

## Weekly Insect Sampling Report: July 2, 2015

**Overview:** Beginning the week of May 21<sup>st</sup>, 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. This week we sampled 11 fields for 5 pests: Hessian fly, Aphids, Cereal Leaf Beetle (CLB), Grasshoppers, Wheat Midges, and Wheat Head Armyworm (WHA) (complex). Data for previous weeks are also published on the [smallgrains.wsu.edu](http://smallgrains.wsu.edu) website

**Monitoring summary:** The table below presents the insect monitoring results from the week of July 10<sup>th</sup>. Shown are the counts of each insect pest from fields located throughout the northern dryland region of Eastern Washington State. ***We have completed sampling in the southern region for the 2015 season but we will continue to sample in northern region.***

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. We recommend that growers continue to monitor their fields for these insects, even some (e.g. Hessian fly and WHA) seem to be absent.

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.



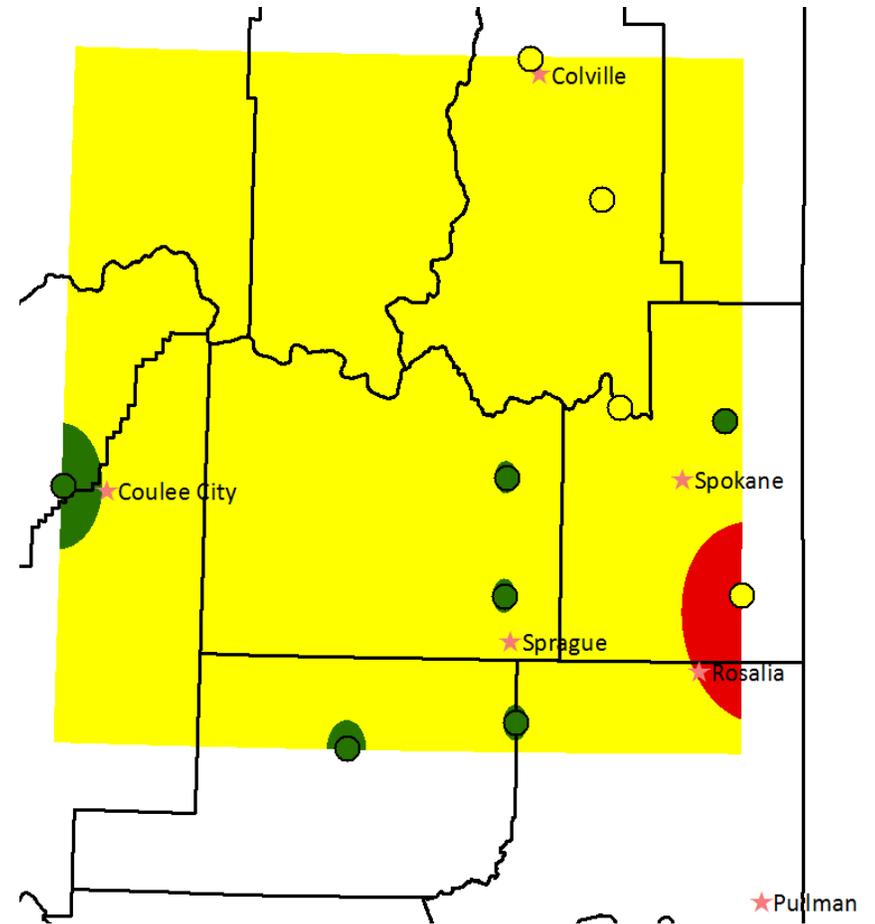
Soft-winged flower beetle (left) and cereal leaf beetle (right)

WEEKLY INSECT TRAPPING & FIELD SAMPLING REPORT: July 2, 2015							
FIELD #	AREA NAME	CLB	HESSIANFLY	APHIDS	GRASSHOPPER	WHEAT	WHEAT HEAD
		Larvae	Immature	All Stages	All stages	MIDGE	ARMY WORM
		AVG #/plant	AVG #/plant	AVG #/plant	AVG#/sweep	AVG #/trap	AVG #/trap
		Visually Inspected			Swept	(2 traps per field)	(2 traps per field)
1	Farmington	FFS*	FFS	FFS	FFS	FFS	FFS
2	Plaza	FFS	FFS	FFS	FFS	FFS	FFS
3	St. John	FFS	FFS	FFS	FFS	FFS	FFS
4	Endicott	FFS	FFS	FFS	FFS	FFS	FFS
5	Colton	FFS	FFS	FFS	FFS	FFS	FFS
6	Walla Walla	FFS	FFS	FFS	FFS	FFS	FFS
7	Dayton	FFS	FFS	FFS	FFS	FFS	FFS
8	Mayview	FFS	FFS	FFS	FFS	FFS	FFS
9	Colville	0	0	0.16	0.03	8.5	0
10	Chewelah	0	0	0.4	0.06	4.5	0
11	Peone Prairie	0	0	0	0.01	4.5	0
12	Nine Mile Falls	0.04	0	0.06	0	0	0
13	Fairfield	0	0	1.76	0	0	0
14	Revere	0	0	0	0.05	0	0
15	Ritzville	0	0	0	0.02	0	0
16	Edwall	0	0	0	0.04	0	0
17	Mondovi	0	0	0	0.05	0	0
18	N. St Andrews	0	0	0	0.17	0	0
19	S. St Andrews	0	0	0	0.3	0	0

