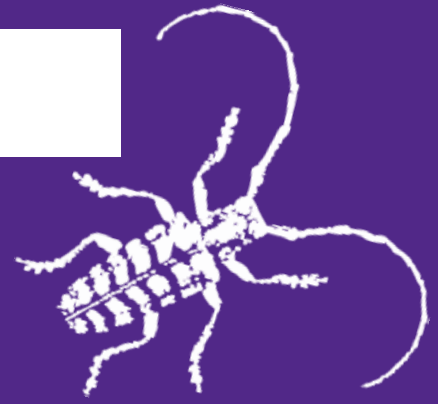


Kansas State University Extension Entomology Newsletter

For Agribusinesses, Applicators, Consultants, Extension Personnel & Homeowners

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Oak Vein Pocket Gall: Back with a Vengeance!

We have received numerous inquiries (in fact...LOTS) regarding gall-like growth on the underside of pin oak (*Quercus palustris*) leaves. In some cases, many pin oak trees have extensive galling on nearly all the leaves, with the leaves twisted or distorted. In fact, one tree on the Kansas State University (Manhattan, KS) campus, located behind Umberger Hall, is nearly 100 percent infested with this gall. I really think the gall makes the tree more attractive☺. The culprit is the oak vein pocket gall, which is caused by the gall-midge, *Macrodiplosis quercusoroca*. Galls are elongated, pocket-like swellings on the lateral veins and mid-rib of pin oak leaves (Figures 1 through 3). The gall-making organism is a small fly called a midge (Family: Cecidomyiidae). Adults are 3.0 mm long and resemble small mosquitoes (but they are not mosquitoes so do not worry). Female midges attack newly developed leaves that are unfolding - just before they are flattened. After the eggs hatch, small larvae or maggots migrate to the lateral and mid-veins, and subsequently begin feeding. After several days, tissue forms and surrounds each larva. Full-grown larvae are white and approximately 2.0 mm in length. Development is completed by mid-spring to early summer. The larvae eventually emerge from the gall, fall to the ground, and overwinter or enter diapause (a physiological state of arrested development) until the next spring. There is one generation per year. There are no control measures for this gall. Remember, this is not the gall-former that the oak leaf itch mite feeds on...that is the marginal oak leaf fold galler (Figure 4).



Figure 1 – Oak Vein Pocket Gall



Figure 2 – Oak Vein Pocket Gall



Figure 3 – Oak Vein Pocket Gall



Figure 4 – Leaf Marginal Fold Gall

I want to acknowledge Matthew McKernan; Horticulture Agent (Sedgwick County; Wichita, KS) for keeping me abreast of the situation (and sending images) regarding the oak vein pocket gall in southwestern Kansas.

Raymond Cloyd

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Rose Sawflies: Out With a Vengeance!

We are receiving numerous questions regarding insects feeding and completely devouring rose plants. These insects are sawflies, and there are at least two species that attack roses during this time of year: the rose slug (*Endelomyia aethiops*) and bristly rose slug (*Cladius difformis*). Rose slugs are the immature or larval stage of sawflies, which are black to yellow colored wasps.

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Rose sawfly females create pockets or slits along the edges of rose leaves with their saw-like ovipositor (egg-laying devise) and insert individual eggs. Larvae hatch from eggs and resemble a slug. The larvae are 1.2 cm long when full-grown and yellow-green with an orange head (Figure 1). Larvae eventually fall on the soil surface to pupate. Rose slugs overwinter as pupae in earthen cells created by the larvae. There is typically one generation per year in Kansas. Bristly rose slug larvae are pale-green and 1.5 to 2.0 cm in length. The body is covered with numerous bristle-like hairs (Figure 2). There is generally one generation per year in Kansas.



Figure 1 – Rose Sawfly Larvae Feeding on Rose Leaf



Figure 2 – Bristly Rose Slug Larvae Feeding on Spirea Plant

Rose slug larvae feed on the underside of rose leaves; resulting in leaves with a skeletonized appearance (Figures 3 and 4) and eventually they create notches or holes on the leaf margins. Bristly rose slug larvae feed on the underside of rose leaves and also cause leaves to appear skeletonized. However, the larvae may chew larger holes than the rose slug.



