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Walnuts—Mite Monitoring

Supplement to UC IPM Pest Management Guidelines: Walnuts

For Print Use Only

Grower/Orchard_____ **Date of survey**_____

How to monitor

Begin looking for spider mites in May in the San Joaquin Valley, in June or early July in the Central Valley, and continue once per week through August.

1. Randomly select 10 trees in the orchard and from each pick 5 leaflets from low branches and 5 leaflets from high branches.
2. Look for the presence of webspinning spider mites, predator mites, and sixspotted thrips and record your observations separately for low and high branch leaves.
3. If predaceous mites are present on at least half of the leaflets that have mites, then there is a good probability that natural enemies will suppress the population. Monitor again in 3 to 4 (3 days if weather is hot) days to determine if the webspinning mite population is increasing or decreasing.

Tree	High branch leaf	Presence / absence mites (+/-)	Presence / absence natural enemies (+/-)	Low branch leaf	Presence / absence mites (+/-)	Presence / absence natural enemies (+/-)
1	1			1		
	2			2		
	3			3		
	4			4		
	5			5		
2	1			1		
	2			2		
	3			3		
	4			4		
	5			5		
3	1			1		
	2			2		
	3			3		
	4			4		
	5			5		
4	1			1		
	2			2		
	3			3		
	4			4		
	5			5		
5	1			1		
	2			2		
	3			3		
	4			4		
	5			5		
6	1			1		
	2			2		
	3			3		
	4			4		
	5			5		
7	1			1		
	2			2		
	3			3		
	4			4		
	5			5		
8	1			1		
	2			2		
	3			3		
	4			4		
	5			5		

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9	1			1		
	2			2		
	3			3		
	4			4		
	5			5		
10	1			1		
	2			2		
	3			3		
	4			4		
	5			5		
Total presence						
Avg. presence						

Action threshold
If predaceous mites or sixspotted thrips are on at least 1/2 the leaflets that have spider mites, then wait and monitor orchard again in 3–4 days.
Before you make a treatment decision, take into consideration populations of predators and whether or not you plan to apply an organophosphate or pyrethroid treatment against other pests later in the season (see below).

For all orchards
If predators are present on at least half of the leaflets that have mites, don't treat; there is a good probability that natural enemies will suppress the population. Monitor again in 3-4 (3 days if weather is hot) days to determine if the webspinning mite population is increasing or decreasing.

For orchards where organophosphate or pyrethroid applications are planned:
- *Predators present on fewer than 10% of infested leaves:* Spray when 10% of leaves have spider mites.
- *Predators present on more than 10% of infested leaves:* Spray when 20% of leaves have spider mites.

For orchards where NO organophosphate or pyrethroid applications are planned:
- *Predators present on fewer than 10% of infested leaves:* Spray when 30–40% of leaves have spider mites.
- *Predators present on more than 20% infested leaves:* Spray when 40–50% of leaves are infested.