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Insect Scouting in Wheat Starts Now

Nothing loves spring more than insects. Out they crawl from the soil, emerge from their winter cocoons, or fly in from the south. No matter how they come, the green lush wheat fields are awaiting their arrival. Now is the time to start scouting for some of the more winter hardy and early spring emerging insects that are common in the four state area, including the Bird Cherry-Oat Aphid, the Army Cutworm, and the Winter Grain Mite. The Hessian Fly also has it's spring hatching of brood but normally this pest is dealt with in the fall. Figure 1 is a calendar of expected pest issues in wheat and the unlined insects are more likely to be a problem in this area.

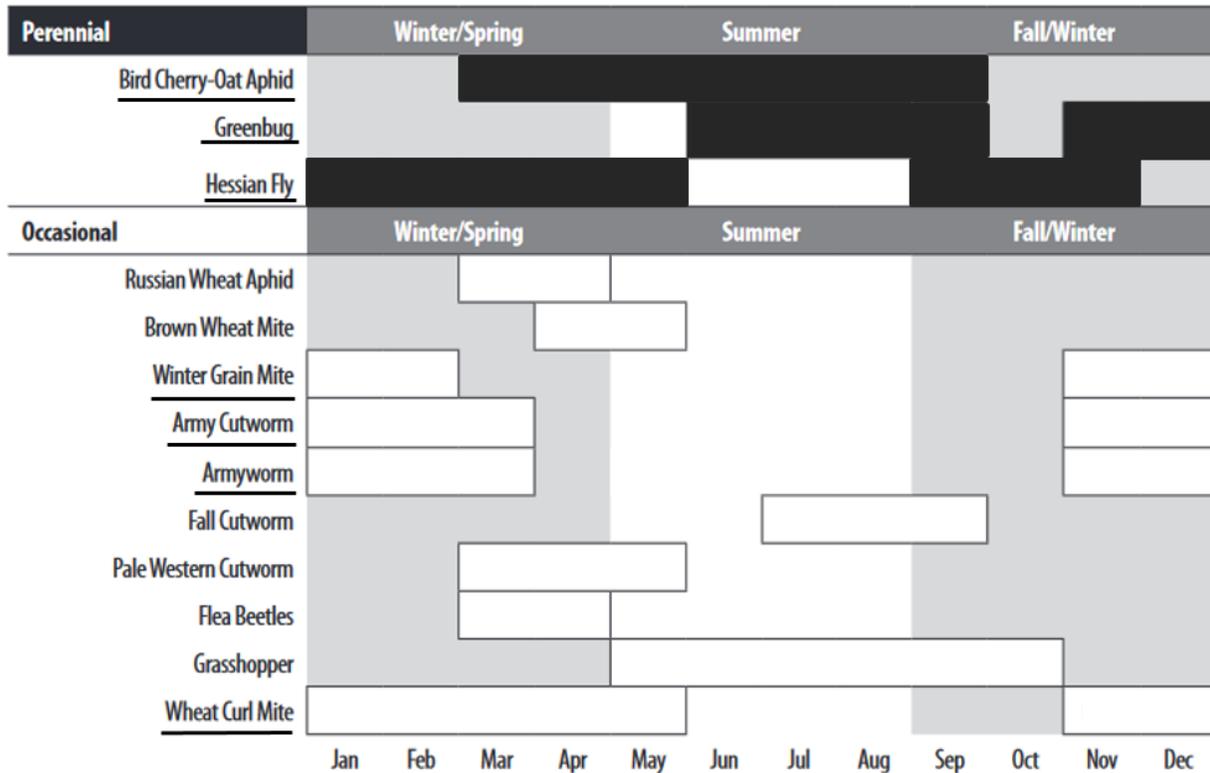


Figure 1. Wheat Insects of Kansas. Adopted from the KSRE 2019 Wheat Insect Management Guide.

Bird Cherry-Oat Aphid

This large aphid is active late into the fall and early in the spring. It has an olive green dark color that is nearly black in cold temperatures. If you see an aphid this time of year in wheat, very good chance that is a bird cherry oat aphid. The “cherry” part of the word is because cherry trees and some other woody species are its primary host. The secondary host is oat, wheat, and barley and other C₃ grasses (corn and sorghum being C₄ are not preferred). Seeing the damage of bird cherry-oat aphid is difficult but heavy, infestations can result in losses in test weight and yields. This aphid rarely gets above economic threshold levels before the beneficials reduce their populations. They can, however, become a problem as a result spraying for other pests, killing the beneficials, allowing for this asexual, fast reproducing pest to have free range to expand. The treatment threshold is from 50 aphids or more per tiller from boot stage until heading. Its aphid ally the Greenbug is more of a problem in warmer weather but it usually not far behind in the spring.

Army Cutworm

Army cutworms are active feeders nearly all winter long, anytime the temperatures get above 45 degrees. The adult moth (Miller moth) lays eggs in the soil in the fall where the larvae hatch and feed most of the winter and into spring. The army cutworm is considered to be a bigger problem farther west as the adult over-summers in the Rocky Mountains before making their way back to the plains in the fall, but some of them can make it all the way to the other side of Kansas and Oklahoma. It won't migrate back to the Rockies until early May and can do a considerable amount of feeding from now until it pupates. 70 percent of its total feeding is done in its fifth and final instar. (An instar is a phase of molting as the larvae gets bigger). The army cutworm is brown and has faint linear stripes. It can get to one and a half inches or so in its last instar. Under average conditions, treatment thresholds don't begin until 4 to 5 larvae per square foot in wheat. Moth worm larvae populations are rarely even throughout a field so be sure to inspect multiple areas when scouting.

Armyworms

Armyworms are similar in name and appearance but not much else. This worm won't become a problem for another month as the adult moth travels in from the southern states. The adult moth lays her eggs in April that hatch in one to two weeks to begin feeding in late April/early May. The larvae feed quickly on a number of host crops, wheat and corn included, before pupating into adults for a second life cycle before migrating back south for the winter. Armyworms are more likely to be an issue in this area as we are more directly in their migration patterns and they feed on nearly every crop and even pastures. Armyworms are more brightly colored than cutworms and their linear stripes are a bright yellow. Both army cutworms and armyworms are feed on by bigger bird species like crows, which is one way to look for infestations within a field. In wheat, the treatment threshold for armyworm is six per linear row foot before heading, but the issue is they can feed directly on the flag leaf and clip the stem just below the head.

Winter Grain Mite

This tiny arachnid is hard to see with the naked eye but has a near black body and bright orange legs. Its life cycle matches up closely with wheat. The first generation eggs hatch in September and October and the second generation hatches in early spring to reach maximum population levels in March and April. Mite damaged wheat is hard to see as they feed on individual cells, leaving the wheat looking grayish. Fortunately this mite doesn't like heavy clay soil, preferring the sandier soils of central Kansas. Also, while the mite can survive freezing for long periods, they have trouble with heavy spring rains.

This brief overview was just some of the more common pests in wheat. As the trees and flowers start blooming, so does it begin time to scout for these pest and also the wheat fungal diseases? If you have any questions or need help with identification, please give me a call at 620-724-8233.

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