

Pest Management Discussion  
Caneberries, 2014

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# Spotted Wing Drosophila



# Keys to Successful Management of the Spotted Wing Drosophila (SWD) on the Central Coast

- Monitoring and trapping to quickly detect infestations.
- Use of sprays or baits to suppress fly populations.
- Use of enhanced sanitation to reduce numbers of flies remaining in the field.
- Area wide management.

# Standard Trap



# Modified trap, plastic.



# Bait

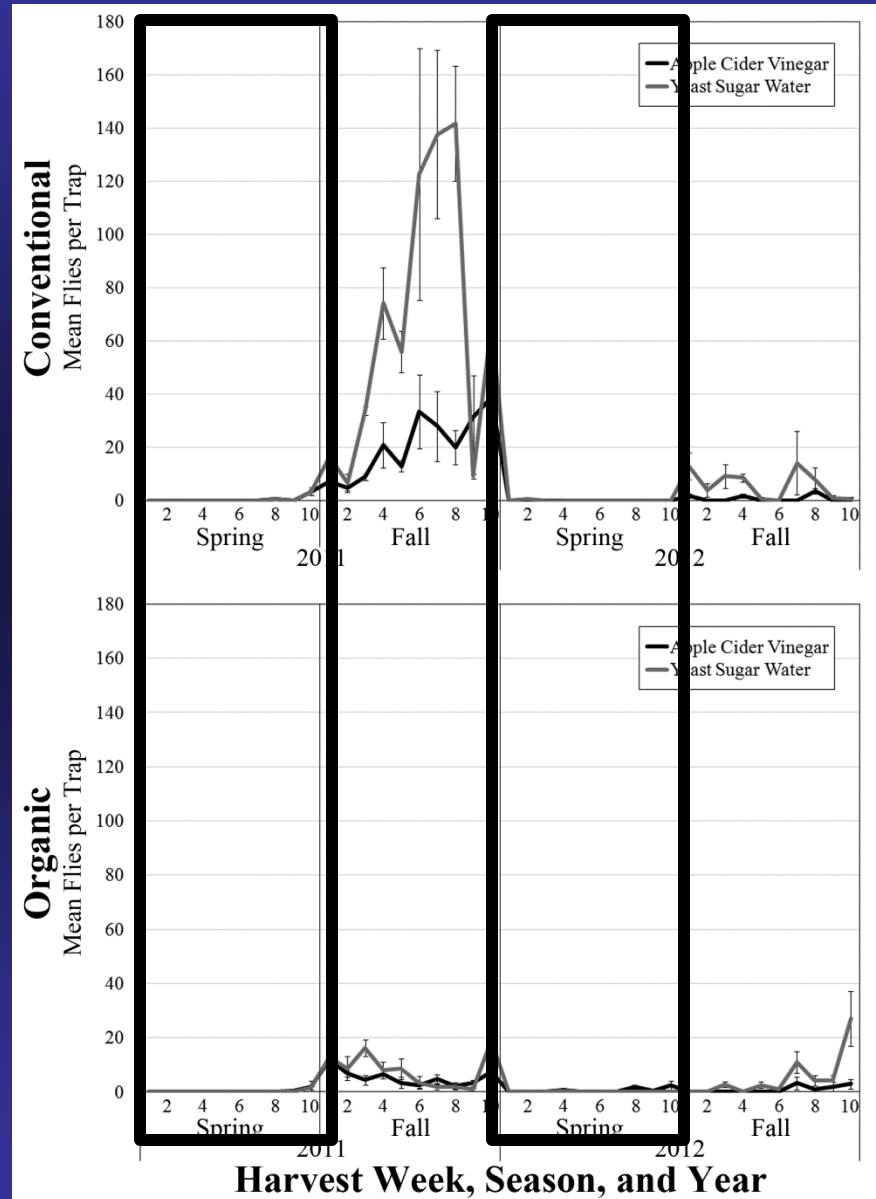
- Yeast, sugar and water in summertime.
  - \* 0.25 oz yeast (one package) + 4 oz sugar + 12 fl oz water
- Apple cider vinegar in the wintertime.

