

Spray coverage and miticide trials in the south Sacramento Valley

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**University of California
Cooperative Extension**

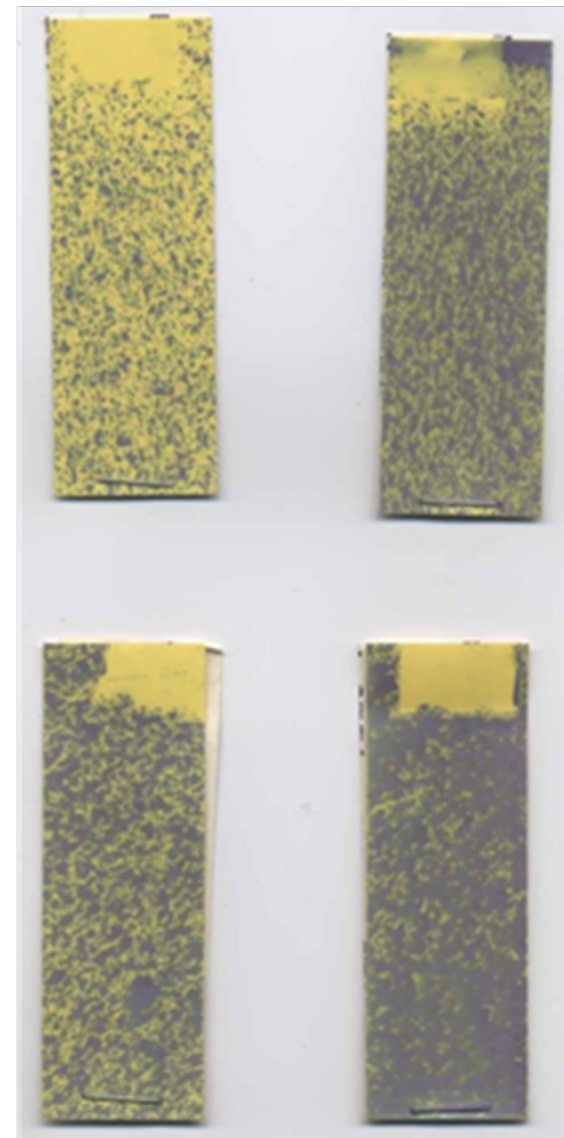
**Agriculture & Natural Resources
Central Valley Region**



