

Wheat Entomology Newsletter June 9, 2023

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Wheat field days

It was so great to see many of you during Wheat field days and to see the wheat crop looking so gorgeous! Thanks to Sally and her team, Colorado Wheat, and our growers for their support!

New sawfly in wheat-grass sawfly!

We are sorry to be the bearer of bad news but there appears to be a new sawfly infesting our wheat! PhD student, Henrique Vieira found many armyworm-like caterpillars and adults on wheat heads in New Raymer/Orchard a couple of weeks ago. Subsequently, one of the insect taxonomists at CSU, Dr. Crystal Cooke confirmed that it was grass sawfly (*Pachynematus* sp). It is relatively rare in Colorado and Dr. Peairs, former wheat entomologist, had not seen or heard of this sawfly in Colorado in his 30 years of experience.

The larvae look like caterpillars or cutworms/armyworms, but sawfly larvae have 8 pairs of short stubby prolegs (these are legs only present in larvae but not in adults) whereas caterpillars have no more than four pairs of prolegs (Figure 1A). The larvae are green to green-yellow with a prominent head which is light green or tan. The larvae feed during the day, usually migrating to the crowns of plants at night whereas armyworms mainly feed at night. The adults look similar to wheat stem sawfly but are larger (Figure 1B). We are trying to get good specimens of the adults for identification and pictures.

The sawfly is reported to infest wheat in Oregon and in the mid-western states. They feed on leaves but more importantly clip heads. The life cycle is similar to wheat stem sawfly. The adult wasps emerge from pupae in the soil during spring. The female lays eggs on leaves of cereals and grasses and eggs hatch within 10 days. The larvae feed on the leaves/heads and when mature, the larvae drop to the soil and form a chamber in which it will remain until the following spring and the cycle begins again. Wet weather and no-till appear to be contributing factors.

Scouting: To scout your fields, shake stems so larvae drop, then examine the ground for both sawfly larvae. If you have a bug net or sweep net, then take straight-line sweeps in 10-15 locations in your field. The economic threshold recommends spraying if you detect >0.4 larvae per foot of row.

Chemical control: Most organophosphate and pyrethroid insecticides labeled for use on wheat for control of cutworms or armyworms will be effective. Two insecticides, Warrior and Mustang, specifically mention grass sawflies on the label.

Here are additional resources:

<https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/em8839.pdf>

<https://www.canr.msu.edu/fieldcropsent/uploads/files/29GrassSawfly.pdf>
<https://www.udel.edu/academics/colleges/canr/cooperative-extension/fact-sheets/grass-sawfly-true-armyworm/>