# First 10 weeks of harvest

Variety S810.5

Low to no adult captures in spring

YSW tends to capture more flies



N = 4 traps of each lure for each site

# Is it the trap – Spring 2012 comparison.

‘Haviland’ trap with ACV + soap

Lee et al. 2012 trapping study ‘higher capturing’ trap

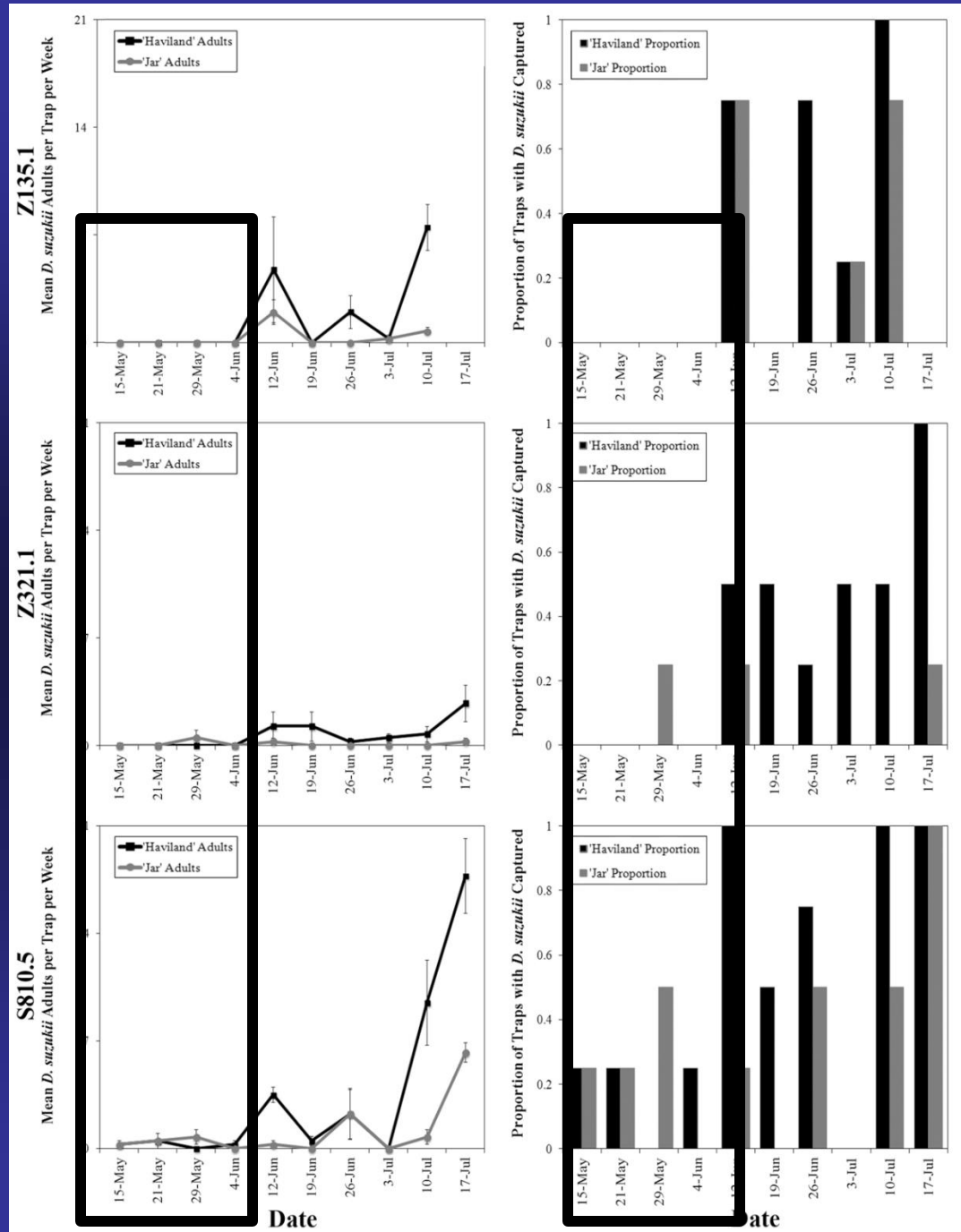




# Trap comparison

Neither trap captures many flies in early spring

Proportion capturing also similar in early spring



