

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

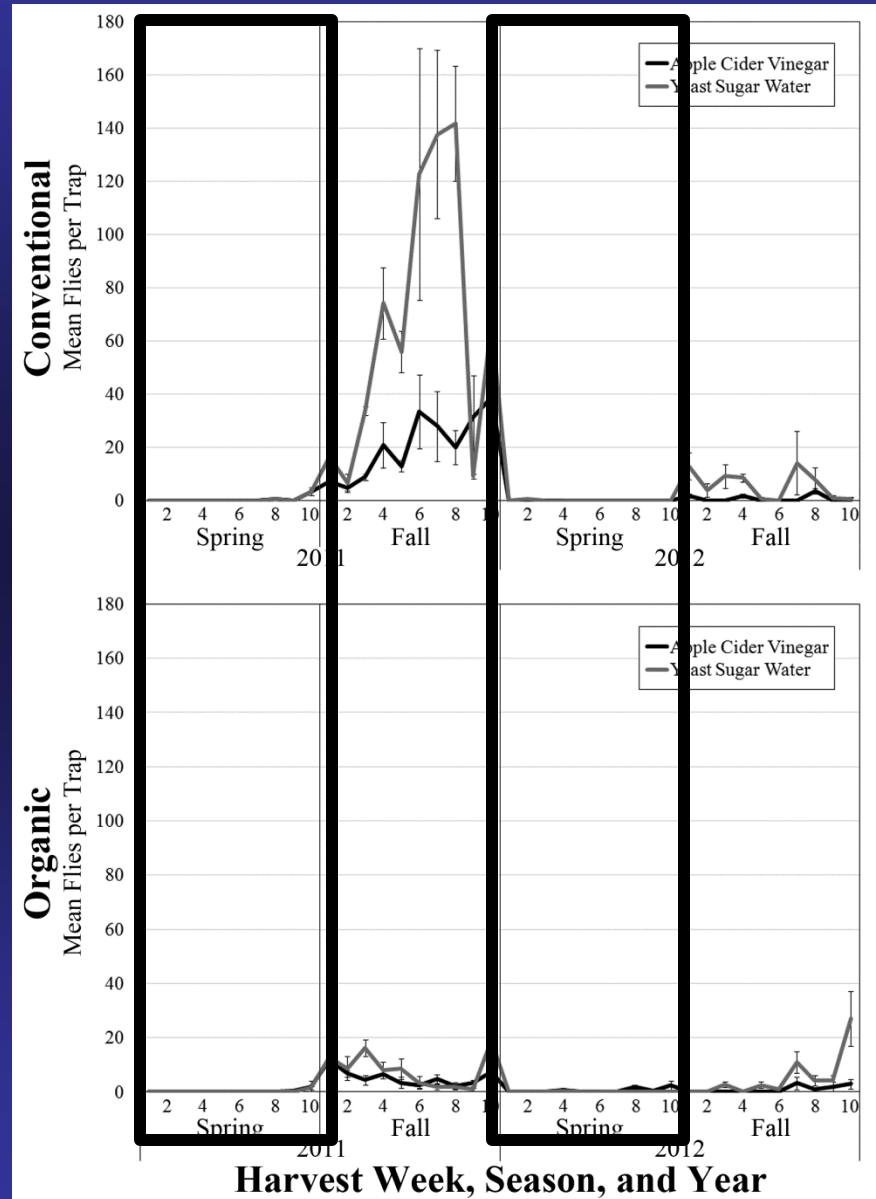
- Yeast, sugar and water in summertime.
 - * 0.25 oz yeast (one package) + 4 oz sugar + 12 fl oz water
- Apple cider vinegar in the wintertime.