High in canopy

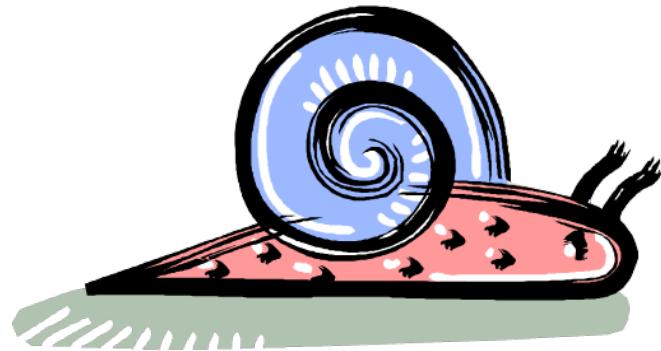


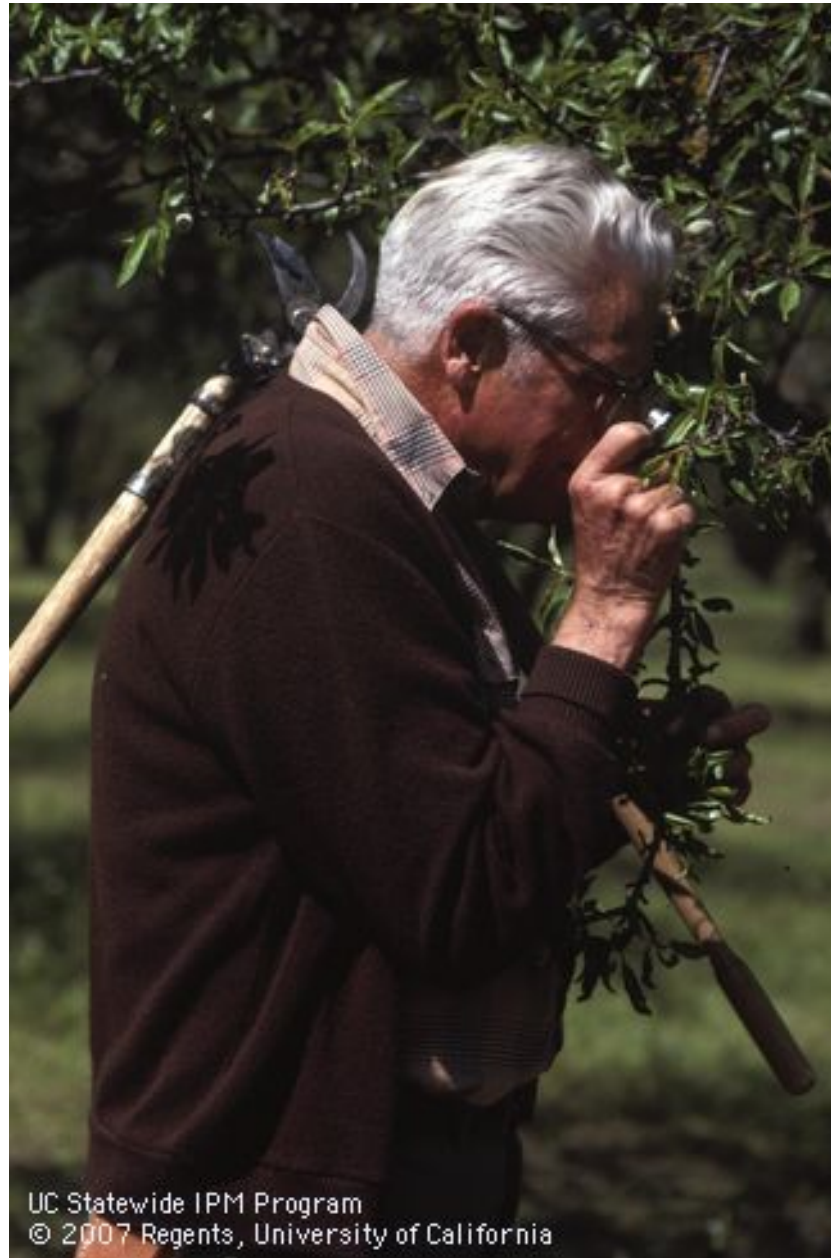
Low in canopy



Year	Location	Tractor speed	Pesticide & rate	Spray volume	Canopy location	Nozzle arrangement*	Day 1 survival	Day 14 survival
2010	Sutter	2.0 mph	Brigade 1.5 lb/a	50 gpa	5-7'	50/50	0.0%	0.2%
2010	Sutter	2.0 mph	Brigade 1.5 lb/a	50 gpa	16-20'	50/50	0.5%	5.3%
2010	Sutter	2.0 mph	Brigade 1.5 lb/a	100 gpa	5-7'	50/50	0.0%	0.0%
2010	Sutter	2.0 mph	Brigade 1.5lb/a	100 gpa	16-20'	50/50	0.1%	10.7%
2011	Arbuckle	1.8 mph	Altacor 4 oz/a	100 gpa	5-7'	66/33	1.1%	3.7%
2011	Arbuckle	1.8 mph	Altacor 4 oz/a	100 gpa	16-20'	66/33	1.1%	3.7%
2011	Arbuckle	2.4 mph	Altacor 4 oz/a	100 gpa	5-7'	75/25	1.5%	4.2%
2011	Arbuckle	2.4 mph	Altacor 4 oz/a	100 gpa	16-20'	75/25	1.5%	12.8%

Drive slow to get the best out of new pesticides.





UC Statewide IPM Program
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Keys to spider mite management

- Spider mites overwinter on the orchard floor. Dormant sprays don't touch them.

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- Spider mites move up from the orchard floor into the crotches of trees in the spring.
- Dry, dusty parts of the orchards show mites first.