# Weekly larval sampling

Collect fruit when available

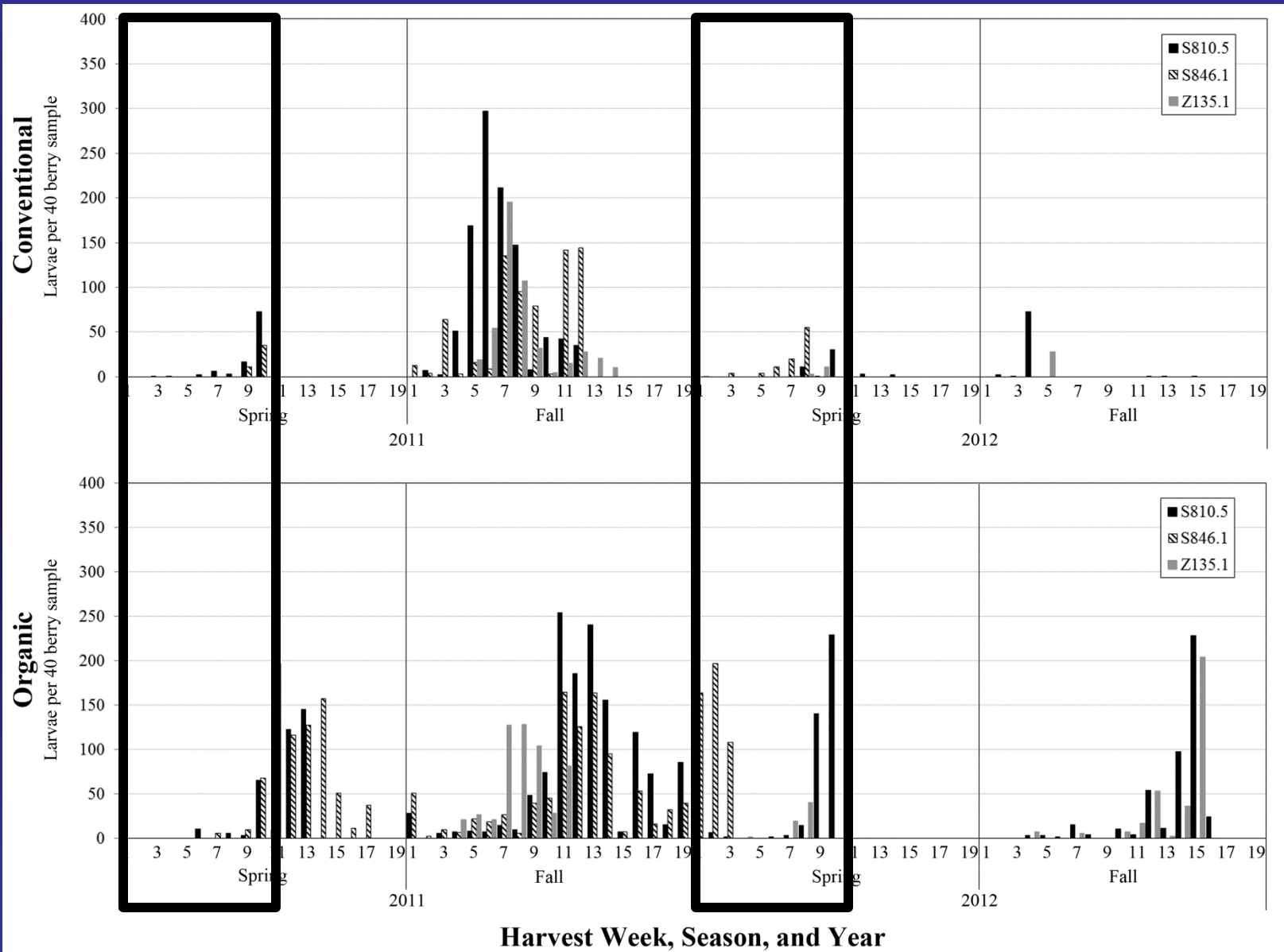
Float out with salt water

Filter through fine sieves

Count larvae under microscope



# Larval counts for 3 varieties



# Chemical Sprays for Spotted Wing Drosophila Management

- Work well

Malathion, Mustang and Delegate

- Work OK

Entrust, Pyganic

- Don't work

Actara, Altacor, oils and everything else.

No Baits.

