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Spotted Alfalfa Aphids in Seedling Alfalfa

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Recently, Kelly Seuhs and I have made several trips across the state sampling for alfalfa weevil eggs. During this time, we noticed no appreciable populations of any damaging arthropods. These samples; however, were taken in established stands that are at least two years old and have not been grazed. Reports of spotted alfalfa aphids in seedling stands have been reported lately. In a year like 2006, monitoring for this pest maybe extremely important in seedling stands. Spotted alfalfa aphid populations as low as 1-2 per plant, under these drought conditions, can quickly thin a good stand. This tiny insect is relatively easy to scout for in alfalfa, since its appearance is quite unique. Of the four primary aphids occurring in Oklahoma alfalfa, this species is the only aphid that is yellow in color. Pea aphids and blue alfalfa aphids are mostly green in color, while cowpea aphids are nearly black. These latter three species also lack the longitudinal rows of dark spots that run along the dorsal surface of the body.

Mild, dry conditions typically favor spotted alfalfa aphid build-up. Cold weather does not necessarily deter populations of spotted alfalfa aphids; therefore, this insect can remain a significant pest throughout the winter months. The effect of feeding by this insect can be devastating to seedling stands. Individual plants may quickly go from healthy looking to yellow and stunted and may eventually turn white in color.

Treatment considerations should be based on the number of aphids per stem in seedling stands. Healthy, well-watered, fall-planted alfalfa may be able to tolerate up to five aphids per stem, while stressed plants that have struggled to grow and establish a viable root system cannot tolerate more than one aphid per stem. If insecticide use becomes necessary, particularly in a dry year, then adequate coverage is a crucial issue. In these conditions, we recommend 3-5 gallons/acre or 15-20 gallons/acre by air and ground application methods, respectively. Cutting back on liquid when conditions are dry and winds are even moderate can result in poor control. We have seen this repeatedly in previous years when conditions were similar. In relation to chemical choices, Lorsban continues to be the preferred choice for aphid control in alfalfa. Some of the newer synthetic pyrethroids (Proaxis, Warrior) will also do an effective job; however, certain chemicals within this group will not perform well on aphids. Although it may be slightly more expensive to use Lorsban, lower rates (1 pint/A) have shown excellent activity against this

pest and these rates should be quite competitive with lower rates of any of the synthetic pyrethroids.

Will January/February Weather Conditions have an Impact on Alfalfa Weevil Egg Populations in 2006????

Phil Mulder and Kelly Seuhs, OSU Extension Entomologist and Extension Assistant

Alfalfa weevil egg populations for January are located in the attached table. In addition, degree days through January 8, 2005 are presented in the last column. For the purposes of comparison, January egg populations and viability of those eggs for the previous two years are also depicted in the table. Viability measurements for this year's samples are still being processed. Relatively low numbers of eggs were recovered in all counties with the exception of Woods County. In 2006, degree days through January 8 are averaging 68.2 across the ten sample sites.

Remember, as far as alfalfa weevil populations are concerned, 150 degree days represents the level that serves as an indicator for growers and consultants to begin scouting for larvae. So far this year, many early (suicidal) emerging larvae were present in our samples. Any of these early emerging larvae will likely be killed by ensuing cold weather events. With warm weather conditions on the immediate horizon; however, it is likely that more adult activity will begin. During warm spells in January and February adult mating and oviposition can increase dramatically. If present populations hold through the February sampling period, and oviposition increases between now and then due to warm weather events, we could experience a heavier infestation of alfalfa weevil than we experienced last season. In contrast, if we receive some relief from the drought and colder temperatures, then egg populations should remain steady or perhaps decline. If we experience colder conditions and continue in the drought, then it is likely that those fields that were late harvested or grazed during the winter will see very low populations of weevils. This is in part due to the lack of stem material for weevil oviposition.

During sampling, we often keep our eye out for any additional insect activity, such as army cutworm or aphids. No such activity was noted during the January sampling trips. However, please see the next article on spotted alfalfa aphids if you have a seedling stand of alfalfa. If you have experienced problems in the past with army cutworm in February or March, then this may be the type of year to keep a close eye on your stand, particularly before the alfalfa begins to really grow. This pest is quite particular about where they lay their eggs as moths, preferring areas that have fewer weeds and less old forage growth. With the lack of rainfall and late cutting in 2005 moths will prefer to select such sites, in particular those grown in sandier soils. We will

keep you posted in a later release about the egg viabilities for the January 2006 samples and for those that we hope to take in February. Currently, the outlook for this coming season is still questionable.

County	January 2006	January 2005	January 2005 % Viable*	January 2004	January 2004 % Viable*	Degree Days (2006)
Grady	56.0	43.6	---	206	34	61
Kay	58.8	124	84	94.8	49	55
Kingfisher	82.0	162	94	207.2	75	62
Payne	189.6	338.8	90	241.2	79	70
Pottawatomie	134.8	218	82	118.4	79	71
Tillman	40.8	54	---	26.8	---	80
Washita	130.0	57.2	93	486	69	70
Woods	208.8	88	85	496	72	65
Garvin	111.6	113.2	87	38	---	84
Tulsa	30.4	105.6	86	115.2	90	64
** Mean	104.3	130.4	88	203	54.7	68.2

* No viability in a specific county means that egg numbers recovered was insufficient to conduct an assessment.
** Means, within each year, represent all areas sampled, not simply those depicted.

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