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

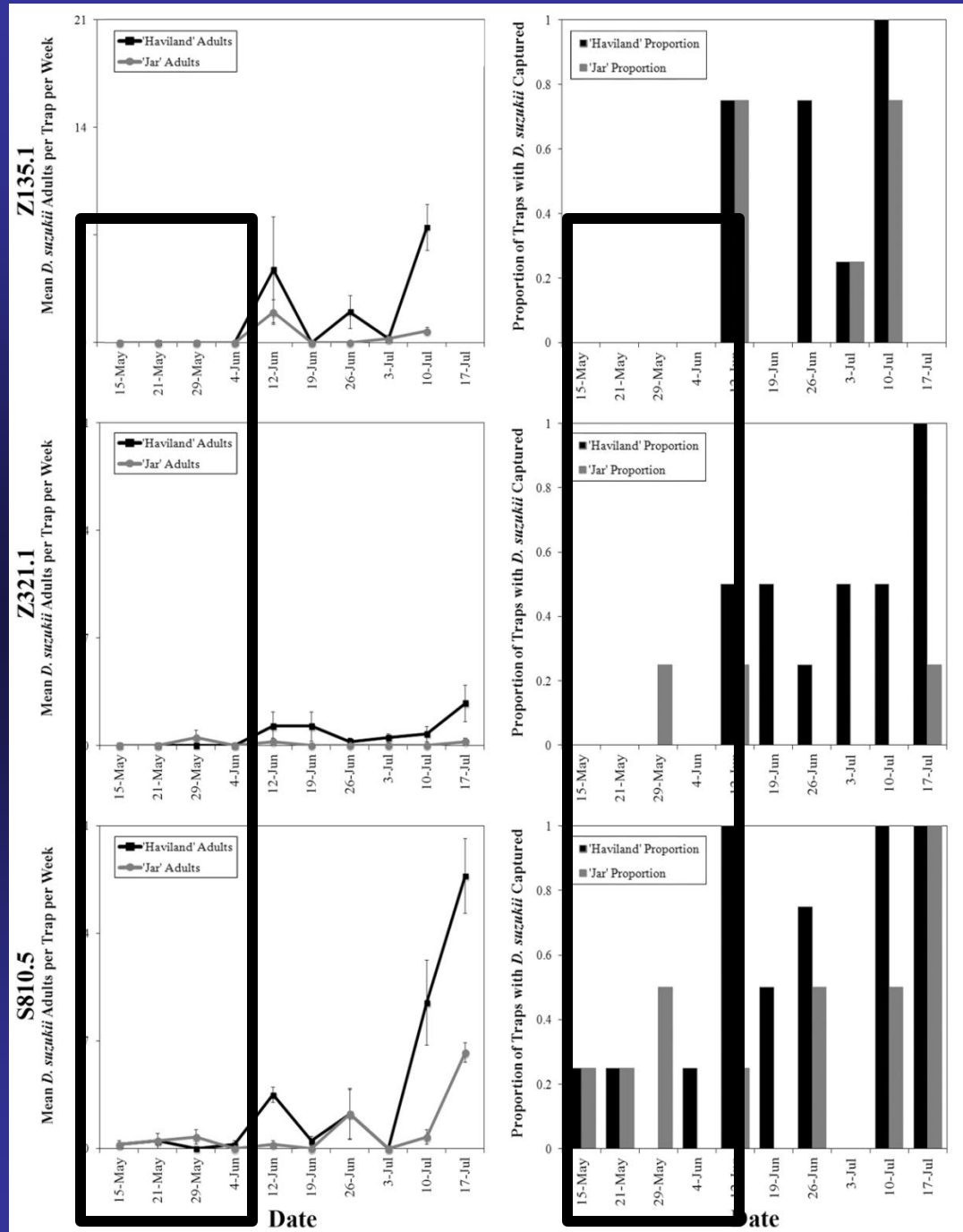
Lee et al. 2012 trapping study ‘higher capturing’ trap