Figure 3 – Damage on Rose Plant Caused By Rose Slug

Small infestations of either the rose sawfly or bristly rose slug can be removed by hand and placed into a container of soapy water. A forceful water spray will quickly dislodge sawfly larvae from rose plants and they will not be able to crawl back onto rose plants. There are a number of contact insecticides with various active ingredients that are effective in suppressing populations of both sawflies. However, the bacterium, *Bacillus thuringiensis* subsp. *kurstaki* (sold as Dipel or Thuricide) will have no activity on sawflies as this compound only works on caterpillars.

Raymond Cloyd

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Spirea Aphid: Watch Out for this “Sucking” Insect

Spirea aphid (*Aphis spiraecola*) is present feeding on spirea (*Spiraea* spp.) plants in landscapes. Spirea aphid colonies aggregate on terminal growth (Figures 1 and 2) and their feeding cause’s leaf curling and stunted plant growth. Spirea aphids prefer to feed on stems and leaf undersides of succulent plant growth. All mature aphids are parthenogenic (reproduce without mating) with females giving birth to live nymphs, which themselves are females. Eggs are laid on bark or on buds in the fall by wingless females after having mated with males. Eggs hatch in spring, and young nymphs develop into stem mothers that are wingless. Spirea aphid females are pear-shaped and bright yellow-green. Stem mothers reach maturity in about 20 days. Each spirea aphid female can produce up to 80 offspring or young females.



Figure 1 – Spirea Aphids Feeding on Spirea Plant



Figure 2 – Spirea Aphids Aggregation on Terminal Growth of Spirea Plant

Although the aphids produce honeydew (sticky, clear liquid); continual rainfall will wash the honeydew off plants. In the summer, both winged and non-winged aphids may be present. The winged forms usually appear when conditions become crowded on infested plants, in which they migrate to a more suitable food source, such as another spirea plant to start another colony. Heavy rainfall and strong winds will dislodge spirea aphid populations from plants onto the ground, where they eventually die. Frequent applications (twice per week) of forceful water sprays will quickly remove spirea aphid populations without disturbing

natural enemies such as parasitoids and predators. They have a number of natural enemies including: ladybird beetles, green lacewings, and hover flies that may help to regulate spirea aphid populations. Spirea aphids are, in general, exposed to regular applications of pesticides such as insecticidal soaps (potassium salts of fatty acids) and/or horticultural oils (petroleum, mineral, or neem-based) that may be effective in suppressing populations of spirea aphid. These pesticides have contact activity only, so thorough coverage of all plant parts is important. Furthermore, these pesticides are generally less harmful to natural enemies compared to conventional pesticides.

Raymond Cloyd

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Alfalfa Update

Much of the alfalfa in northcentral Kansas that could be swathed has been in the last week. The cool damp weather has kept the adult alfalfa weevils in the fields. They are congregated under windrows in the cut fields where they do a little feeding on the stems, resulting in characteristic spots of epidermis removal, called 'barking'. As these windrows are picked up there will be the characteristic striping across the fields where the windrows held back the regrowth underneath, plus provided the weevils with a protected site to continue feeding. Fields not yet swathed also have significant populations of adults but this should not impact the foliage prior to cutting.



