

Weekly Insect Sampling Report: June 18, 2015

Overview: Beginning the week of May 21st, the small grains team at Washington State University began conducting weekly sampling of insect pest populations in wheat and barley fields throughout the dryland region of Washington State. Current funding for the regional insect sampling network comes from WSU Extension. The objective of this monitoring network is to alert the small grains industry about the size and location of damaging insect pest populations to aid in early detection and management efforts for each insect pest. In this fourth week we sampled 10 fields for 5 pests: Hessian fly, Aphids, Cereal Leaf Beetle (CLB), Grasshoppers, Wheat Midges, and Wheat Head Armyworm (complex). Data for previous weeks are also published on the smallgrains.wsu.edu website

Monitoring summary: The table below presents the insect monitoring results from the week of June 18th. Shown are the counts of each insect pest from fields located throughout the dryland region in Eastern Washington State. Sites not sampled are indicated with an NA (we were unable to sample 9 of our original 19 fields this week because of an unforeseen injury to one of our technicians who was conducting the sampling). Cells shown in green indicate the pest was not found. Cells colored yellow indicate the pest was found below economic thresholds. Growers in these regions should be on the lookout for these pests but management action is not warranted unless populations exceed thresholds. Cells shown in red indicate the pest was found at higher than average levels. Importantly, due to the smaller than normal sample size of sites this week, the map predictions should be taken as a coarse guideline. We recommend that growers continue to monitor their fields for these insects, even though insects such as wheat midge and wheat head armyworm seem to be completely absent from the southern region where we are sampling.

At many sites we are also finding high numbers of beneficial insects such as the ladybird beetle and the soft-winged flower beetle (*Collops* spp), which is often mistaken for the cereal leaf beetle. These beneficial insects play a great role in managing pest species! They are very sensitive to insecticides that are labeled for use on wheat, so balance the pros and cons before making a spray application.

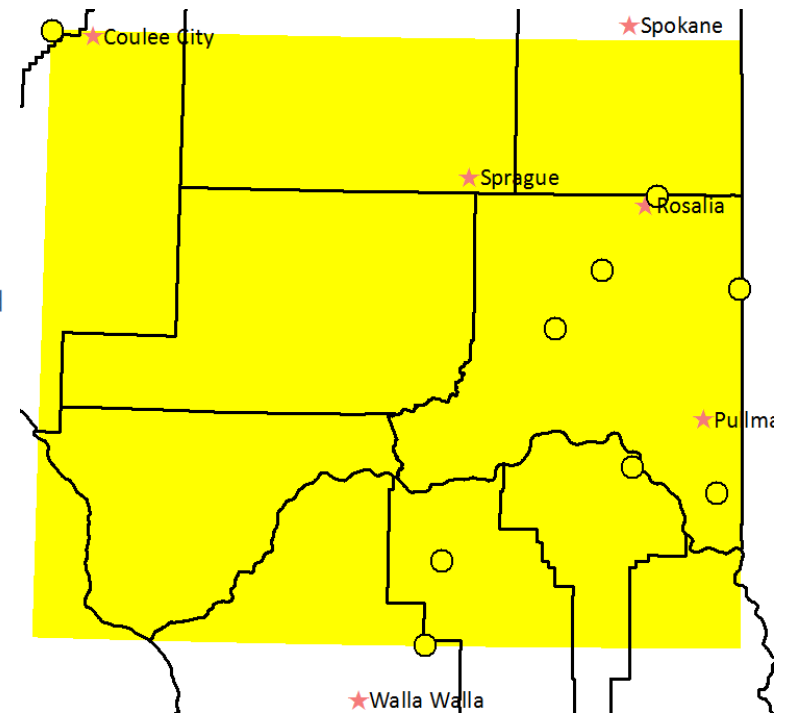
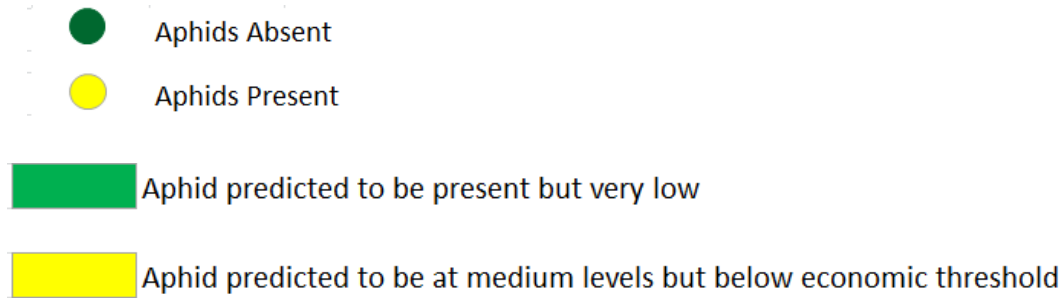
Soft-winged flower beetle (left) and cereal leaf beetle (right)



