Post Rock Extension District Column
Feature Story

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Worms, Worms and more worms?

Fall is a busy time of the year for farm families with wheat drilling and fall harvest! One of your tasks might be to scout fields for insects that could cause potential damage to growing crops or crops that you will be seeding this fall. If you have seen several different kinds of worms this fall, you are not alone!!!! According to our K-State Research and Extension Entomologist, Dr. Jeff Whitworth, "2021 might be called the "year of the worm"! The first thing to do is to determine which worm is present. Proper identification is important because they have different feeding and overwintering patterns.

Starting in late winter/early spring, 2021, there was considerable activity by **army cutworms.** Most of the problem was caused by the larvae really attacking thin stands of wheat and/or alfalfa. 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.

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.

Image by Purdue Extension

Whitworth points out that **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. Armyworms infest primarily grasses, such as sorghum, corn, brome pastures, lawns, and often this time of year, wheat, but occasionally alfalfa. So, if armyworms are the problem they could be around through another generation or maybe even two depending upon the weather. If armyworms are relatively small, ¼ to ½ inch, they will probably feed for another 10-14 days then pupate or stop feeding. If they are relatively large 1 to 1 ½ inches, they will probably pupate in the next 3-7 days. There will probably be at least one more generation of armyworms.

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. Whitworth points out that it has a very identifiable "inverted Y" on the head. It usually arrives in Kansas in July where it lays eggs on corn, sorghum and other summer crops. Several generations occur and reproduction may continue through August and into September and even sometimes into October depending on the weather, putting early-planted wheat at greatest risk. Early-planted fields should be inspected frequently during the first few weeks following emergence.

Image by Texas A&M AgriLife Extension

As with their name, "armyworms", they tend to start on one side of a field and "move" in a group across the field like an army. So you may find that pattern in your field.

Whitworth stresses when scouting fields for fall armyworm damage, look for **"windowpane"** injury caused by tiny larvae chewing on seedling leaves. Each individual field should be scouted in several locations, including the field margins and the interior. The larvae themselves are usually too small to be easily observed after they first hatch, and hide in or around the base of seedlings. There are probably all sizes out in the fields from pretty small (1/4 inch or less) and about the same color as the soil, so fairly difficult to spot at first. After a few days, the worms grow larger (mature size is about an inch) and become darker in color with a distinct stripe (sometimes yellow) down one side. Within a few days of hatching, the larvae become large enough to destroy entire leaves.

Fall armyworms have a little wider host range, which includes alfalfa, soybeans, corn, sorghum, or wheat, but don't usually overwinter in Kansas, thus, hopefully, will be heading south after these larvae finish feeding and become moths.

According to Whitworth, the suggested treatment threshold is 2-3 actively feeding larvae per linear foot of row in wheat. Fields with 25 to 30 percent of plants with windowpane injury should be re-examined daily and treated immediately if stand establishment appears threatened. Larvae increase in size at an exponential rate, and so do their food requirements. Later instars do the most damage, sometimes destroying entire stands, and are the least susceptible to insecticides. Without treatment, problems can continue until larvae reach maturity or until a killing frost. Thin stands of wheat are especially at risk. Fall armyworms will feed until the temperatures cool into the mid-20's or they pupate, whichever comes first. If a killing frost does not occur soon after the treatment threshold is reached, fields may require chemical treatment.

The **army cutworm** may be coming later, as mentioned earlier, as it is a late fall/winter to early spring pest of wheat. So, 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. The larvae begin feeding during winter when the temperatures rise a few degrees above freezing. Infestations in well-established stands will probably not require insecticide applications while wheat is dormant. But some fields may not green up in the spring, because of cutworm feeding in the fall/winter.

K-State Research and Extension has excellent insect management publications on each of the major crops online or at any of our Post Rock Extension District Offices in Beloit, Lincoln, Mankato, Osborne or Smith Center. The crop insect management guides are free of charge and provide information on each of the major crops.

If you have further questions, contact me at any Post Rock Extension District Office.

*Post Rock Extension District of K-State Research and Extension serves Jewell, Lincoln, Mitchell, Osborne, and Smith counties. Sandra may be contacted at swick@ksu.edu or by calling Smith Center, 282-6823, Beloit 738-3597, Lincoln 524-4432, Mankato 378-3174, or Osborne 346-2521. Join us on Facebook at "Post Rock Extension" along with our blog site at "postrockextension.blogspot.com. Also remember our website is **www.postrock.ksu.edu** and my twitter account is @PRDcrops.*