Trap comparison

Neither trap captures many flies in early spring

Proportion capturing also similar in early spring



Weekly larval sampling

Collect fruit when available

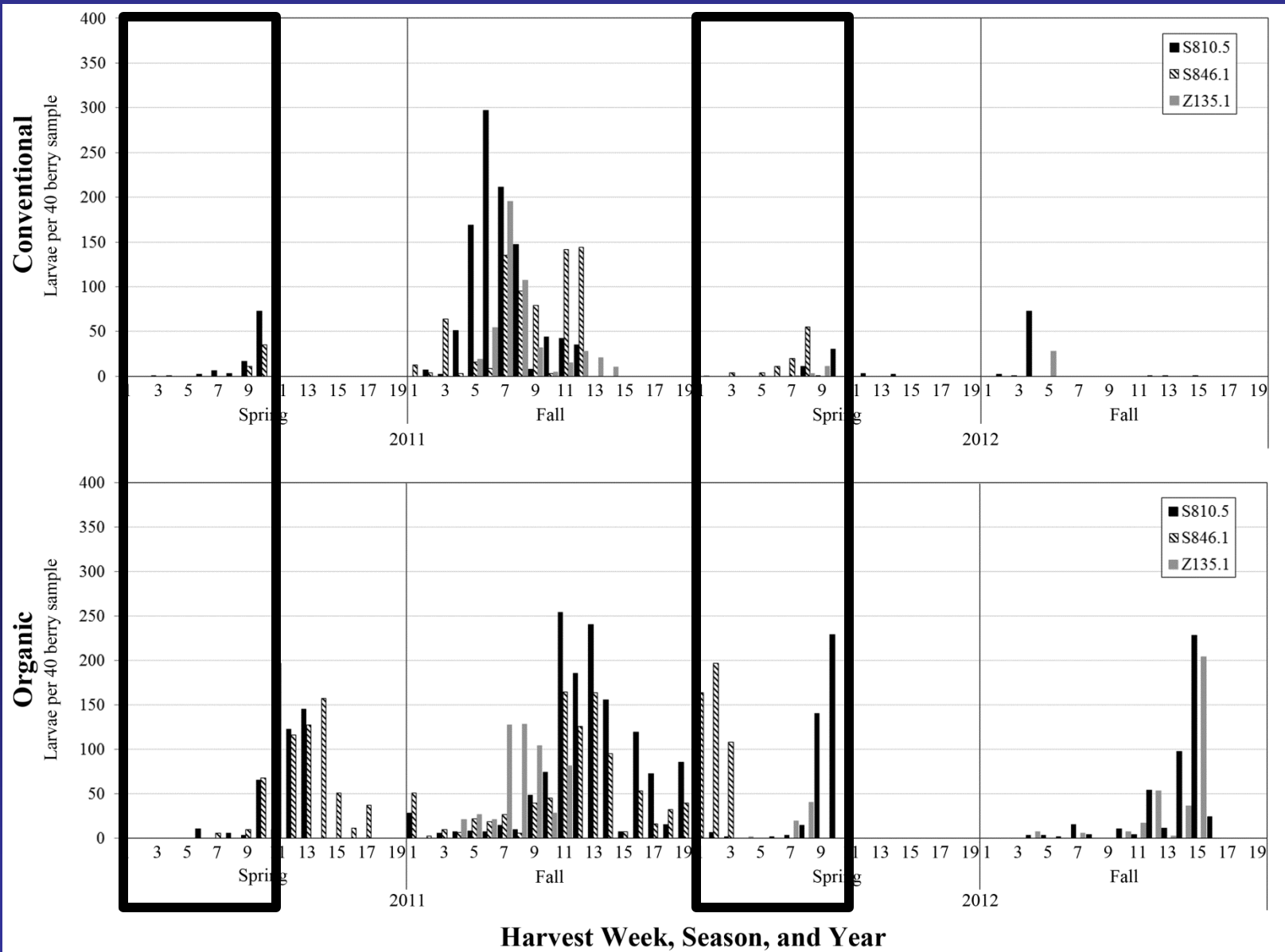
Float out with salt water

