



Pest e-alerts



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

Vol. 11, No. 2

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

Jan 18, 2012

Alfalfa Weevil Egg Populations 2012

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



Alfalfa weevil egg populations for January are located in the attached table. In addition, degree days through January 16, 2012 are presented in the last column. Unfortunately, no data was collected for egg populations over the past three seasons. However, for the purposes 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 are still being processed; with four locations (Payne, Kingfisher, Grant and Washita Counties) having sufficient egg numbers for testing. Compared to previous sample years (2004-2007), relatively low numbers of eggs were recovered. In 2012, degree days

through January 16 are averaging 59.5 across the ten sample sites.

In an attempt to identify what may be having an effect on alfalfa weevil populations over the last couple of years, we looked 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 didn't receive any measurable rainfall until late summer or early fall of 2011. Currently, even with the moisture received last fall and thus far this year, most of the counties in the central to western parts of the state are still in an extreme drought with 40-80 percent below average rainfall. While those deficits may not totally account for the reduced numbers of alfalfa weevil eggs recovered this year, if you look at the impact from the extreme temperatures last summer (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 diapausing adult weevils. However we must remain vigilant, early 2011 was a perfect storm for insect

development. With above average temperatures and below average rainfall, minimal to no alfalfa growth occurring in the spring allowed an explosion of insect populations prompting multiple sprays for control.

While average egg numbers for this year are lower than in previous collection years it is slightly higher than the last collection year of 2007, where cold weather events kept numbers in check. If moderate climate conditions persist and moisture is limited again this year we will have to closely monitor for early insect development.

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, there are a few early (suicidal) emerging larvae that were present in our samples. In a normal season, many of these early emerging larvae would likely be killed by ensuing cold weather events. Continued and persistent cold with ice and/or rainfall will further enhance mortality. Any upcoming 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 warm conditions persist we may continue to see egg populations increase. 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 higher and/or earlier infestation of alfalfa weevil than normal. Alfalfa Weevil and spotted alfalfa aphids were high last year and were a great concern. Growers should be encouraged to be diligent about checking for spotted alfalfa aphids throughout the winter, especially if the winter remains relatively mild (above average temperatures with little to no rainfall). Rainfall, in particular, will be critical to aphid control. These cold weather rainfall events keep aphid numbers in check and favor alfalfa growth once temperatures do warm up.



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.

County	January 2012	January 2012 % Viable	January 2007	January 2007 % Viable	January 2006	January 2006 % Viable*	January 2005	January 2005 % Viable*	January 2004	January 2004 % Viable*	Degree Days (2012)
Grady	33.2	---	.8	---	56.0	---	43.6	---	206	34	40.7
Kingfisher	77.6	?	48.0	---	82.0	---	162	94	207.2	75	55.9
Payne	69.6	?	56.4	70	189.6	45	338.8	90	241.2	79	51.5
Pottawatomie	4.8	---	14.8	---	134.8	41	218	82	118.4	79	73.8
Tillman	54.4	---	2.0	---	40.8	---	54	---	26.8	---	68.4
Washita	74.4	?	3.6	---	130.0	45	57.2	93	486	69	61.8
Garvin	52.4	---	0.0	---	111.6	76	113.2	87	38	---	87.5
Rogers	17.6	---									73.4
Major	74.8	---									48.0
Grant	198.0	?									34.2
**Means	65.68		20.3		104.3		130.4		203.00		59.5

? Viabilities are currently being processed and will be made available as soon as results are in.

--- 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. We will keep you posted in a later release about the egg viabilities for the January 2012 samples and for those that we hope to take in February.