\*FFS = Finished for season

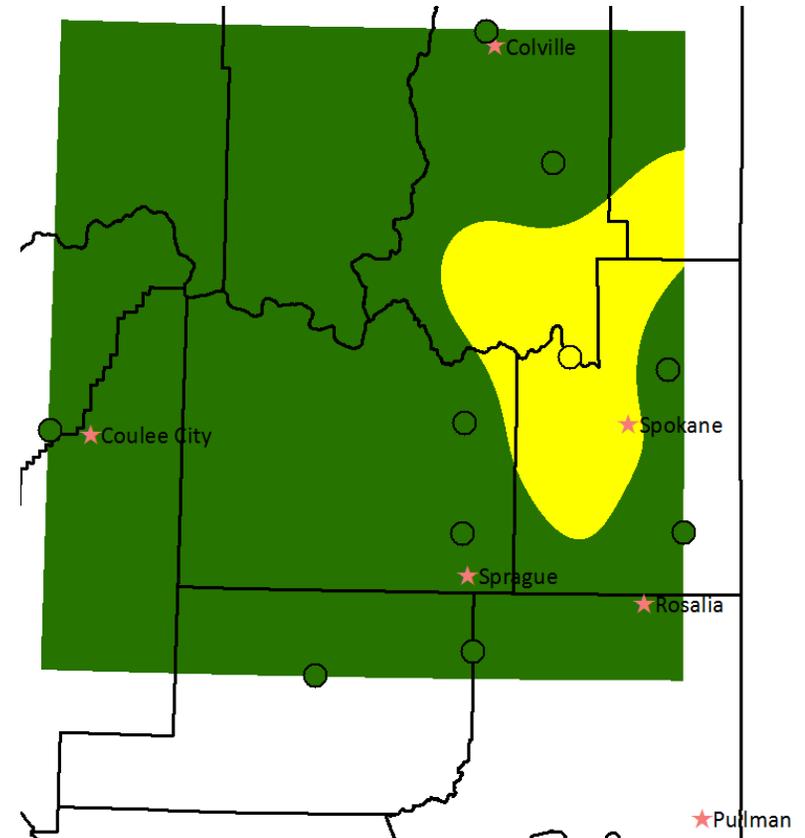
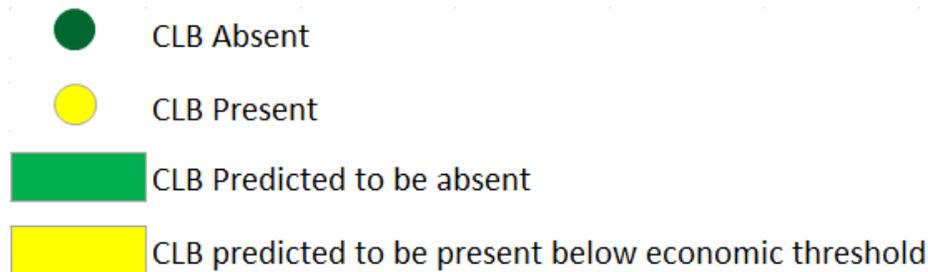
**Aphids:** Aphids were found at 4 of 11 sampling locations at densities ranging from 0.62 to 1.76 aphids per plant. Shown, right, is a map of aphids occurrence (circles). Yellow circles indicate fields where aphids were observed, and green circles indicate fields where aphids were not observed (from 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 would indicate low-risk locations where aphids are not expected to be present, yellow are medium risk locations where aphids are not likely to exceed 5 aphids per plant. Areas shaded red indicate a high risk. As the season progresses populations will continue to move North and East. See the [smallgrains.wsu.edu](http://smallgrains.wsu.edu) website for information on economic thresholds for aphids in order to make appropriate management decisions.