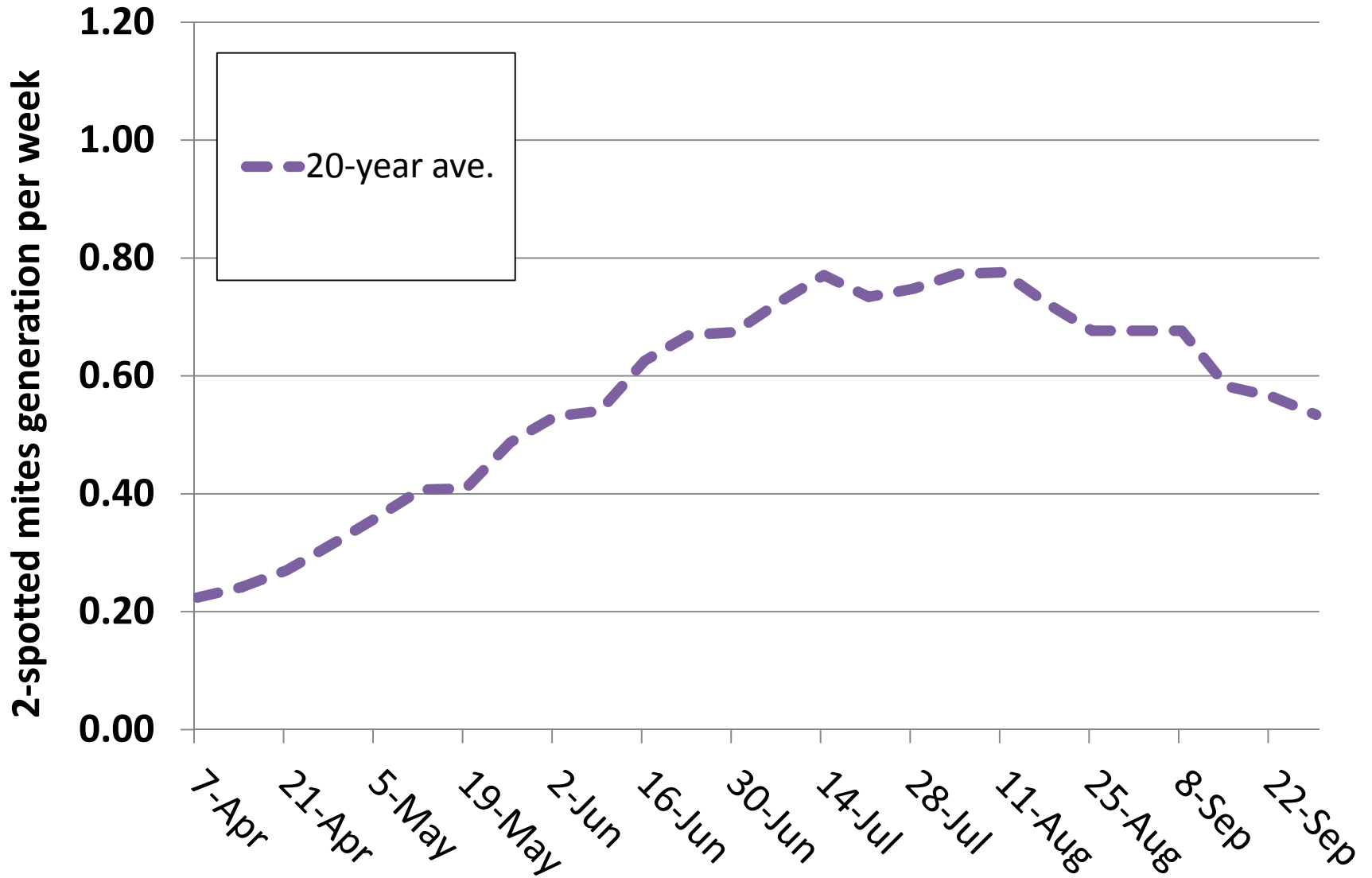
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- Spider mites overwinter on the orchard floor. Dormant sprays don't touch them.
- Spider mites move up from the orchard floor into the crotches of trees in the spring.
- Dry, dusty parts of the orchards show mites first.
- Hot weather and dry trees can flare mites.