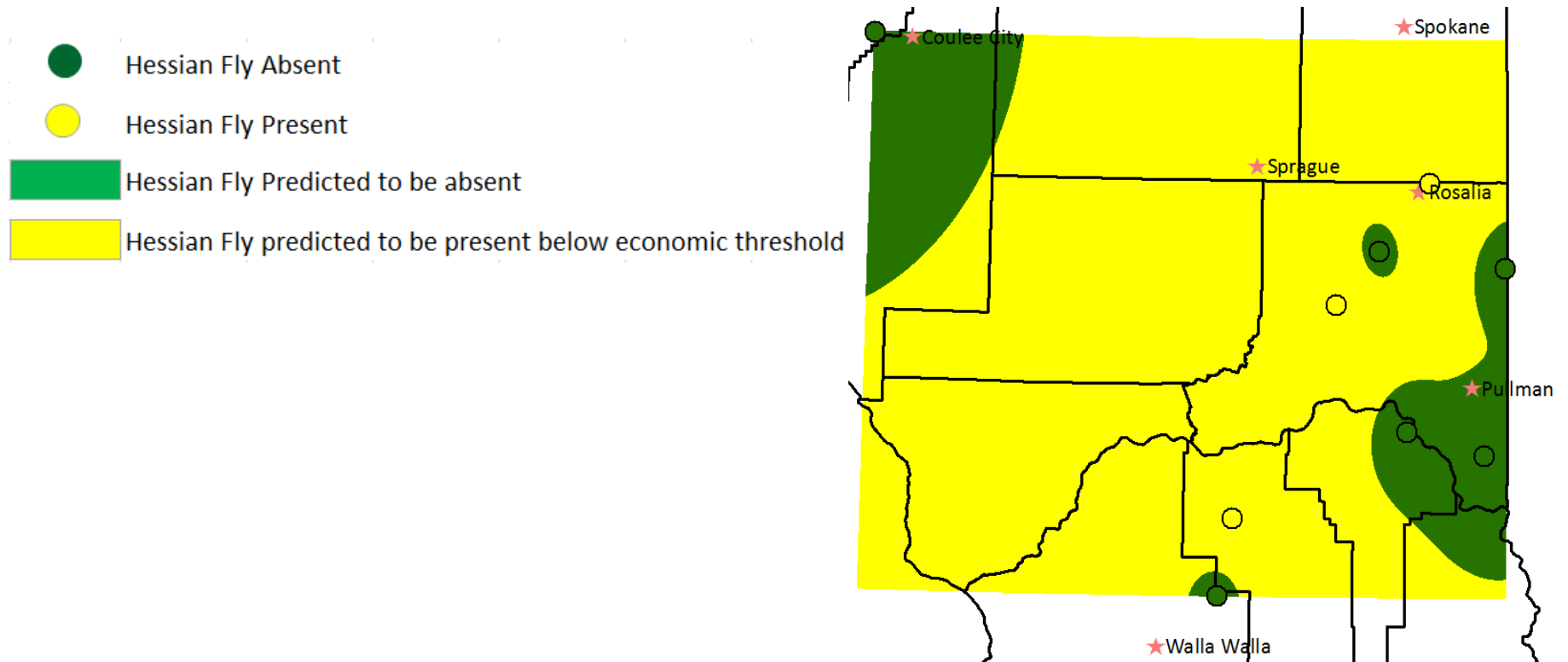
WEEKLY INSECT TRAPPING & FIELD SAMPLING REPORT: June 18, 2015

FIELD #	AREA NAME	CLB <i>Larvae</i>	HESSIANFLY <i>Immature</i>	APHIDS <i>All Stages</i>	GRASSHOPPER <i>All stages</i>	WHEAT MIDGE	WHEAT HEAD ARMY WORM
		<i>AVG #/plant</i>	<i>AVG #/plant</i>	<i>AVG #/plant</i>	<i>AVG#/sweep</i>	<i>AVG #/trap</i>	<i>AVG #/trap</i>
		<i>Visually Inspected</i>			<i>Swept</i>	<i>(2 traps per field)</i>	<i>(2 traps per field)</i>
1	Farmington	0.02	0	0.52	0	0	0
2	Plaza	0	0.02	0.26	0	0	0
3	St. John	0	0	0.4	0	0	0
4	Endicott	0	0.02	0.24	0.02	0	0
5	Colton	0	0	0.22	0	0	0
6	Walla Walla	0	0	0.44	0	0	0
7	Dayton	0	0.02	0.2	0	0	0
8	Mayview	0	0	0.2	0.01	0	0
9	Colville	NA	NA	NA	NA	NA	NA
10	Chewelah	NA	NA	NA	NA	NA	NA
11	Peone Prairie	NA	NA	NA	NA	NA	NA
12	Nine Mile Falls	NA	NA	NA	NA	NA	NA
13	Fairfield	NA	NA	NA	NA	NA	NA
14	Revere	NA	NA	NA	NA	NA	NA
15	Ritzville	NA	NA	NA	NA	NA	NA
16	Edwall	NA	NA	NA	NA	NA	NA
17	Mondovi	NA	NA	NA	NA	NA	NA
18	N. St Andrews	0	0	0.48	0.05	0	0
19	S. St Andrews	0	0	0.86	0.05	0	0