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

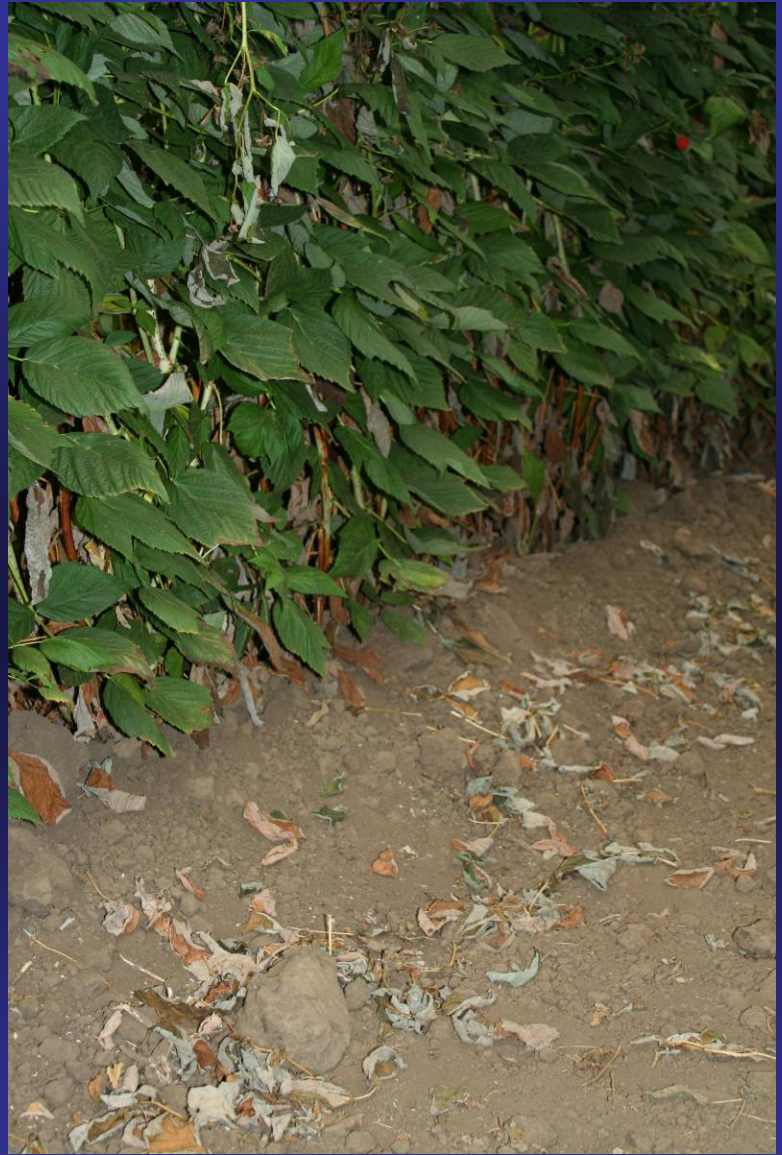
Each treatment 3 hoops; 3 replications

Sampling done for marketable and
unmarketable fruit
Weekly Trap counts

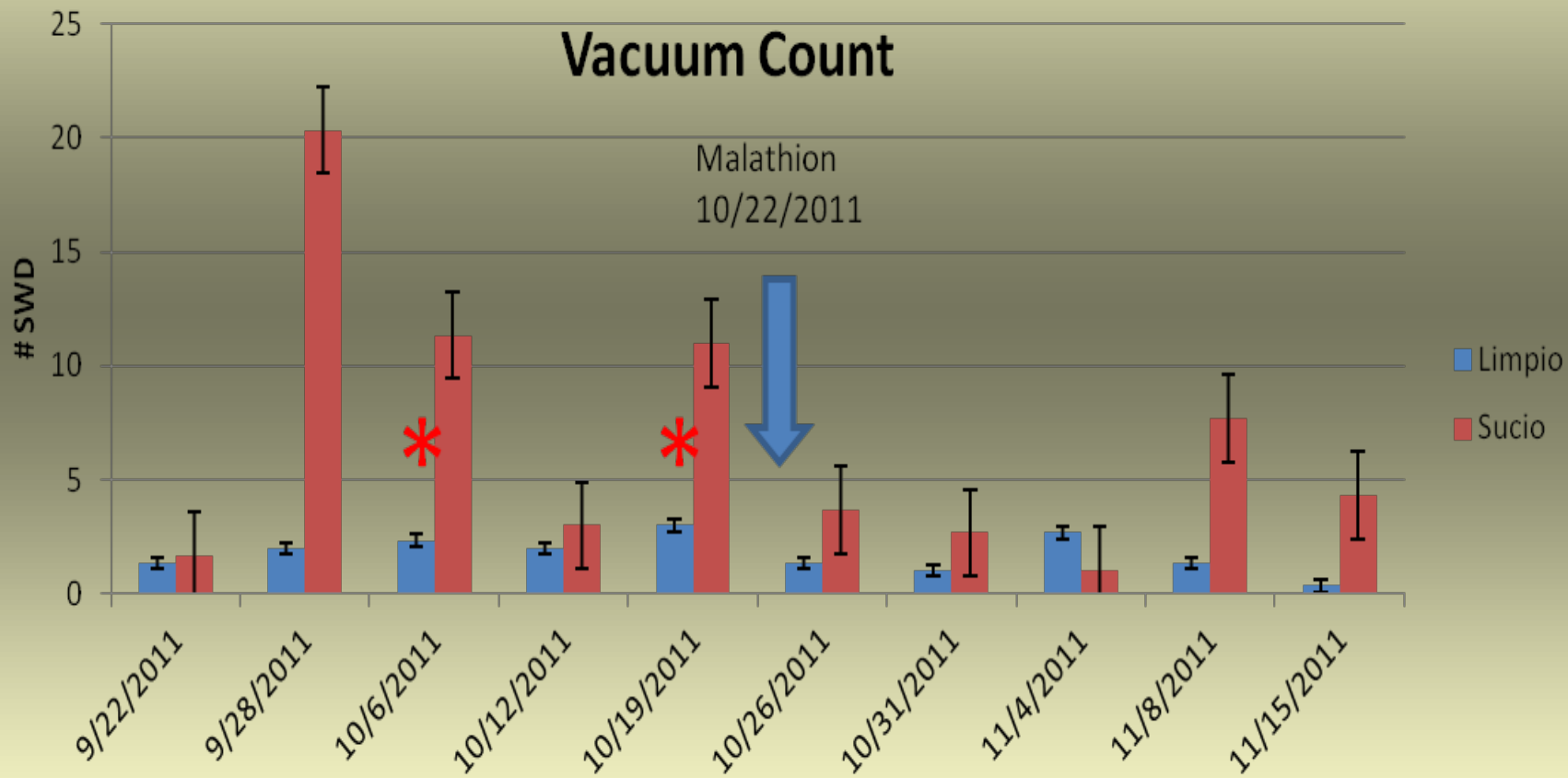
Fruit Samples:
Collected 20 berries of each marketable and
non-marketable fruit

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.

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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.