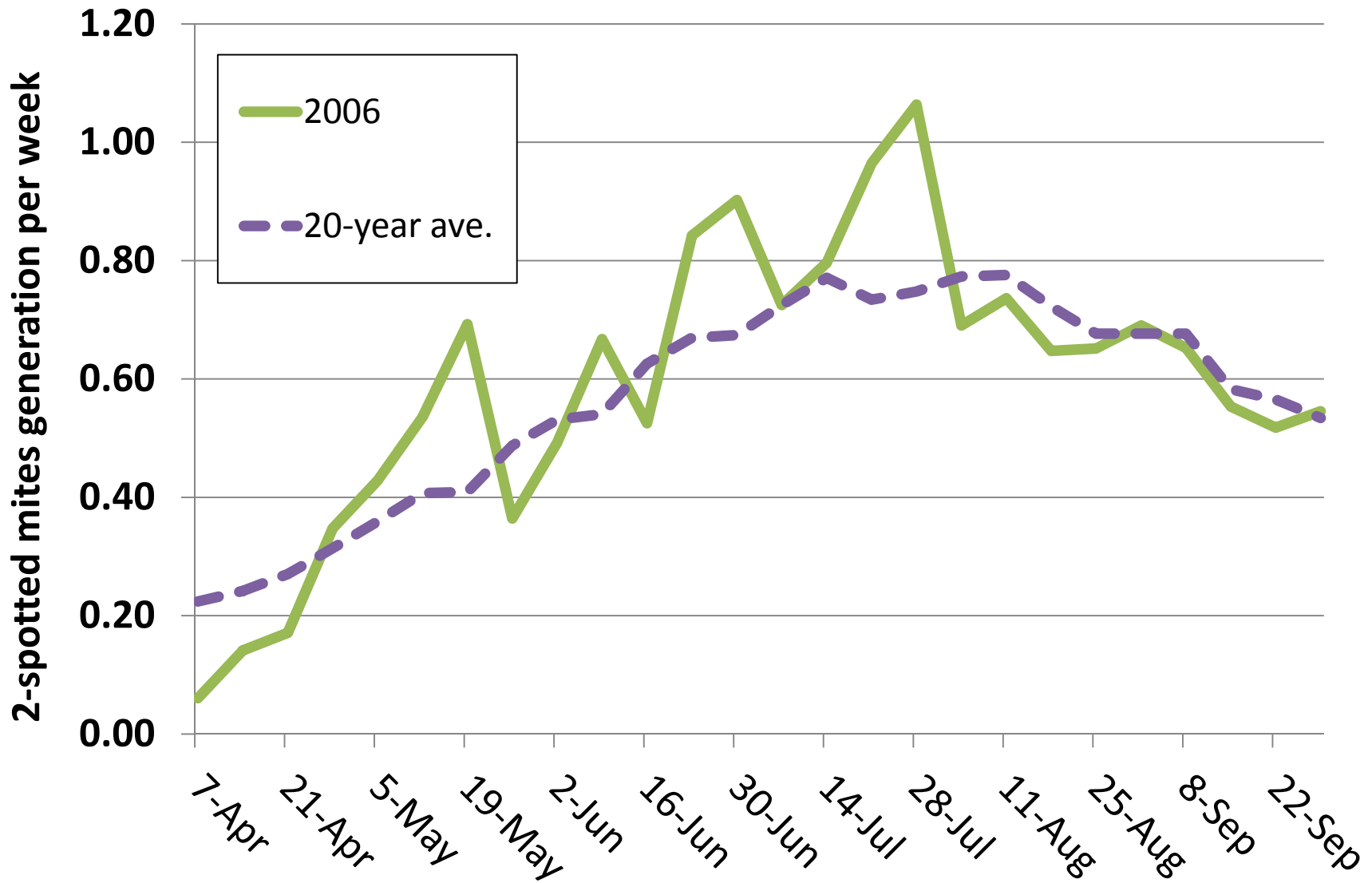
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- Spider mites move up from the orchard floor into the crotches of trees in the spring.
- Dry, dusty parts of the orchards show mites first.
- Hot weather and dry trees can flare mites.
- Careful monitoring is key to effective, long lasting control.

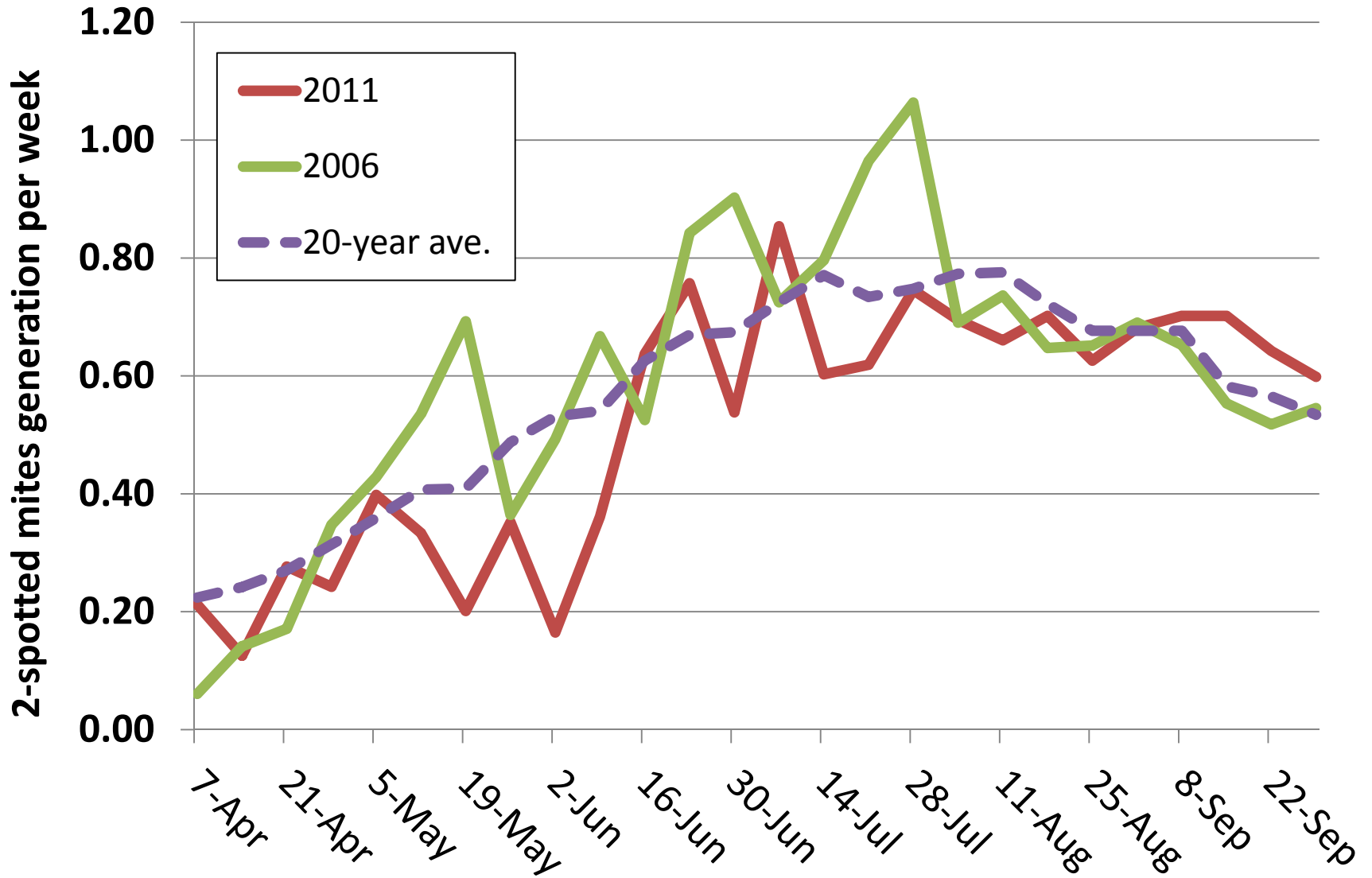
Two-spot spider mite generations/week for 20 year average temperatures. All data are from the Colusa CIMIS station.



