Wheat Entomology Newsletter June 22, 2022

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AGRICULTURAL BIOLOGY
COLORADO STATE UNIVERSITY

Colorado Wheat Administrative Committee

Wheat Field Days

We had a great time talking to everyone who attended wheat field days! Sadly, Erika and I came down with COVID and had to miss the field days on June 13th and 14th. If you were not able to attend or still have questions about wheat stem sawfly (WSS), please check out pages 37-46 in the CSU Crop Testing 2022 Wheat Technical Report. In addition, we have written a FAQ about WSS and provided some more information about WSS biological control. There is also a lot of good information written by many fantastic people on different wheat topics. So be sure to check it out!

https://agsci.colostate.edu/csucrops/wp-content/uploads/sites/18/2022/06/wheatreport-2022-WFD.pdf

Wheat Stem Sawfly

In 2022, we detected adult sawflies (thick teal line) starting in mid-May but the numbers are low. This was likely due to cold and rainy/windy days. If temperatures are below optimum, then WSS will not fly, and emergence from their over wintering stubs can be delayed. This delayed emergence could increase the duration of the WSS flight period as seen in the graph below. We expect to see adults in flight for another week.

Beginning the first week of July, we will start our statewide larval infestation survey. This year we will be sampling for sawflies in KS as well.

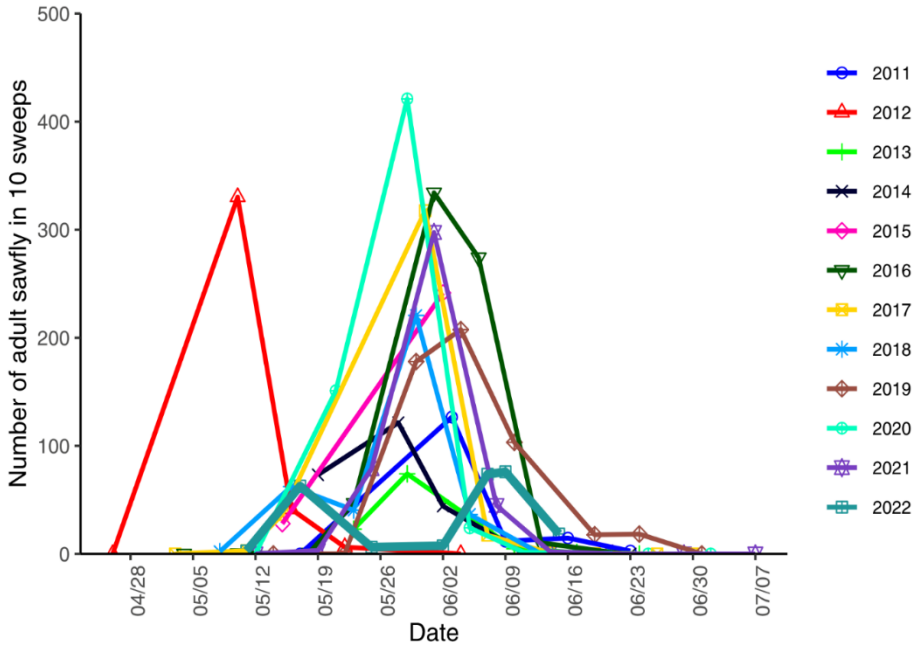

Figure 1: Historical WSS flight numbers in New Raymer and Orchard, CO. The thick teal line is 2022 data.

WSS Biological Control

Bracon cephi and *B. lissogaster* are the only known parasitoids to parasitize WSS. There is limited record of WSS parasitism in Colorado. However, we found small amounts of parasitism in the non-cultivated grasses, i.e., intermediate wheatgrass, smooth brome, and western wheatgrass, located directly next to wheat fields. We are also conducting weekly sweeps of wheat at New Raymer, CO, to see if we can capture adult parasitoids near wheat fields.

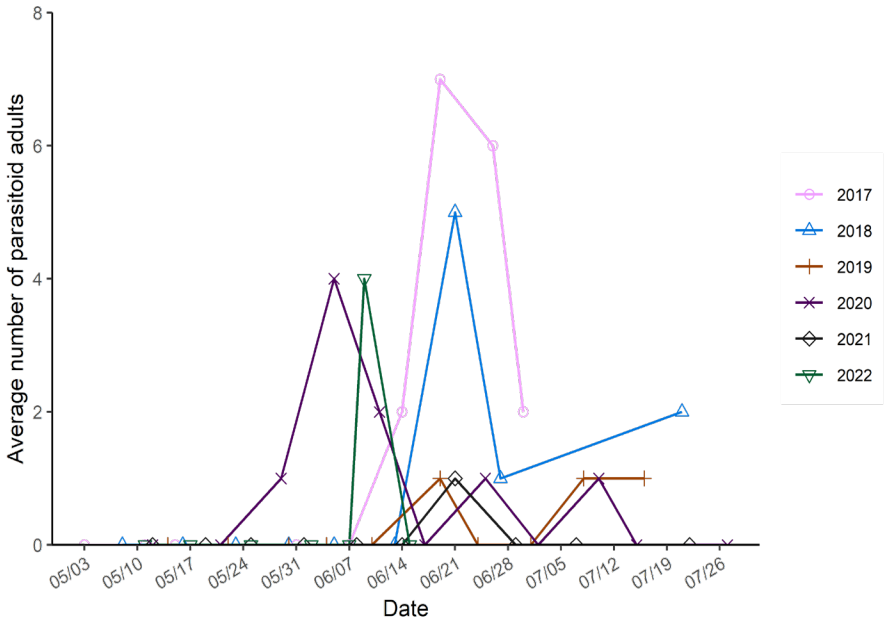

Figure 2: Historical parasitoid adults captured near wheat in New Raymer and Orchard, CO.

Currently, we are working on projects to determine whether field releases of Nebraska parasitoids can result in field establishment. Additionally, we are working with the wheat breeding program to understand how different cultivars might influence parasitoid survival and development.

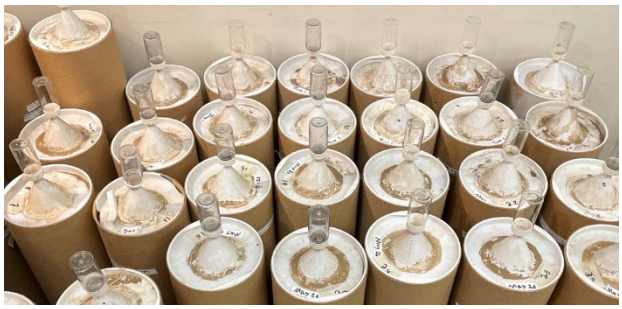

Figure 3: Emergence canisters, adult parasitoids are attracted to the light and then are collected in the glass vials at the top. Photo credit: Paetra Vroman-Lucas

Figure 4: Adult parasitoid emerging from Nebraska wheat stubble. Photo credit: Paetra Vroman-Lucas

Wheat Diseases

For wheat disease updates by Dr. Robyn Roberts, please see:
https://coloradowheat.org/category/news-events/wheat-pest-and-disease-update/

Acknowledgments

We would like to acknowledge the tireless work of the CSU researchers and extension agents for reporting pest problems throughout the state, including Ron Meyer, Todd Ballard, Sally Jones-Diamond, Barry Ogg, Kevin Larson, Brett Pettinger, Dennis Kaan, Mel Schreiner, and Michaela Mattes. As well Dr. Frank Peairs for continuing to provide insight on pest problems during his retirement.