-  Aphids Absent
-  Aphids Present
-  Aphids predicted to be at low densities
-  Aphids predicted to be at medium densities
-  Aphids predicted to be at high densities



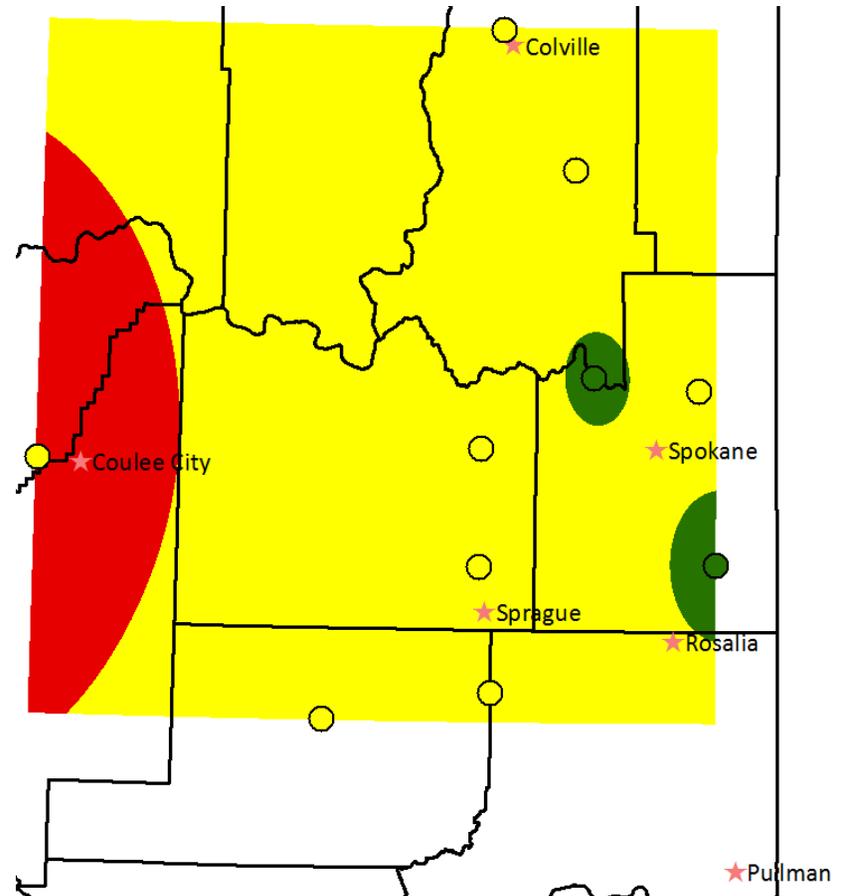
**Hessian fly:** Larvae of Hessian fly (HF), the primary damaging stage in wheat and barley crops, were not found at any sampling locations. See the [smallgrains.wsu.edu](http://smallgrains.wsu.edu) for more information on economic thresholds and management options for HF.

**Cereal Leaf Beetle:** Cereal leaf beetles were collected at 1 of the 11 sampling locations this week at a density of 0.04 insects per plant. These densities are below economic thresholds for CLB. Shown, right, 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. See the [smallgrains.wsu.edu](http://smallgrains.wsu.edu) for more information on economic thresholds and management options for CLB.



**Grasshoppers:** Grasshoppers (GH) were found at 9 of 11 sampling locations, at a density ranging from 0.01 to 0.17. The average grasshopper density is calculated per sweep, out of 100 total sweeps. On the map right, the circles indicate fields that were sampled as part of the network. Green circles indicate fields where grasshoppers were not observed and yellow circles indicate fields where grasshoppers were 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 to be absent, yellow are regions where grasshoppers are likely to present at low densities, and red are regions where grasshoppers are expected to be seen in high densities. See the [smallgrains.wsu.edu](http://smallgrains.wsu.edu) for more information on economic thresholds and management options for grasshoppers.