Two-spot spider mite generations/week for 20 year average temperatures and a strong mite year (2006). All data are from the Colusa CIMIS station.



Two-spot spider mite generations/week for 20 year average temperatures, and a strong mite year (2006), and a late mite year (2011). All data are from the Colusa CIMIS station.



Growers have several, effective early and rescue materials available.

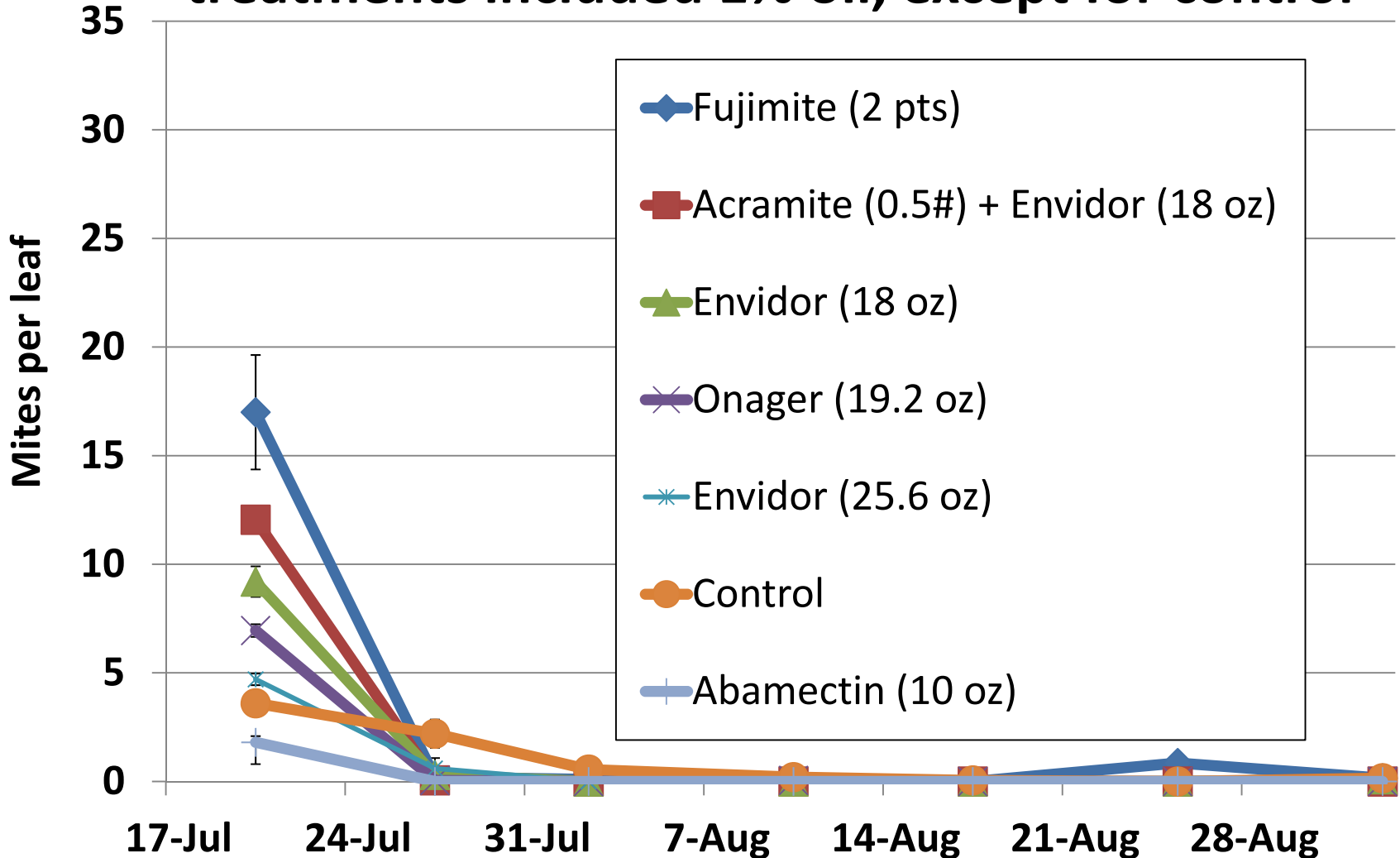
Building populations

- Agri-mek, etc.
- Envidor
- Zeal
- Onager

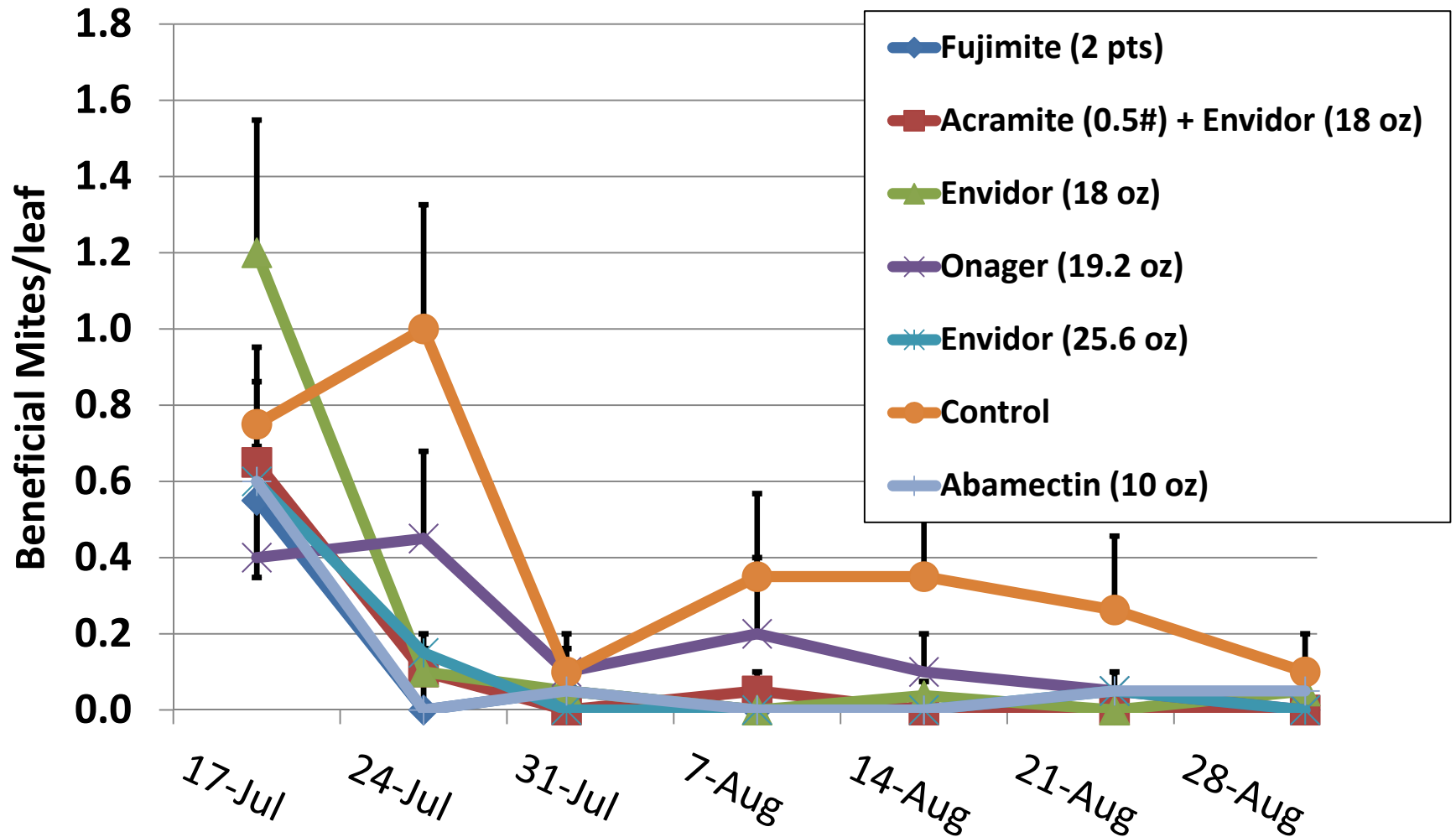
Rescue sprays

- Fujimite
- Acramite (Vigilant)
- Desperado
- Omite
- Vendex

**Spider mite count per leaf. 2010 Miticide trial.
Sutter Co. Miticides applied on July 22. All
treatments included 1% oil, except for control**