Aphids: Aphids were found at all 10 sampling locations at densities ranging from 0.2 to 086 aphids per plant. These densities are below economic thresholds for aphids. Shown below is a map of aphids occurrence. The circles indicate fields that were sampled as part of the network. Yellow circles indicate fields where aphids were observed, and green circles indicate fields where aphids were not observed (from samples of 50 plants per field). Also shown is a prediction of aphid occurrence throughout the dryland region using Geographic Information Systems (GIS) software. Areas shaded green are low-risk locations where aphids are not expected to exceed a density of 0.2 insects per plant and areas shaded yellow are medium risk locations where aphids are not likely to exceed 1 aphid per plant. Areas shaded red would indicate a high risk but there are none this week. As the season progresses populations will continue to move North and East. Growers in these regions should be aware that aphid populations are likely present and growing. See the smallgrains.wsu.edu website for information on economic thresholds for aphids in order to make appropriate management decisions.



Hessian fly: Larvae of Hessian fly (HF), the primary damaging stage in wheat and barley crops, were found at 3 of the 10 sampling locations. Only 1 larva was found at each site and these densities are below economic thresholds for HF. These second-generation adults are likely laying eggs and we expect to find damaging larval stages in future weeks. On the map below, yellow circles indicate fields where HF were observed, and green circles indicate fields where HF were not observed (from samples of 50 plants per field). Also shown is a prediction of HF occurrence throughout the dryland region using Geographic Information Systems (GIS) software. Areas shaded green are locations where HF are not expected to be found at this time, and areas shaded yellow are regions where HF are likely present but below economic thresholds. As the season progresses populations will continue to move North and East. See the smallgrains.wsu.edu for more information on economic thresholds and management options for HF.



Cereal Leaf Beetle: Cereal leaf beetles were collected at 1 of the 10 sampling locations this week at a density of 0.02 or 1 insect. These densities are below economic thresholds for CLB. Below, is a map of CLB occurrence. The circles indicate fields that were sampled as part of the network. Yellow circles indicate fields where CLB were observed, and green circles indicate fields where CLB were not observed (from samples of 50 plants per field). Also shown is a prediction of CLB occurrence throughout the dryland region using Geographic Information Systems (GIS) software. Areas shaded green are locations where CLB are not expected to be found at this time, and areas shaded yellow are regions where CLB are likely present but below economic thresholds. As the season progresses populations will continue to move North and East. See the smallgrains.wsu.edu for more information on economic thresholds and management options for CLB.



Grasshoppers: Grasshoppers (GH) were found at 4 of 10 sampling locations, at a density ranging from 0.01 to 0.05. These are below economic thresholds for grasshoppers. The average grasshopper density is calculated per sweep, out of 100 total sweeps. On the map below, the circles indicate fields that were sampled as part of the network. Yellow circles indicate fields where grasshoppers were observed, and green circles indicate fields where grasshoppers were not observed. Also shown is a prediction of grasshopper occurrence throughout the dryland region using Geographic Information Systems (GIS) software. Areas shaded green are regions where grasshoppers are likely present at very low densities. Areas shaded yellow are regions where grasshoppers are likely to present at medium densities, but still below economic threshold. See the smallgrains.wsu.edu for more information on economic thresholds and management options for grasshoppers.



Wheat Armyworm Complex: The wheat armyworm complex (WHA) consists of two species: the true WHA, *Dargida diffusa*; and the false WHA, *Dargida terrapictalis*. We did not observe any WHA in our 10 sampled locations this week. Usually, these species are collected by pheromone lures in bucket traps (for a total of 2 traps per site). Even though WHA are likely to be absent from the southern region, they could be present at very low densities. Growers throughout the region should still keep an eye out for adults. See the smallgrains.wsu.edu for more information on economic thresholds and management options for Wheat Head Armyworm.

Wheat Midge. Wheat Midge (WM) was sampled for the second time this week but was not found at any of our 10 sampling locations. Usually, this species is collected by pheromone lures in delta traps (for a total of 2 traps per site). Even though WM are likely to be absent from the southern region, they could be present at very low densities. Growers throughout the region should still keep an eye out for adults. See the smallgrains.wsu.edu for more information on economic thresholds and management options for Wheat midge.