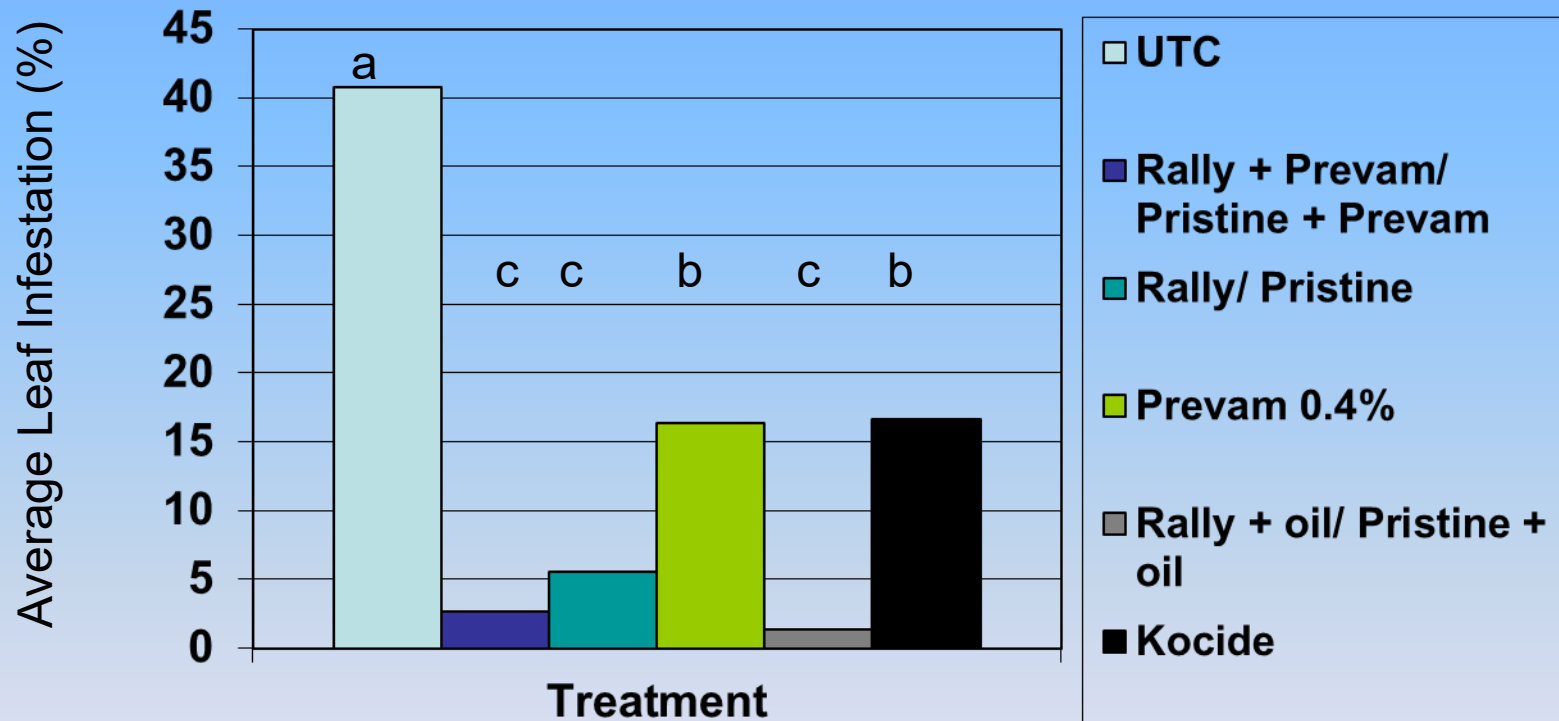
Oil for Control of Mildew in Organic Strawberries
Golden Pest Spray Oil (GPSO) at 0.5% and 1.0%