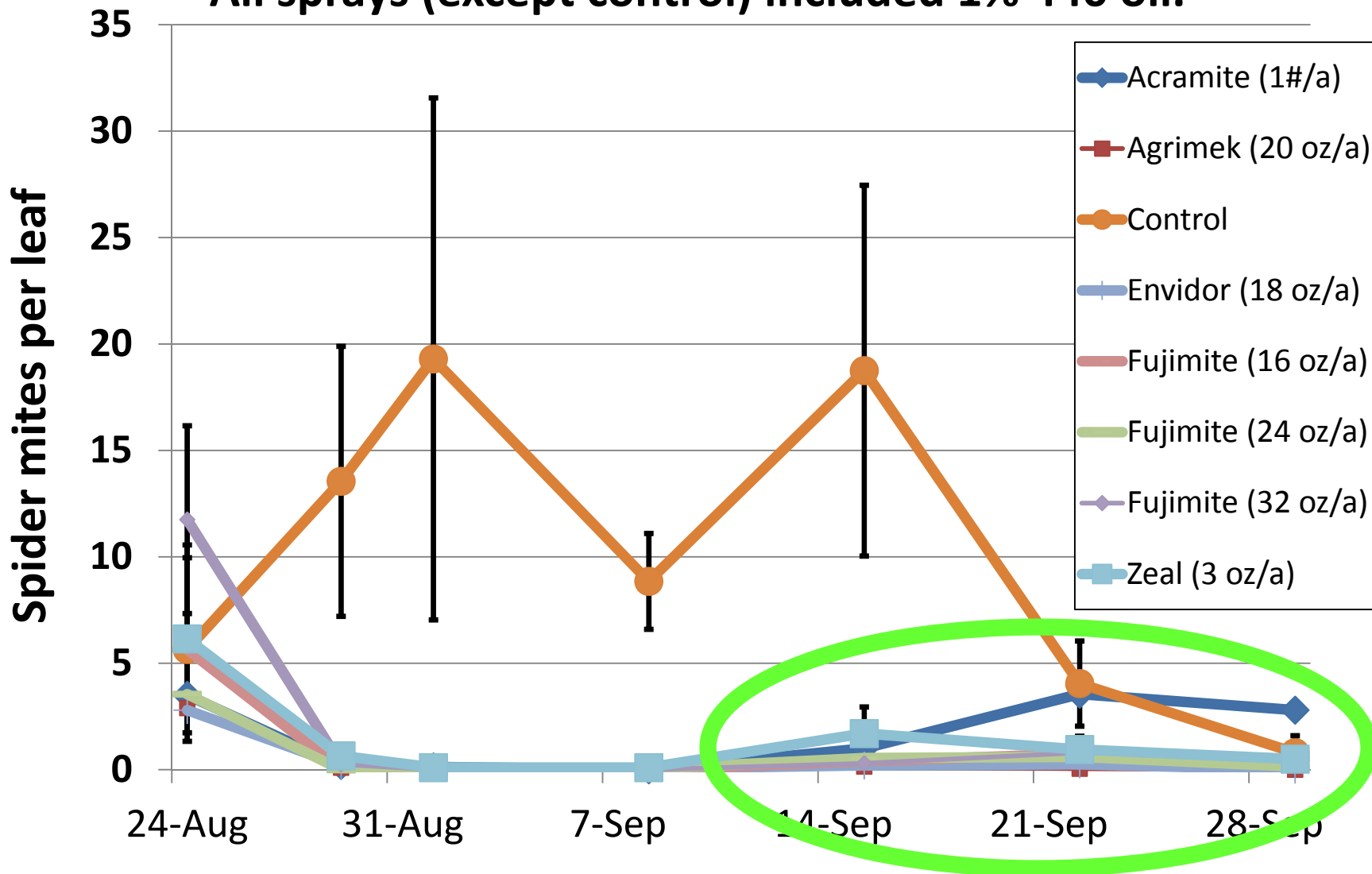


Beneficial mite count per leaf. 2010 Miticide study. Sprays applied July 22. All treatments included 1% oil, except for control.



Motile Pacific spider mite counts before and after spraying with a range of miticides on August 27, 2011.

