



EXTENSION

Pest e-alerts



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Alfalfa Insect Update – 22 June 2020

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Blister Beetles in Alfalfa

As the official start of summer has begun, reports are filtering in concerning activity of blister beetles in alfalfa. Scouting at the Cimarron Valley Research Station in Perkins, OK (Payne County) last week, I also found several swarms of striped blister beetles (Fig. 1). In Oklahoma, after overwintering as larva, adults usually emerge May through June (fig. 2). In late summer, females lay eggs in cracks at the soil surface, eggs hatch and small larvae feed for a time, and the cycle begins again.



Figure 1. Blister beetle swarm



Figure 2. Striped blister beetle adult

Blister beetles feed on foliage and blooms of many plants including alfalfa. While minimal feeding damage can occur, the major concern with blister beetles is Cantharidin, a highly stable chemical that remains active even within the dried remains of beetles. The blistering agent is highly toxic and may cause illness or death in livestock, particularly horses, when consumed in forage. If the beetles are killed during alfalfa harvesting, as would occur when a crimper/conditioner is used for swathing, they may be baled into hay and inadvertently fed to livestock.

As producers' transition into second and third alfalfa cuttings now is the time to think about blister beetles and minimizing their risk. Several species of adult beetles are active from mid-May to October; however, striped blister beetles (most significant to alfalfa growers or buyers) generally concentrate in high numbers in June and July. An estimated 75% of the total numbers of blister beetles occurring in Oklahoma alfalfa are striped blister beetles.



Common blister beetles found in Oklahoma. L-R, Striped, Black, Gray, and Spotted.

Sampling and Control. There is no way to "guarantee" that alfalfa hay harvested is completely free of blister beetle contamination. However, several precautions can be taken to greatly reduce the chances that hay will be contaminated:

- Use hay harvested before mid-May or after early September as forage for horses. Chances of blister beetles being present at harvest is greatly reduced at these times.
- Scout fields beginning in border areas to look for "swarms" of blister beetles. Often, they will be found within 50-100 yards of the field edge but can occur anywhere in fields. If swarms are found, a short residual insecticide should be applied before cutting.
- Do not use a crimper when cutting hay intended for horses, especially during mid-summer when beetles are found most commonly. Avoid driving over windrows. If left alone, most beetles will leave the field after swathing due to lack of food source.
- Cut alfalfa in the bud stage; the presence of blooms is attractive to blister beetles and increases the likelihood of infestations.
- When small amounts of hay are being handled as when feeding small, square bales, examine hay carefully as it is fed to detect the presence of blister beetle bodies or body parts.

As there is no way to completely eliminate the possibility of blister beetles being in alfalfa, the prudent approach for management is to take all possible precautions to reduce the likelihood that they are present, particularly when marketing hay to horse owners. Additional information on blister beetles in alfalfa can be obtained from OSU Extension Facts No. F-2072 *Blister Beetles and Alfalfa*.

Disease and Insect Diagnostic Laboratory

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