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Aphid Sampling

Supplement to UC IPM Pest Management Guidelines: Alfalfa

Grower _____ Date of survey _____

Field location _____ Comments _____

Average plant height: less than 10 inches ___ 10 to 20 inches ___ or more than 20 inches ___

See page 2 for instructions.

	Stem	Pea aphids per stem	Blue alfalfa aphids per stem	Cowpea Aphids per stem	Spotted alfalfa aphid per stem	Mummies or Fungal infected aphids (+/-)	Lady beetle Larva (+/-)	Adult lady beetles per sweep	Other natural enemies
Area 1	1								
	2								
	3								
	4								
	5								
Area 2	1								
	2								
	3								
	4								
	5								
Area 3	1								
	2								
	3								
	4								
	5								
Area 4	1								
	2								
	3								
	4								
	5								
Total									
Average per stem									
Treatment threshold for plants < 10"		40-50*	10-12	10-12	See table on page 2				
Treatment threshold for plants 10"-20"		70-80*	40-50	40-50					
Treatment threshold for plants > 20"		100+ *	40-50	40-50					

*Do not treat if there are 4 or more adult lady beetles or 3 or more lady beetle larvae per sweep for every 40 aphids counted per stem (on stubble this ratio is one larva/sweep per 50 aphids).

How to monitor

1. Randomly choose 5 stems from each of 4 areas per field, noting if the average plant height is less than 10 inches, 10 to 20 inches, or more than 20 inches.
2. Bend each stem sample over a white pan and tap; dislodged aphids will fall in.
3. Count the number of healthy aphids, fungal killed aphids, parasitized aphid mummies, and the presence or absence of predators.
4. If only pea aphids or spotted aphids are present and reach treatment thresholds, be sure to sweep and compare aphids and lady beetles according to the "Spotted Alfalfa Aphid: Lady Beetle Ratio Table" below.
5. If both blue alfalfa and pea aphid species are present, use the blue alfalfa aphid treatment thresholds.
6. Monitor the field once a week or very 2 to 3 days if natural controls are present, since they can quickly reduce the aphid population and sprays may not be necessary.
7. Record results on this form.

	Stand Establishment and Spring, Fall in Established Stands	Established Stands, Summer
Aphid species	Blue alfalfa, pea aphids, cowpea aphid, and natural enemies	Cowpea aphid, spotted alfalfa aphid, and natural enemies
When to start	February during Stand Establishment for fall planted alfalfa	Early summer (June for spotted alfalfa aphid and continue monitoring for cowpea aphid)

Treatment thresholds			
	Pea aphids per stem	Blue alfalfa aphids per stem	Cowpea Aphids per stem
Treatment threshold for plants < 10"	40-50*	10-12	10-12
Treatment threshold for plants 10"-20"	70-80*	40-50	40-50
Treatment threshold for plants > 20"	100+*	40-50	40-50

Treatment thresholds	
For spotted alfalfa aphid	
For spring months	40*
For summer months	20*
After last fall cutting	50-70

*Do not treat if there are 4 or more adult lady beetles or 3 or more lady beetle larvae per sweep for every 40 aphids counted per stem (on stubble this ratio is one larva/sweep per 50 aphids).

Sweep for ladybeetle	
Average adult ladybeetle per sweep	
Average ladybeetle larvae per sweep	