# Sanitation

Dirty= throw cull fruit on ground  
Clean= remove cull fruit from field

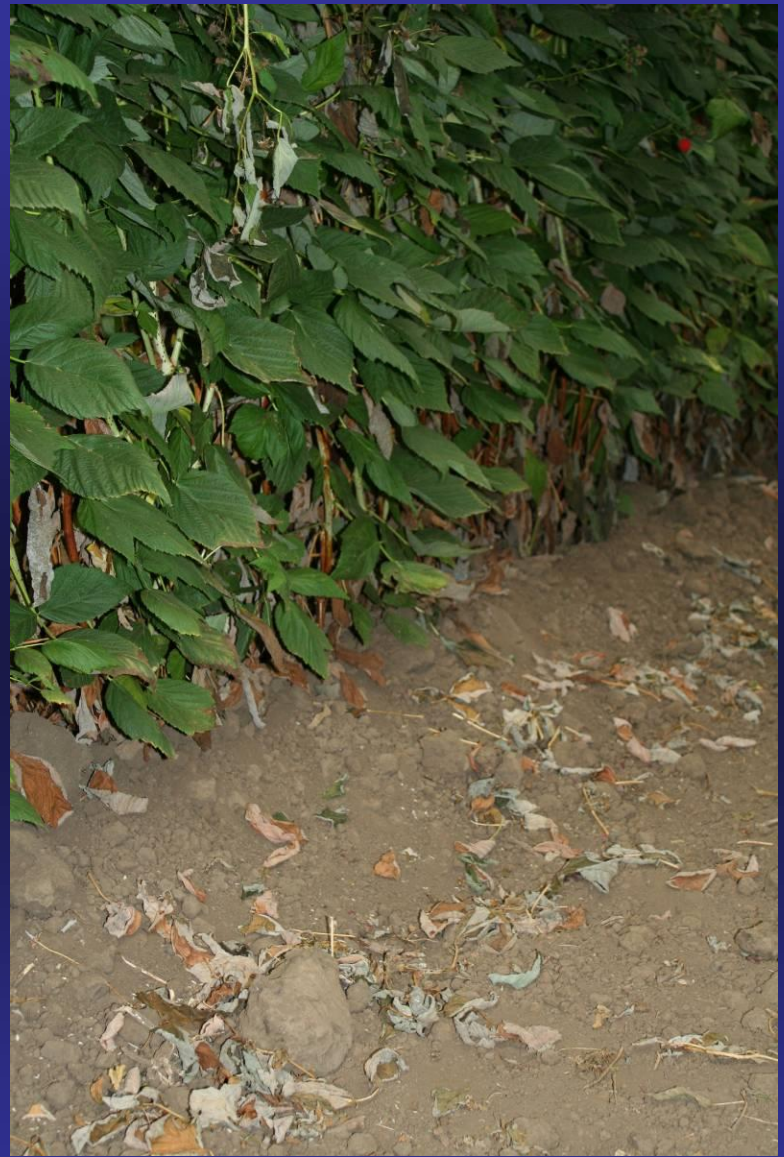
Each treatment 3 hoops; 3 replications

Sampling done for marketable and  
unmarketable fruit  
Weekly Trap counts

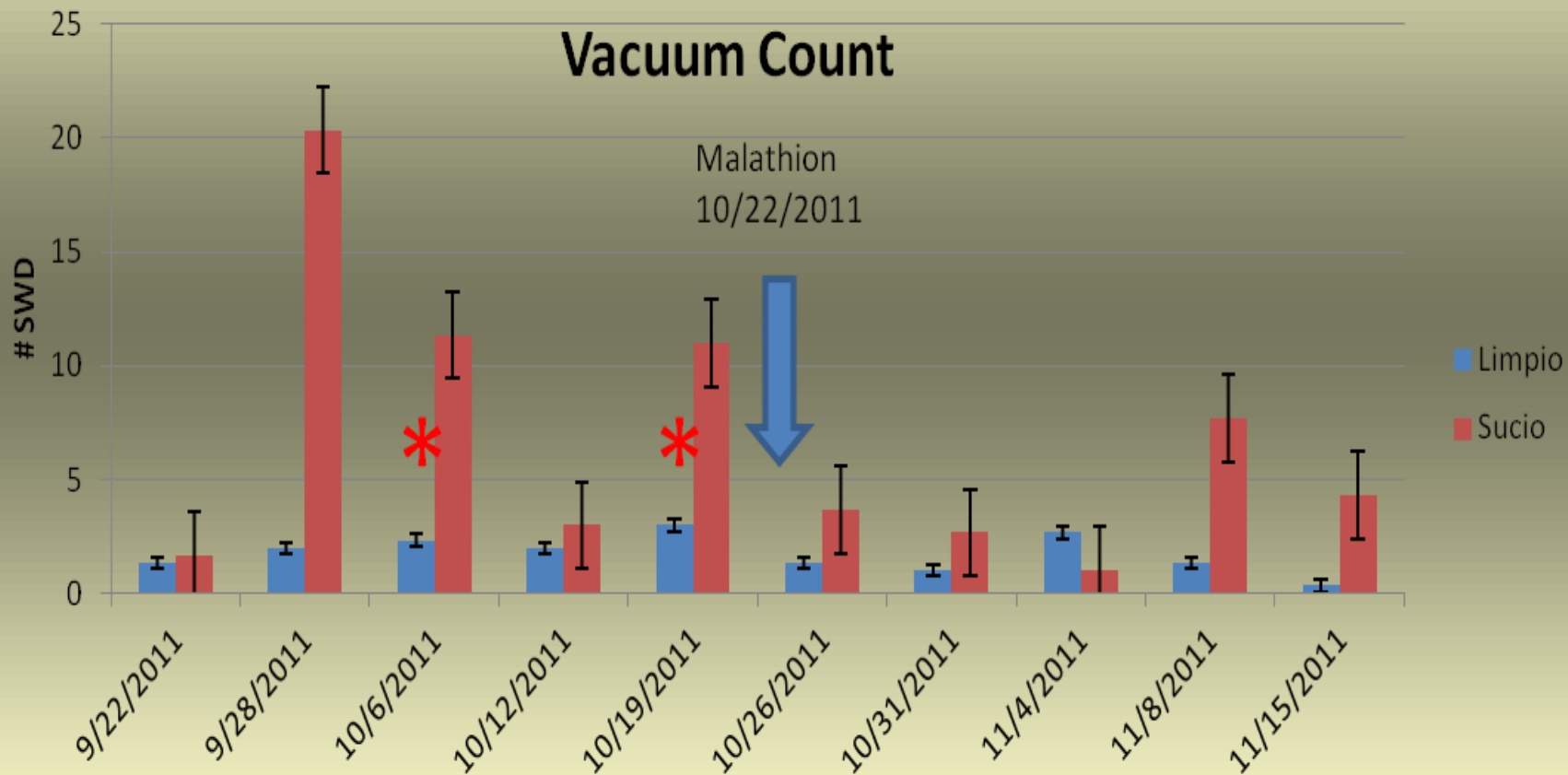
Fruit Samples:  
Collected 20 berries of each marketable and  
non-marketable fruit

Vacuum sample when fruit was collected

Clean
Dirty
Clean
Dirty
Clean
Dirty



# Sanitation Trial





# Areawide Management Comments

- Industry is de-facto in an areawide commitment, flies in 2013 were lower than any other year since the initial invasion.

# Keys to Successful Management of the Spotted Wing Drosophila (SWD) on the Central Coast

- Trapping to detect infestations.
- Use of sprays to suppress fly populations.
- Use of enhanced sanitation to reduce numbers of flies remaining in the field.
- Area wide management.

# Redberry Mite



# Recommendations for Redberry Mite Management

- Three to four applications of 2% concentrations of Golden Pest Spray oil in at least 50 gallons water carrier begun at 25-50% flowering + first green fruit.

# Caution about using oils

- Golden Pest Spray oil applied every two weeks starting in April through the season for control of mites and mildew on strawberry.