All sprays (except control) included 1% 440 oil.



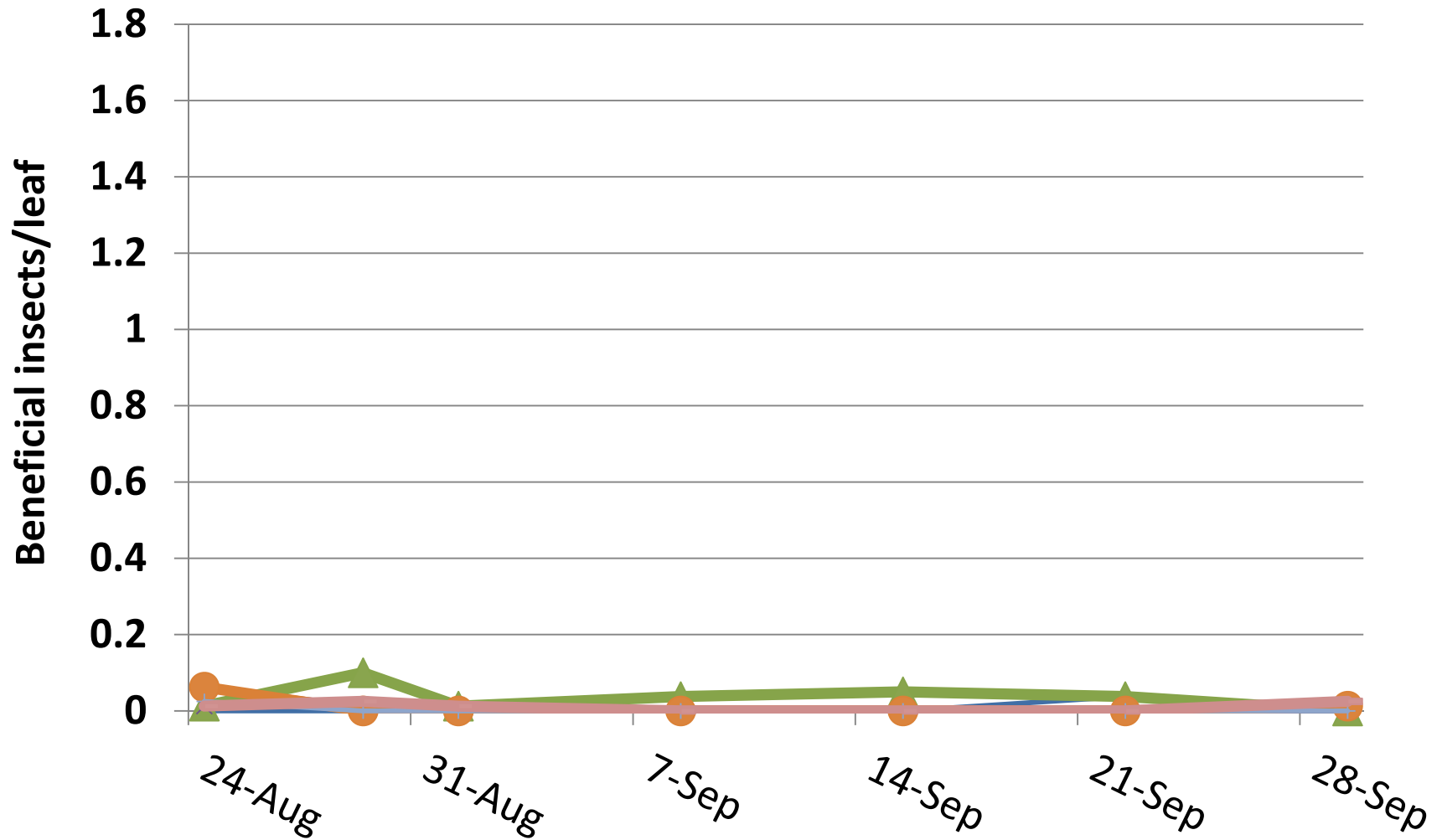
Untreated tree, early September

treated tree



Beneficial insect counts per leaf. 2011

Miticicide trial. Sutter County.



Keys to good spider mite control.

- Rotate miticides to manage resistance.
There are several, effective miticides registered in almonds for early or rescue applications.

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- Spray at the correct timing for mites and material. [Track spider mites & beneficials.](#)

Keys to effective spider mite management.

- Rotate miticides to manage resistance. There are several, effective miticides registered in almonds for early or rescue applications.
- Good coverage is key.
- Spray at the correct timing for mites and material.
- To avoid surprise(s) before & after spraying...
 - Be aware of harvest date
 - Check beneficial populations.
 - Watch/be aware of nearby mite pressure.
 - Watch temperature (late heat?)

Thank you!

