Orchard history suggests low damage potential
2) Willing to accept some damage from LCPA, MPA, scale or worms
3) Research suggests low LCPA populations do not cause economic damage
4) Willing to apply an April or May spray if a problem develops
5) Shoot samples confirm low populations of live scale (San Jose or Lecanium)
6) No plans to fresh pick, low levels of worm damage are not a concern

Option 2: Reasons to apply a dormant treatment:

1) Orchard history suggests high damage potential
2) Not willing to accept any curled leaves at all from from LCPA or cracked fruit from MPA
3) Enough money in the budget to cover the cost
4) Planning to fresh pick, do not want to chance Peach Twig Borer damage
5) Shoot samples confirm treatment levels of live scale, LCPA or MPA eggs
6) Need a treatment for Italian Pear Scale

Option 3: Reasons to apply a predormant treatment:

1) Orchard floors are drivable in the fall
2) Low potential for scale and PTB damage
3) Should get better spray conditions
4) Might combine with a zinc application
5) Should eliminate pesticide runoff

In Summary

- Pre-dormant sprays represent a useful tool
- Low rates of insecticide are effective
- May get better spray conditions
- Watch for SJS and / or PTB