Kansas State University Extension Entomology Newsletter

For Agribusinesses, Applicators, Consultants, Extension Personnel & Homeowners

Department of Entomology
123 West Waters Hall
K-State Research and Extension
Manhattan, Kansas 66506
785-532-5891
http://blogs.k-state.edu/kansasbugs/
http://www.entomology.ksu.edu/extension

September 16, 2021 No 22

Perennial Grain Species as Border Crops: Pollinator Habitat, Weed Suppression, and Forage Potential (panel discussion)

You are invited to attend a panel discussion about perennial grains as border crops hosted by the Land Institute.

Date Time: Sep 22, 2021 10:00 AM Central Time (US and Canada)
Topic: Perennial Grain Species as Border Crops: Pollinator Habitat, Weed Suppression, and Forage Potential

Location: Zoom (registration required, information below).

Description: Border crops have the potential to deliver agronomically important ecosystem services to crop fields. Perennial plantings could be advantageous in providing low-maintenance ground cover for field borders, flowers for pollinators, and even forage for livestock. In this webinar we will discuss the border crop potential of four perennial species at The Land Institute being domesticated as perennial grain crops –

sainfoin, silflower, cup plant, and Kernza® – compared to two known border and forage crops, alfalfa and a 9-species prairie mixture. Dr. Ebony Murrell at The Land Institute and Jessica Butters at Kansas State University will discuss data collected during a 3-year research study, give a brief virtual tour of the research plots, and answer questions regarding perennial border crops and the services they provide.

To register, please use this link

https://landinstitute.org/news-events/event-calendar/perennial-grain-species-as-border-crops-webinar/

Tania Kim—Dept. of Entomology – Insect, Landscape Ecology; Plant-Insect Interactions

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Redbud Leaffolder

Has anyone noticed the leaves of their Eastern redbud, *Cercis canadensis*, trees or shrubs turning brown and folding on top of each other? The damage you are noticing is caused by the caterpillar stage of the redbud leaffolder, *Fascista cercerisella*. Adults are 1/4 inch long, black to dark brown with an orange head. There are approximately 10 white spots on the wings. The adults are very active when disturbed. Adult females lay oval, white eggs near the leaf veins.

Caterpillars emerge (eclose) from the eggs laid by adult females and feed on the leaves of Eastern redbud. Early-instar caterpillars are 1/4 of an inch in length, initially white (Figure 1), and then become light-green. Later-instar caterpillars are 1/2 of an inch long with alternating bands of white and black on the body (Figure 2). Caterpillars fold the edges of leaves onto the upperside (Figure 3) and then fasten the leaves together with white strands of silk (Figure 4). The caterpillars feed within the folds on the upper leaf surface, which protects them from natural enemies such as parasitoids and predators. If you pull the leaves apart the caterpillars will move vigorously and fall off the leaves. Redbud leaffolder overwinters as a pupa in the folds of fallen leaves. There are three generations per year in Kansas.

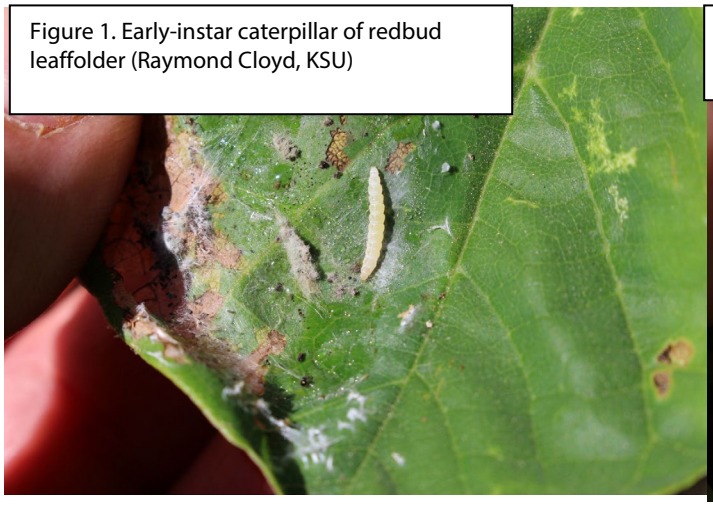

Figure 1. Early-instar caterpillar of redbud leaffolder (Raymond Cloyd, KSU)

Figure 2. Later-instar caterpillar of redbud leaffolder (Raymond Cloyd, KSU)

Figure 3. Edges of leaves folded onto the leaf upperside (Raymond Cloyd, KSU)