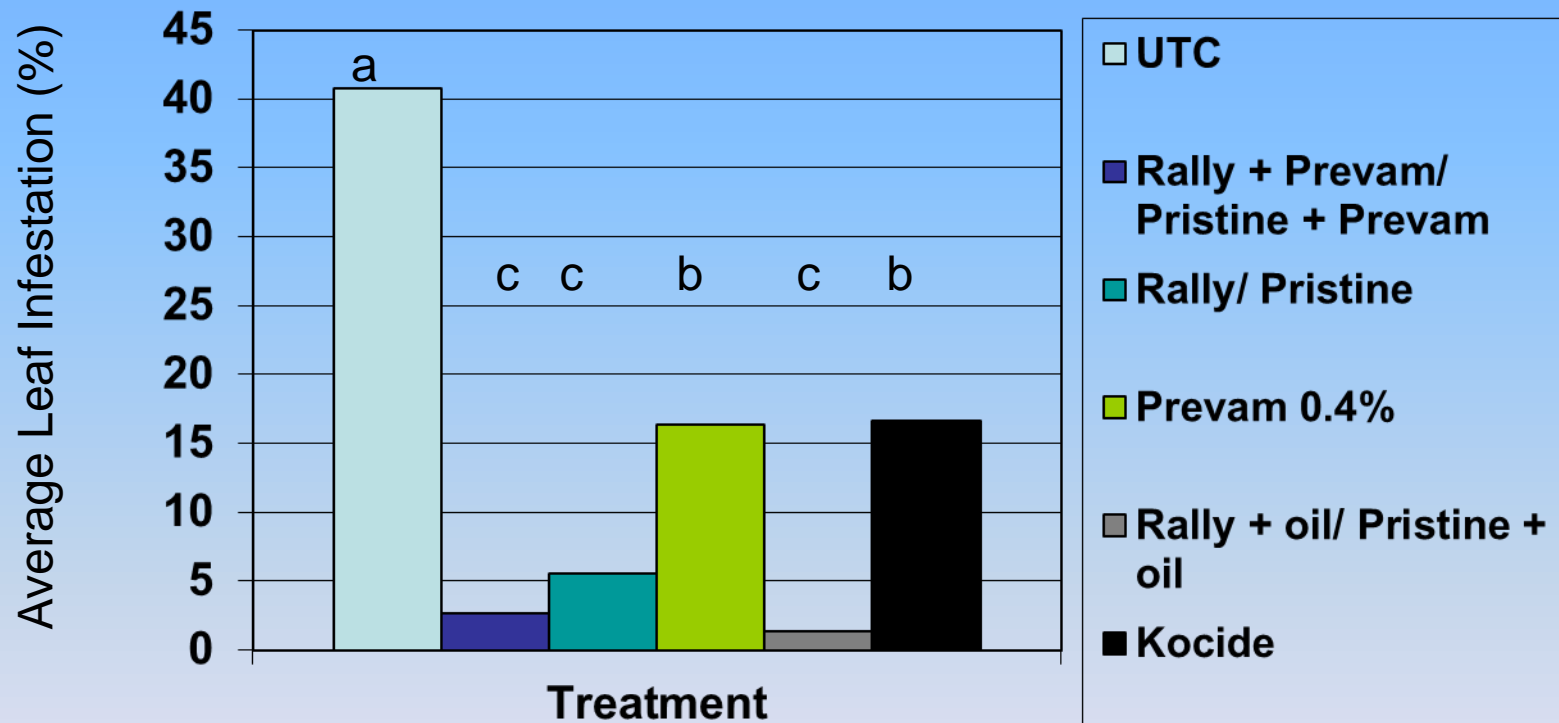
**Oil for Control of Mildew in Organic Strawberries**  
**Golden Pest Spray Oil (GPSO) at 0.5% and 1.0%**

		<b>Yield 6/18/2007 Mkt Box/A</b>		<b>Yield 9/6/2007 Mkt Box/A</b>		<b>Yield Mkt Box/A Total</b>	
<b>1</b>	<b>Untreated control</b>	749.7	d	3076.9	a	3826.6	c
<b>2</b>	<b>GPSO @1%</b>	1395	c	3126.0	a	4521.8	b
<b>3</b>	<b>GPSO @ 0.5%</b>	1987	b	3298.6	a	5286.4	a
<b>4</b>	<b>Grower rotation</b>	2647	a	2957.4	a	5604.5	a

# A Caution About Using Oils

- Six total applications in fall 2005 for yellow rust in raspberry, beginning August 12 and ending November 1.

