



# Aphid Sampling

## Supplement to UC IPM Pest Management Guidelines: Alfalfa

Grower \_\_\_\_\_ Date \_\_\_\_\_

Field location \_\_\_\_\_ Comments \_\_\_\_\_

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

**How to monitor**

1. Randomly pick 5 stems from each of 4 areas per field, selecting areas that best represent the alfalfa stand.
2. Note the general plant height in each of the 4 areas and record above.
3. Shake the stems onto your sweep net to dislodge the aphids.
4. Estimate the number of healthy aphids.
5. Note the presence (+/-) of fungal killed aphids and parasitized aphid mummies.
6. Using a sweep net, sample for lady beetles. Note the presence (+/-) of other natural enemies.
7. Record results on the table below from each of 4 areas in the field. Calculate the average number of aphids per stem.
8. If only pea aphids or spotted aphids are present and reach treatment thresholds, compare aphids and lady beetle ratios.
9. If both blue alfalfa and pea aphid species are present, use the lower blue alfalfa aphid treatment thresholds.
10. Monitor the field once a week. If natural enemies are present, monitor every 2 to 3 days, since they can quickly reduce the aphid numbers and insecticide application may not be necessary.

WHEN TO START		
Fall, Winter, Spring	Spring, Summer	Summer
Pea aphid Blue alfalfa aphid Natural enemies	Cowpea aphid Natural enemies	Spotted alfalfa aphids Natural enemies

SITE	NUMBER APHIDS PER 5 STEMS					NUMBERS PER 5 SWEEPS <sup>1</sup>		
	Pea	Blue alfalfa	Cowpea	Spotted alfalfa	Mummies, fungal infected aphids, natural enemies (+/-)	Lady beetle larvae	Lady beetle adults	Other natural enemies (+/-)
1								
2								
3								
4								
Total								
Average per stem or sweep								

<sup>1</sup> If mostly pea or spotted alfalfa aphids present

Aphids	Treatment thresholds (number of aphids per stem)						
	Treatment threshold for plants < 10"	Treatment threshold for plants 10"-20"	Treatment threshold for plants > 20"		For spring months	For summer months	After last fall cutting
Pea aphids	40-50*	70-80*	100+*		-	-	-
Blue alfalfa aphids	10-12	40-50	40-50		-	-	-
Cowpea aphids	10-12	40-50	40-50		-	-	-
Spotted alfalfa aphid**	-	-	-		40*	20*	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).

\*\*Shorter hay will likely be more susceptible to spotted alfalfa aphid infestations.