



Pest e-alerts



Entomology and Plant Pathology, Oklahoma State University
127 Noble Research Center, Stillwater, OK74078
405.744.5527

Vol. 12, No. 1

<http://entopl.okstate.edu/Pddl/>

Jan 25, 2013

Alfalfa Weevil Egg Populations 2013

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

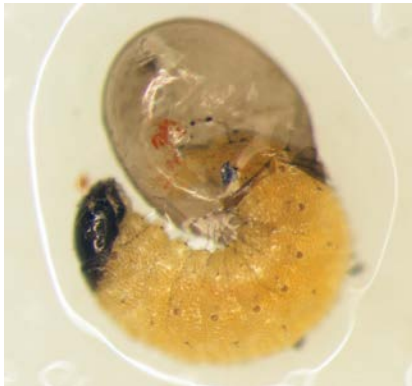
Alfalfa weevil egg populations for January are located in the attached table. In addition, degree days through January 24, 2013 are presented in the last column. For the purpose of comparison, January egg populations and viability of those eggs for the previous collection years are also depicted in the table. Viability measurements for this year's samples have been processed; with four locations (Grady, Tillman, Major and Alfalfa Counties) having sufficient egg numbers for testing. An average of 68 % viability was obtained. Compared to previous sample years (2004-2007, 2012), relatively low numbers of eggs were recovered. However, there is a slight increase in comparison to this time last year. In 2013, degree days through January 24 are averaging 51.2 across the ten sample sites.



In an ongoing effort to identify effects on alfalfa weevil and aphid populations over the current and previous years, we continue to look at the percentage of normal precipitation in each of the ten counties sampled this year. From the fall of 2010 through most of 2011, a large portion of the state was in an exceptional drought. As much as two thirds of the state did not receive any measurable rainfall until late summer or early fall of 2011 and the cycle continued in 2012. Currently, even with the moisture received last fall and thus far this year, most of the state is still in an extreme drought with well below average rainfall. While those deficits may not totally account for the numbers of alfalfa weevil eggs recovered this year, if you look at the impact from the extreme temperatures the last two summers (50+ days over 100 degrees), the combination of persistent drought with extremely high temperatures during the summer months of 2011, may have resulted in increased mortality of summer aestivating (inactive in summer) adult weevils.

However, we must remain vigilant; early 2011 was a perfect storm for insect (Aphid) development while a mild and dry 2012 showed an increase of alfalfa weevil populations. Also, in 2011, above average temperatures and below average rainfall equated to minimal to no alfalfa growth occurring in the spring allowing an explosion of insect populations prompting multiple sprays for control.

While average egg numbers for this year are slightly greater than in last year's sampling, populations are much greater than the collection year of 2007, where cold weather events kept numbers in check. If moderate climate conditions occur and moisture is limited again this year growers will have to closely monitor for early insect development.



Remember, as far as alfalfa weevil populations are concerned, 150 degree-days represent the level that serves as an indicator for growers and consultants to begin scouting for larvae. In processing this year's samples, there have been many early (suicidal) emerging larvae that were present. In a normal season, these early emerging larvae are likely killed by subsequent cold weather events. Continued and persistent cold with ice and/or rainfall will further enhance mortality for both weevils and aphids. Any upcoming coming cold weather events with ice and freezing rain while not agreeable to us

would aide in the control of insect development. Adult activity of alfalfa weevil generally peaks in January and February of each year; however, if a warm pattern starts to occur we may start to see egg populations increase. If present populations hold through to February, and oviposition remains low between now and then due to cold weather events, we could get lucky and experience a lower and/or later infestation of alfalfa weevil than normal. However, with milder temperatures alfalfa weevil and spotted alfalfa aphids ended up being high last year and were a great concern. In 2011, early and extremely heavy populations of cowpea aphids kept alfalfa growth to a minimum and resulted in that so-called perfect storm for disaster with both aphid and weevil pressure. Growers should be encouraged to keep a close eye out for early cowpea aphid populations, especially levels that can stunt alfalfa growth and set the plants back before weevil emergence begins in earnest.



Dr. Richard Grantham
Director, Plant Disease and Insect Diagnostic Laboratory

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972, Americans with Disabilities Act of 1990, and other federal laws and regulations, does not discriminate on the basis of race, color, national origin, gender, age, religion, disability, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert E. Whitson, Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President, Dean, and Director of the Division of Agricultural Sciences and Natural.

Table 1. Alfalfa weevil egg populations for January, 2013. Degree days through January 24, 2013 are presented in the last column.

County	January 2013	January 2013 % Viable	January 2012	January 2012 % Viable	January 2007	January 2007 % Viable	January 2006	January 2006 % Viable*	January 2005	January 2005 % Viable*	Degree Days (2013)
Grady	401.2	58	33.2	---	.8	---	56.0	---	43.6	---	47.0
Kingfisher	36.4	---	77.6	82	48.0	---	82.0	---	162	94	36.3
Payne	4.0	---	69.6	72	56.4	70	189.6	45	338.8	90	52.0
Pottawatomie	22.0	---	4.8	---	14.8	---	134.8	41	218	82	73.7
Tillman	273.6	69	54.4	---	2.0	---	40.8	---	54	---	52.6
Washita	31.2	---	74.4	76	3.6	---	130.0	45	57.2	93	46.7
Garvin	59.2	---	52.4	---	0.0	---	111.6	76	113.2	87	76.8
Rogers	26.0	---	17.6	---							61.0
Major	77.2	81.5	74.8	---							40.1
Alfalfa	72.4	64	198.0	75							26.2

**Means 100.5 65.68 20.3 104.3 130.4 51.2

--- No viabilities in a specific county means that egg numbers recovered were insufficient to conduct an assessment.

** Means within each year, represent all areas sampled, not simply those depicted.

During sampling, we often keep our eye out for any additional insect activity, such as army cutworm or aphids. Minimal numbers of other insect activity were observed during collection. Any cold, wet weather will likely have a detrimental effect on these insects.