# Control of Rust in Red Raspberry (Fall 2005)

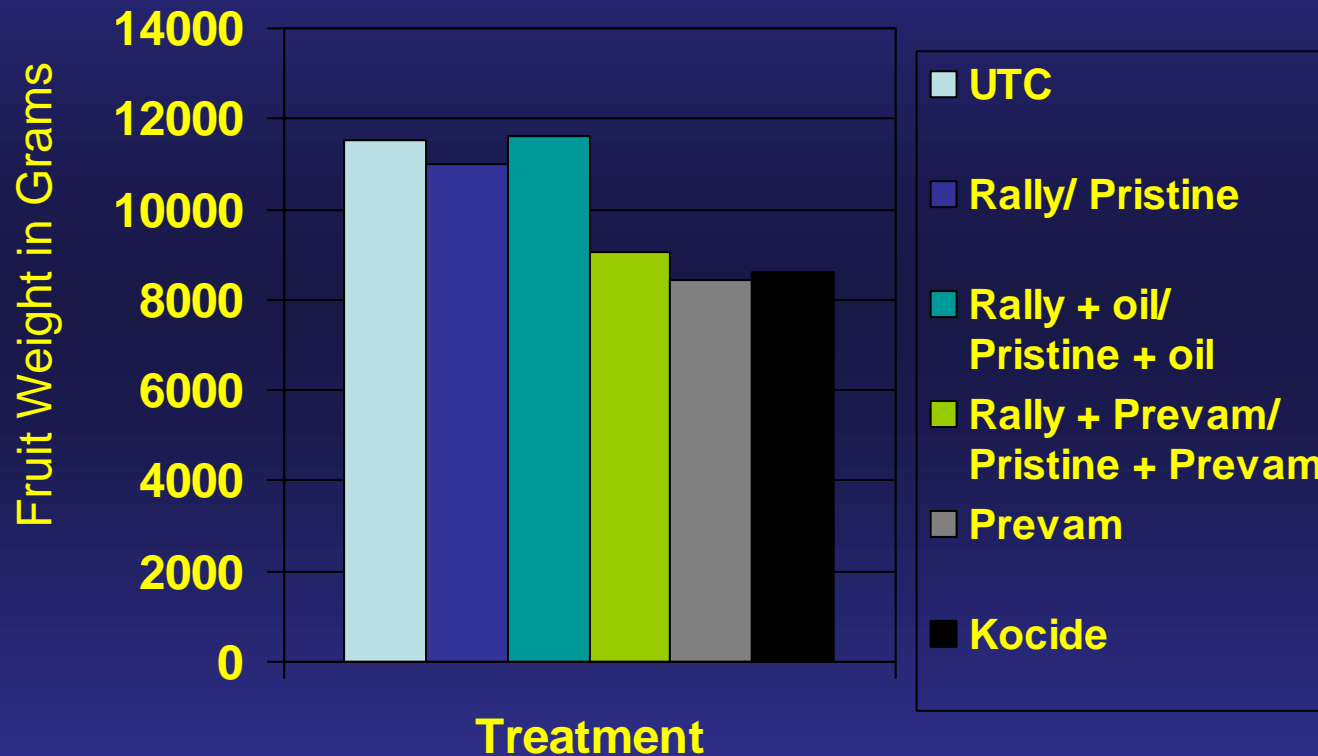




# Control of Rust in Red Raspberry

## Total Yield of Marketable Fruit

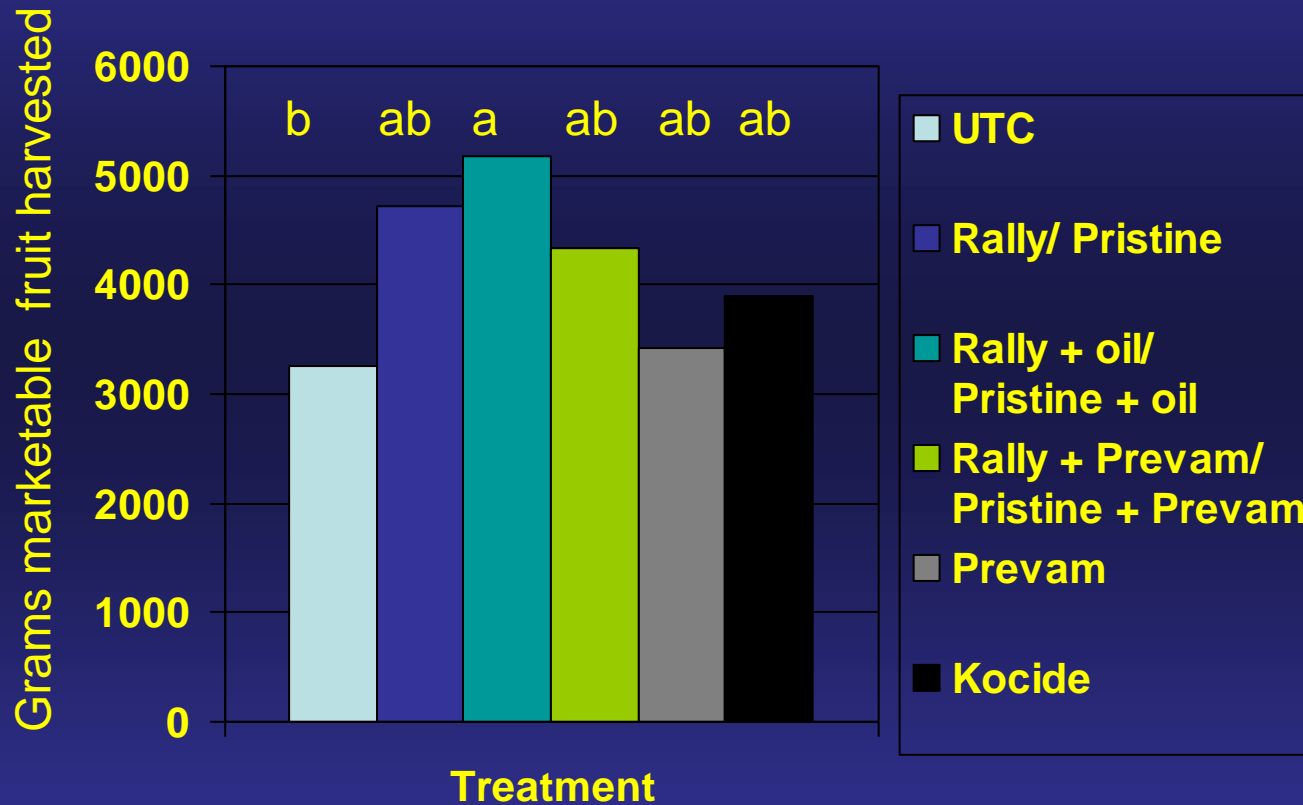
### Fall 2005



# Control of Rust in Red Raspberry

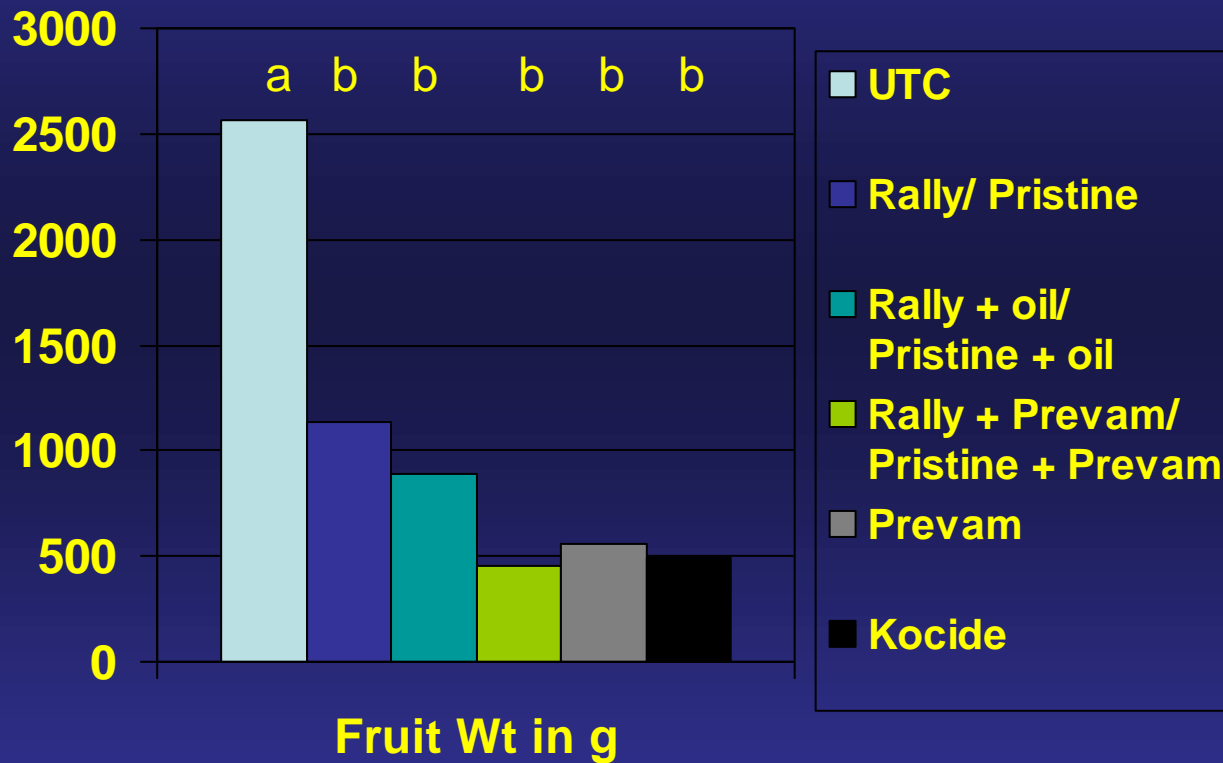
## Yield of Marketable Fruit

November 2005



# Marketable Fruit Weight in Grams

## September 2005



# Redberry mite management

- Three to four applications of 2% concentrations of Golden Pest Spray oil in at least 50 gallons water carrier begun at 25-50% flowering + first green fruit.