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

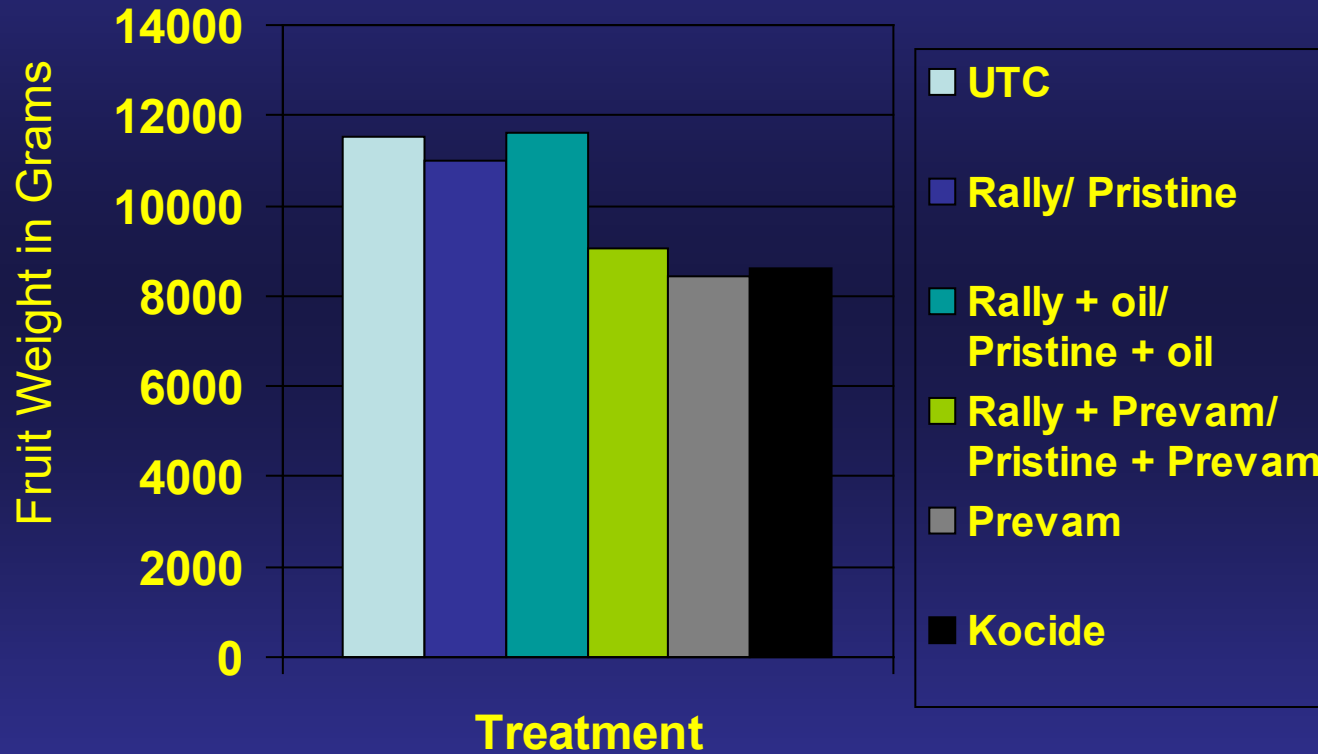
Control of Rust in Red Raspberry (Fall 2005)