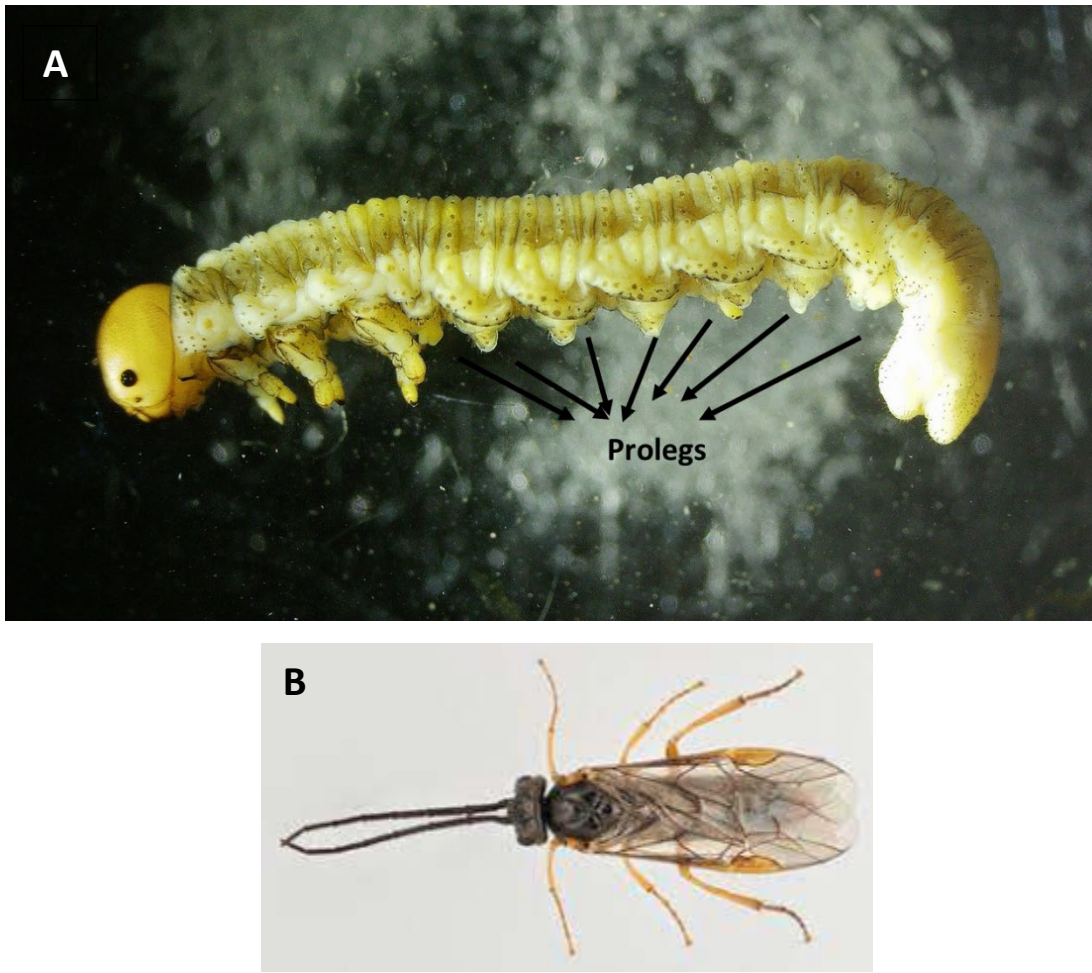


Figure 1. A) Grass sawfly larva with many prolegs (Photo by. Dr Cooke, CSU) and B) grass sawfly adult (Image from Discoverlife).

Wheat stem sawfly adult flight in New Raymer and Orchard

We have completed our survey for adult sawflies at Orchard and New Raymer, CO (Figure 2). The average number of sawflies per site was 18 which is significantly lower than some previous years. In addition, the sawflies appear to be delayed in emergence and peaked at the end of May. We noticed higher populations of sawflies in Akron which received less moisture compared to New Raymer/Orchard.

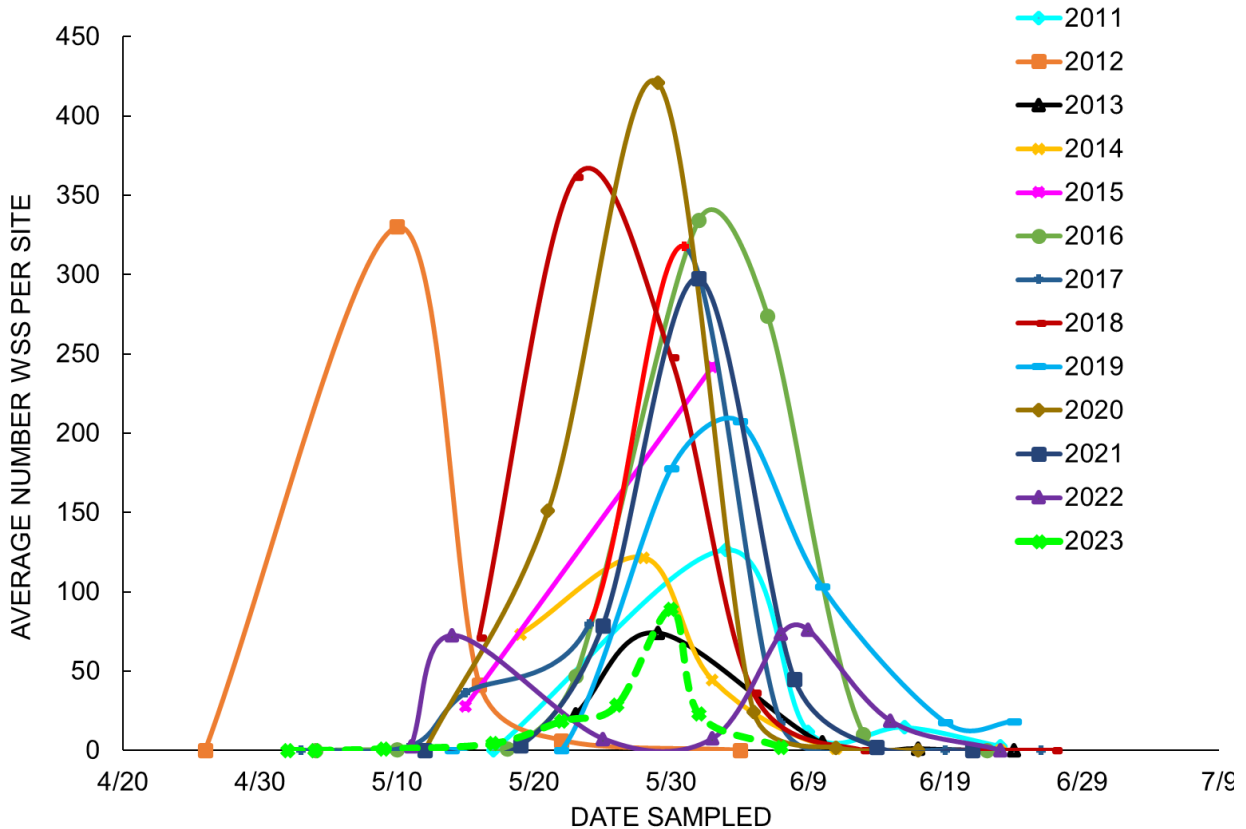


Figure 2. Graph showing historical WSS flight numbers in New Raymer and Orchard, CO. The dashed line in green is the 2023 data.

Wheat Diseases

For wheat disease updates by Dr. Robyn Roberts, please see:

<https://coloradowheat.org/category/news-events/wheat-pest-and-disease-update/>

Acknowledgments

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