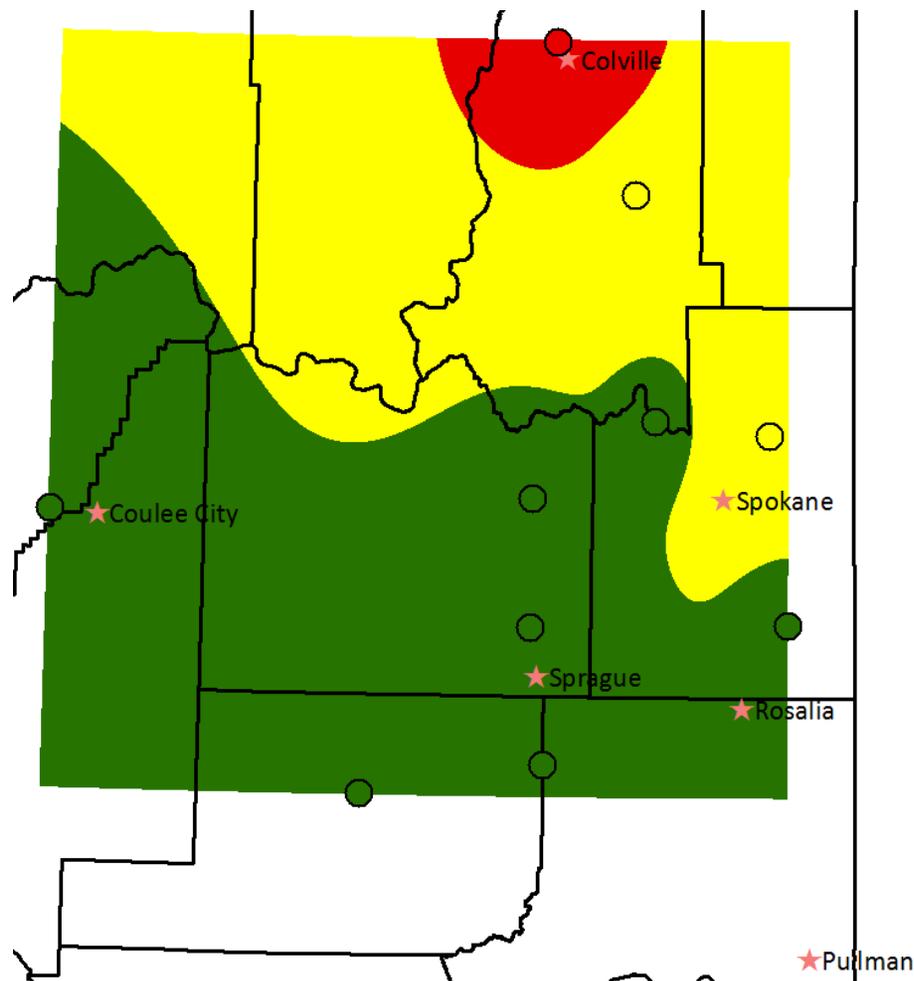
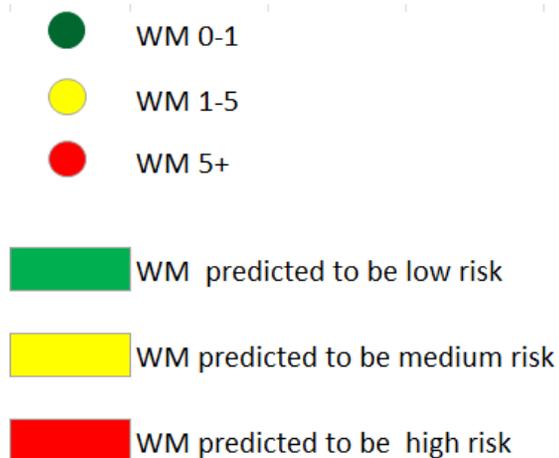
-  Grasshoppers Absent
-  Grasshoppers Present
-  Grasshoppers predicted to be absent
-  Grasshoppers predicted to present in low densities
-  Grasshoppers predicted to present in high densities



**Wheat Armyworm Complex:** The wheat armyworm complex consists of two species: the true WHA, *Dargida diffusa*; and the false WHA, *Dargida terrapictalis*. There were no WHA found at our sampling locations this week. These species are collected by pheromone lures in bucket traps (for a total of 2 traps per site). Contact your local Extension educator or see the [smallgrains.wsu.edu](http://smallgrains.wsu.edu) website

**Wheat Midge.** Wheat Midge (WM) was found at 3 of 11 sampling locations, at a density ranging from 4.5 to 8.5 insects per trap. This is a significant drop in numbers from last week. This species is collected by pheromone lures in delta traps (for a total of 2 traps per site). On the map to the right, the circles indicate fields that were sampled as part of the network. Green circles indicate fields where an average of 1 or fewer midges were observed, yellow circles indicate fields where 1-5 midges were observed and red circles indicate where over 5 midges were observed. Also shown is a prediction of WM occurrence throughout the dryland region using Geographic Information Systems (GIS) software. Areas shaded green are regions where WM are likely to be present at very low densities, yellow are regions where WM are likely present at medium densities and red are regions where WM are expected to be at high densities.

Pheromone traps draw in insects from across a large area of the field/s. This makes them highly sensitive and not necessarily an accurate indication of



infestation levels on a per-plant-basis. Contact your local Extension educator or see the [smallgrains.wsu.edu](http://smallgrains.wsu.edu) website.