Control of Rust in Red Raspberry

Total Yield of Marketable Fruit

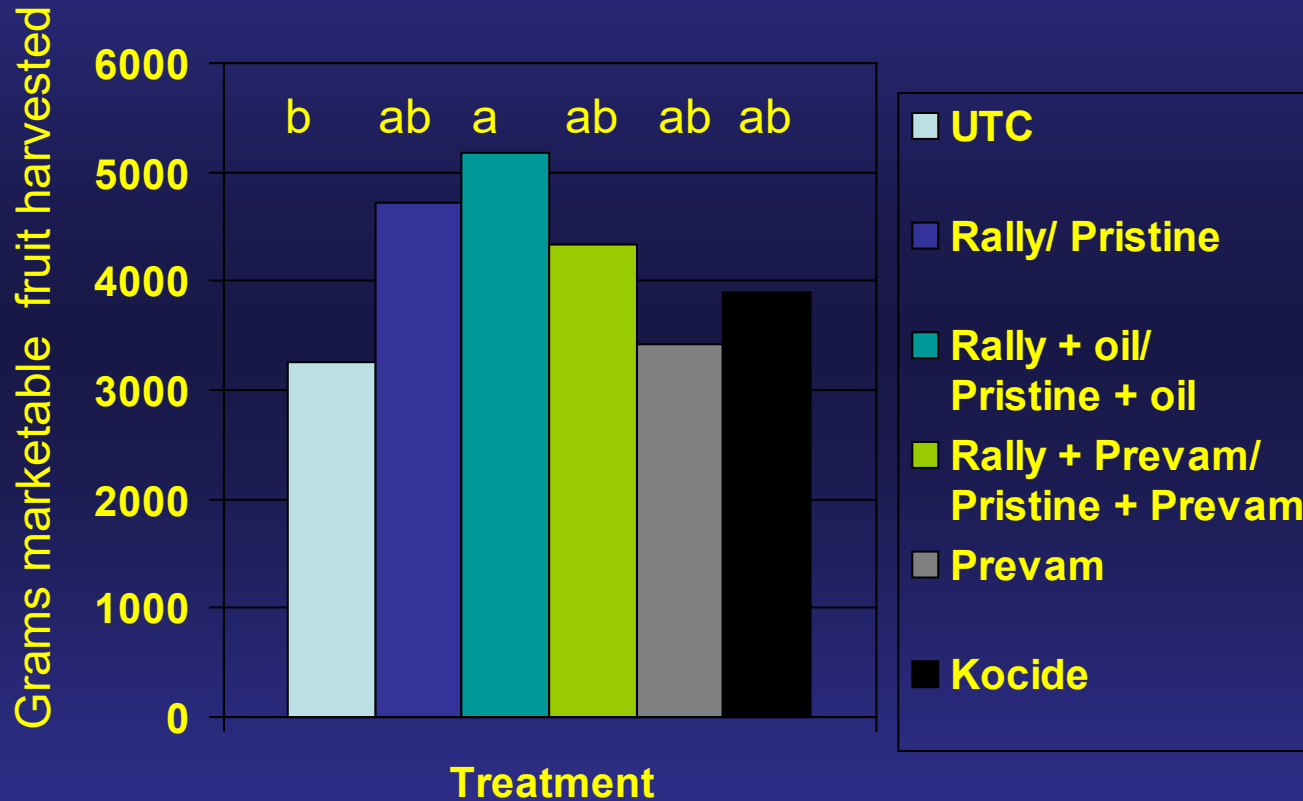
Fall 2005



Control of Rust in Red Raspberry

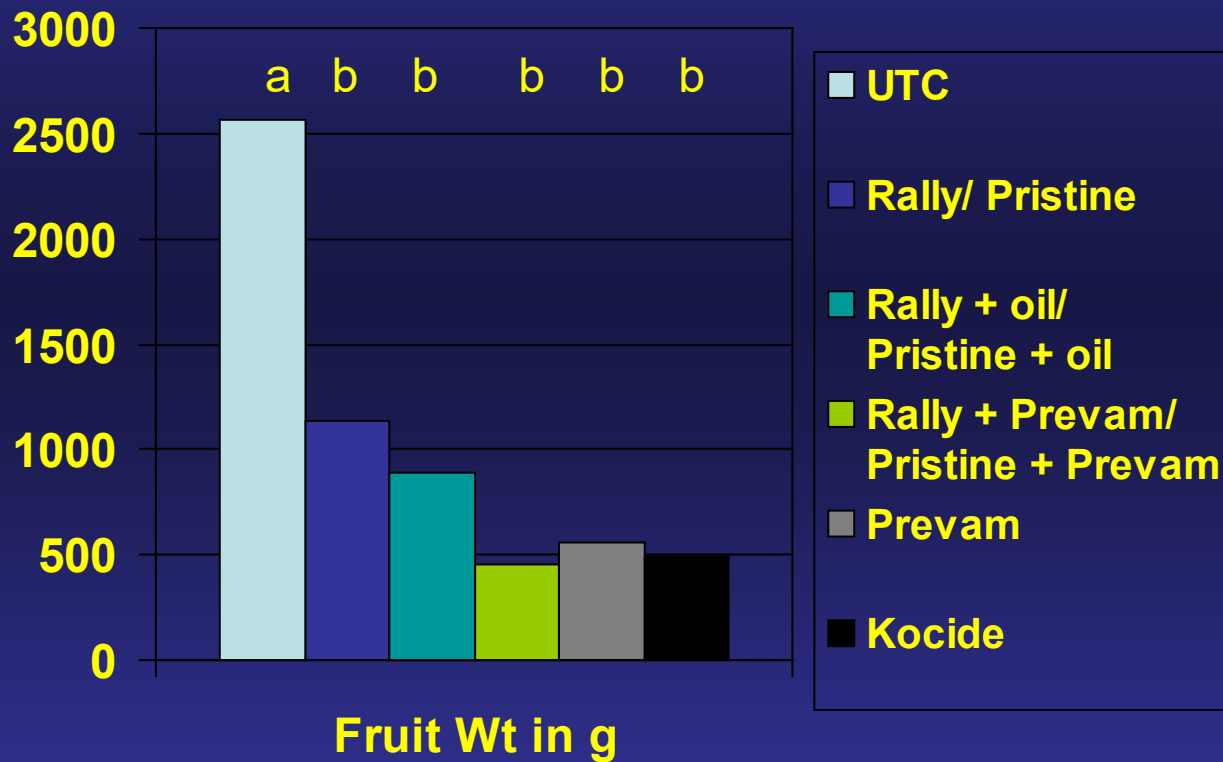
Yield of Marketable Fruit

November 2005



Marketable Fruit Weight in Grams

September 2005



Redberry mite management

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