



# Pest e-alerts



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## Update on Alfalfa Weevil Egg Populations 2017

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On January 31- February 2, 2017, alfalfa samples were taken at six sites across the state to determine egg populations of Alfalfa Weevil. In light of the type of winter we've had thus far, numbers in most sample locations remain extremely low. Alfalfa weevil egg populations for January are located in the attached table (Table 1). Numbers presented reflect weevil eggs per square foot. In addition, degree days through February 8, 2017 are presented in the last column. For the purpose of comparison, January egg populations and viability of those eggs for previous collection years are also depicted in the table. Viability measurements for this year's samples were not taken due to insufficient egg numbers collected. Compared to previous sample years (2012, 2013, 2014, 2015 and 2016), relatively low numbers of eggs were recovered. This year's numbers are well below averages from the sites from this time last year, and even more so from previous sample years where average eggs/ft<sup>2</sup> were in excess of one hundred or greater. Degree days through February 8, 2017 are averaging 186.2 across ten sites around the state.

Keep in mind, these numbers may not indicate the severity of the upcoming season's infestation since most of the egg laying by adult weevils occurs during warm periods of January and February. Early numbers obtained in this sampling indicate oviposition that has taken place thus far, including last fall (October and November), when conditions coming out of summer aestivation were conducive for mating and oviposition. Toward the end of 2016 and the early part of 2017, most of the state has experienced single digit to below zero temperatures which could have increased the chance that early eggs that had already been placed may not have survived that extreme cold producing the lower egg numbers we've observed during this sampling period. In processing this year's samples we have seen a few early emerging larvae in a couple of



locations. In “normal” years, early emerging larvae would likely not survive subsequent cold weather events, ice, and freezing rain that occurs through February and early March. These type of conditions would help in controlling both weevil and aphid populations. However, if the current warming pattern continues and temperatures stay above average we could still see populations increase.

In an ongoing effort to identify weather effects on alfalfa weevil and aphid populations over the current year, we continue to look at weather and other factors that could contribute to increased or decreased populations of these pests. As stated above, through early January, we experienced extremely cold conditions with temperatures dipping below zero in many areas. Daily averages for most of the state have remained somewhat normal for this time of year. However, there have been enough days where temperatures reached into the seventies and eighties that have allowed degree days to accumulate rapidly.

As always, keep in mind as the season progresses and daytime temperatures increase, scouting will be needed to accurately determine weevil and aphid population levels leading up to first harvest. Regarding alfalfa weevil populations, 150 degree-days represents the level that serves as an indicator for growers and consultants to begin scouting for larvae. Throughout the state, degree day numbers are averaging 186.2, with some counties already over 250. These numbers can go up quickly if a warming trend continues.

We'll keep you posted as the season progresses.

<b>Table 1. Alfalfa Weevil Egg populations for January, 2017. Degree Days through February 8, 2017 are presented in the last column.</b>												
County	January 2017	January 2017 % Viable	January 2016	January 2016 % Viable	January 2015	January 2014	January 2014 % Viable	January 2013	January 2013 % Viable	January 2012	January 2012 % Viable	Degree Days 2017
Alfalfa	23.2	--	23.6	--	61.6	6.0	---	72.4	64.0	198.0	75.0	119.8
Major		--		--		15.2	---	77.2	81.5	74.8		150.2
Payne	46.4	--	95.6	69.0	56.0	42.8	---	4.0		69.6	72.0	197.5
Kingfisher		--		--		20.0	---	36.4		77.6	82.0	147.4
Comanche		--	40.4 (Stephens)	--	20.4	69.2	59.0	273.6 (Tillman)	69.0	54.4 (Tillman)		267.6
Kiowa	11.6	--	37.6	--		53.6	---	31.2 (Washita)		74.4 (Washita)	76.0	184.4
Pottawatomie	.8	--	13.2	--		59.2	---	22.0		4.8		215.1
Rogers		--		--	44.8	78.8	---	26.0		17.6		160.5
Garvin	.8	--	34.8	--	22.4	28.4	---	59.2		52.4		245.0
Grady	3.2	--	129.2	80.0	48.0	159.6	64.0	401.2	58.0	33.2		174.6
<b>**Means</b>	<b>14.3</b>		<b>53.4</b>		<b>42.2</b>	<b>53.28</b>	<b>61.5</b>	<b>100.5</b>		<b>65.68</b>		<b>186.2</b>

--- 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.

Unfortunately, due to time restraints, only six counties were utilized in collections this year. With relatively low numbers, no viabilities were taken. Degree day numbers presented represent all the above counties.

During sampling, we keep our eye out for any additional insect activity, such as army cutworm or aphid. No other insect activity was observed during collection. The warm weather in previous weeks and warmer weather that is predicted will likely have some effects on the impending population.

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