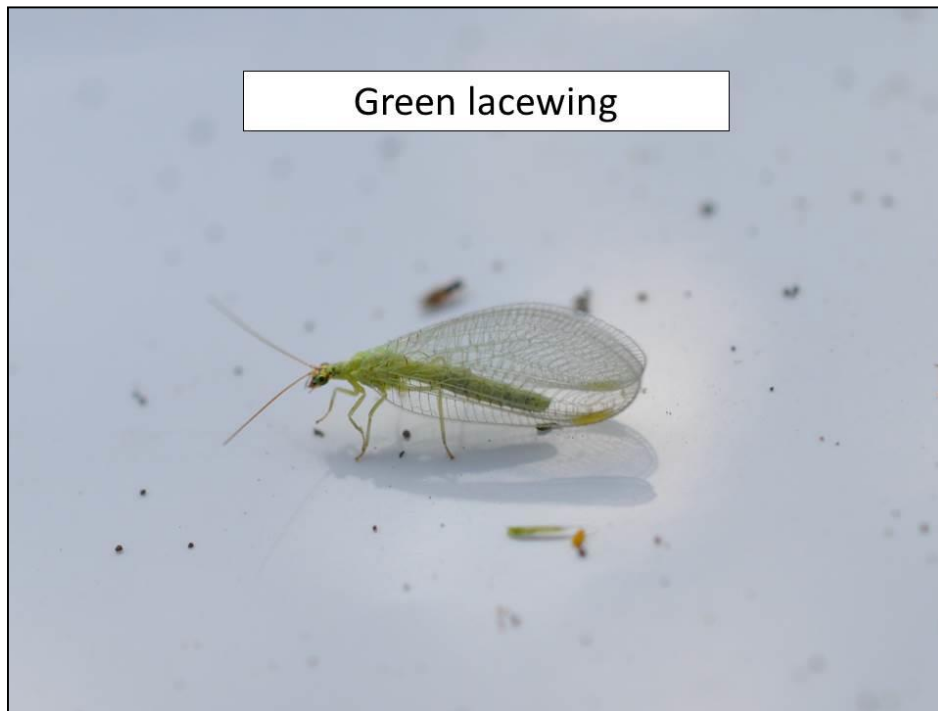
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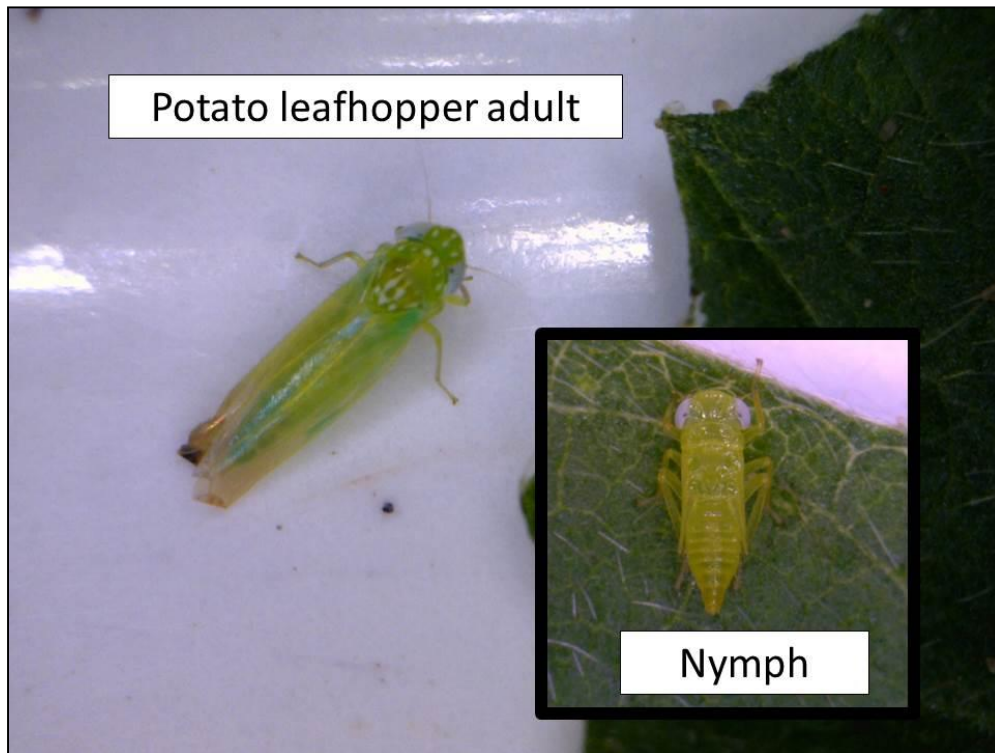


Pea aphids are also present in both cut and uncut fields, but lady beetles and green lacewings are also, so would not expect pea aphid populations to have a negative impact on alfalfa.





Potato leafhopper adults are already present in all alfalfa fields we checked over the past week. This is earlier than usual for these pests as they typically don't migrate into the state for another month, between the 2nd and 3rd cutting. Some of these populations already exceed the treatment threshold with just adults, so hatching nymphs will just increase the populations further. These potato leafhopper populations need to be monitored throughout the rest of the growing season.



Jeff Whitworth

Holly Schwarting

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Wheat Update

Aphid populations remain at minimal levels in all wheat fields monitored throughout northcentral Kansas. Lady beetle and green lacewing populations are still present in these wheat fields and therefore should prevent any aphid increases.

Jeff Whitworth

Holly Schwarting

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Insect Diagnostic Laboratory Report

<http://entomology.k-state.edu/extension/diagnostician/recent-samples.html>

Eva Zurek

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Kansas State University Agricultural Experiment Station and Cooperative Extension Service

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