



Pest e-alerts



Entomology and Plant Pathology, Oklahoma State University
127 Noble Research Center, Stillwater, OK 74078
405.744.5527

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Blister Beetle Reports On the Increase

Kelly Seuhs, Associate Extension Specialist
Department of Entomology and Plant Pathology
Oklahoma State University
127 Noble Research Center, Stillwater, OK 74078
405-744-6456

I have received several reports of blister beetles in alfalfa and other crops.

As we progress through the remaining summer months into fall, it is important for alfalfa growers to remain vigilant in their scouting for blister beetle activity. This time of year blister beetles become a major consideration to hay buyers and producers. Adult beetles are active from mid-May to October; however, they tend to concentrate in high numbers in June and July.

Life Cycle and Damage. Several species of blister beetles are common throughout eastern and southern areas of the U.S. The species found in alfalfa range from uniform black or gray in coloration to a striped pattern of alternating brown and orange colors. It is the striped blister beetle (*Epicauta occidentalis*) that most commonly forms large aggregates or "swarms" in alfalfa fields (Fig. 1).



Figure 1. Striped Blister Beetle Swarm

The blister beetles found in alfalfa complete one generation per year, which begins during late summer as females lay eggs in cracks and cavities at the soil surface. Eggs hatch and tiny, long-legged larvae called "triungulins" crawl over the soil surface in search of clusters (pods) of grasshopper eggs, which are also laid within 1-2 inches of the soil surface. Upon finding a site where grasshopper eggs have been laid, each triungulin tunnels into the egg "pod" and begins to feed. The larva continues to grow and develop while consuming the grasshopper eggs, then overwinters in the soil and emerges as an adult beetle the following May and June.

These beetles feed on foliage and blooms of many plants including alfalfa. However, it's not their feeding activity that gives them pest status. The primary problem with blister beetles is related to the toxin, cantharidin, present in the insect's body fluids. Cantharidin provides the beetles protection, but may also effect livestock health when beetles are inadvertently incorporated into baled alfalfa during harvest. When livestock, particularly horses, are fed forage containing bodies or fragments of these insects, illness or death can result. Cattle and sheep also have died from cantharidin poisoning. The biggest sub-lethal effects on ruminants have been reduced milk production and weight gains.



Growers can reduce the risk of contaminated hay by following these suggestions: Use hay harvested before midMay or after early September as forage for horses. Chances of blister beetles being present at harvest is greatly reduced at these times, carefully monitor hay before cutting, cut at 10% bloom or less, spray infested areas and/or field borders with low residual insecticides, do not use a crimper when swathing hay and do not drive over cut hay while cutting the next swath. If the crimper is removed and the windrow is straddled by subsequent tire traffic, blister beetles are allowed to crawl away from infested hay. Unfortunately, this practice greatly increases drying time for the hay.

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](#)

For recommendations on insecticide choices in alfalfa consult [OSU publication EPP 7150](#).

Disease and Insect Diagnostic Laboratory

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