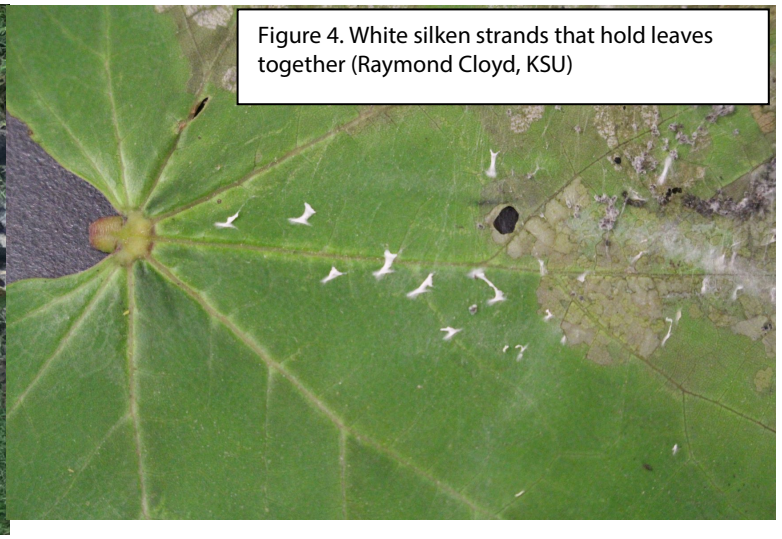

Figure 4. White silken strands that hold leaves together (Raymond Cloyd, KSU)

Eastern redbud trees or shrubs may be disfigured and leaves distorted when leaf margins fold over each other. Heavily-infested Eastern redbud trees or shrubs may drop their leaves prematurely.

Redbud leaffolder caterpillars are difficult to manage with spray applications of insecticides once the leaves are folded over and fastened together because the caterpillars are protected from exposure inside the folded leaves. However, folded leaves can be physically removed and placed into a container of soapy water that will kill redbud leaffolder caterpillars.

Raymond Cloyd – Horticultural Entomology

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New Extension Publications

Euonymus Scale: Insect Pest of Euonymus Plants Grown in Landscapes (MF3586 August 2021)

https://bookstore.ksre.ksu.edu/pubs/MF3586.pdf

Pollinators and Beneficial Insects (MF3588 September 2021)

https://bookstore.ksre.ksu.edu/pubs/MF3588.pdf

Raymond Cloyd – Horticultural Entomology

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WORMS, WORMS, and MORE WORMS (army cutworms, fall armyworms)

2021 might be called the "year of the worm". Starting in late winter/early spring, 2021, there was considerable activity by army cutworms. Most of the problem was caused by the larvae decimating thin strands of wheat and/or alfalfa. Then, since late spring/early summer, a combination of armyworms and fall armyworms have been causing serious concern and damage in lawns, pastures, and alfalfa fields throughout about the eastern 2/3rd's of the state. Army cutworms spend the summer in the Rocky Mountains but start to migrate back into Kansas in early fall every year. The larvae may feed on just about any plants but mostly affect wheat and alfalfa, as these are usually the only plants actively growing this time of year. Armyworms, probably more so than fall armyworms, may continue to cycle through another generation or even two as they overwinter in Kansas, and thus it will probably take a "hard" frost or freeze to stop them. Fall armyworms, since they don't usually overwinter in Kansas, may migrate south after this generation become adults-but there could be another, or at least partial generation. Armyworms infest primarily grasses, i.e. sorghum, corn, brome pastures, lawns, and often this time of year, wheat, but occasionally alfalfa, etc. Thus, if armyworms are the problem they could be around through another generation or maybe even two depending upon the weather. So, if armyworms are relatively small (see pic 1) they will probably feed for another 10-14 days then pupate (stop feeding). If they are relatively large (see pic 2) however, they will probably pupate in the next 3-7 days. There will probably be at least one more generation of armyworms. Fall armyworms (see pic 3) have a little wider host range, which includes alfalfa, soybeans, corn, sorghum, wheat, etc., but don't usually overwinter in Kansas, thus, hopefully, will be heading south after these larvae finish feeding and become moths. Also, in the next 30-60 days army cutworm moths should have returned from their summer Rocky Mountain retreats to deposit eggs throughout at least the western 2/3rd's of the state and thus, these tiny worms will start feeding on wheat and/or alfalfa all winter.

Picture 1: Small Armyworm (pic by Cayden Wyckoff)

Picture 2: Larger Armyworm (pic by Cayden Wyckoff)

Picture 3: Fall Armyworms (pic by Jay Wisbey)

Jeff Whitworth – Field Crops

Bug Joke of the Week

Q: How Do Caterpillars Order The Latest Fashions?

A: Using Caterloges!

Raymond Cloyd – Horticultural Entomology

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Sincerely,

Jeff Whitworth
Extension Specialist
Field Crops
phone: 785/532-5656
e-mail: jwhitwor@ksu.edu

Raymond A. Cloyd
Professor and Extension Specialist
Horticultural Entomology/Integrated Pest Management
Phone: 785-532-4750
Fax: 785-532-6232
e-mail: rcloyd@ksu.edu

Tania Kim, Ph.D.
Department of Entomology
125 W. Waters Hall
1603 Old Claflin Place
Kansas State University
Manhattan KS 66506-4004
office: 785-532-4709
e-mail: tkim@ksu.edu

KANSAS STATE UNIVERSITY | Department of Entomology