Pest e-alerts

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Update on Alfalfa Weevil Egg Populations 2018

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On February 5-6, 2018, alfalfa samples were taken at nine 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 February are located in the attached table (Table 1). Numbers presented reflect weevil eggs per square foot. In addition, degree days through February 19, 2018 are presented in the last column. For the purpose of comparison, 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 (2013, 2014, 2015, 2016 and 2017), low numbers of eggs were recovered.

This year's numbers are below averages from sample sites from this time last year and even more so from previous sample years where, in some areas, average eggs/ft^2 were in excess of one hundred or greater. Degree days through February 19, 2018 are averaging 159.9 across thirteen 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. Similar to last year's sampling, throughout January 2018, many areas of the state have experienced single digit 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.

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 sixties and seventies that have allowed degree days to accumulate rapidly since sampling was conducted.

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 159.9, however, some southern counties have already reached the 230 mark. Current icy conditions will delay insect activity, but numbers can increase quickly when a warming trend develops.

We'll keep you posted as the season progresses.

Table 1. Alfalfa Weevil Egg populations for February, 2018.
Degree Days through February 19, 2018 are presented in the last column.

County	February 2018	February 2018 % Viable	January 2017	January 2017 % Viable	January 2016	January 2016 % Viable	January 2015	January 2014	January 2014 % Viable	January 2013	January 2013 % Viable	Degree Days 2018
Alfalfa	0.0	--	23.2	--	23.6	--	61.6	6.0	---	72.4	64.0	144.0
Major				--		--		15.2	---	77.2	81.5	154.0
Payne 1.	3.2	--										161.0
Payne 2.	14.8	--	46.4	--	95.6	69.0	56.0	42.8	---	4.0		161.0
Kingfisher				--		--		20.0	---	36.4		141.0
Comanche				--	40.4 (Stephens)	--	20.4	69.2	59.0	273.6 (Tillman)	69.0	178.0
Kiowa	6.8	--	11.6	--	37.6	--		53.6	---	31.2 (Washita)		180.0
Pottawatomie	.4	--	.8	--	13.2	--		59.2	---	22.0		162.0
Canadian	6.4	--										145.0
Blaine	.4	--										139.0
Rogers				--		--	44.8	78.8	---	26.0		139.0
Garvin	10.4	--	.8	--	34.8	--	22.4	28.4	---	59.2		195.0
Grady	4.4	--	3.2	--	129.2	80.0	48.0	159.6	64.0	401.2	58.0	180.0
**Means	12.0		14.3		53.4		42.2	53.28	61.5	100.5		159.9

--- 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.

Due to time restraints, only eight 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.

Plant Disease and Insect Diagnostic Laboratory

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