

News Column
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BLISTER BEETLES

When mosquitos bite, we smash them. When flies land on our picnic, we swat them. When ticks crawl in our hair, we pick them out and flush them. And when grasshoppers eat our garden plants, we spray them. We don't just shoo them away, or try to relocate them — we want them dead!

Why? Because a dead insect can't hurt you, right?

No. That isn't always right. Dead blister beetles are just as deadly as live ones, with horses being the most sensitive and the most likely to die from consuming blister beetles.

The bodies of blister beetles contain a toxic substance called cantharidin. Horses are particularly sensitive to cantharidin, but cattle are also affected. Ruminants (cattle) might just gain weight more slowly, whereas horses could die.

Horse owners are cautious when purchasing alfalfa hay and some won't even feed alfalfa because of the risk of blister beetle contamination. Spraying to kill beetles before harvesting hay hasn't proven effective. Beetles may not fall to the ground when they die, and balers may pick some of the dead beetles and put them back in the hay even if they have fallen to the ground.

Probably the best option for horse owners wanting to feed alfalfa hay is to purchase first cutting hay, or hay put up late in the fall from a fifth cutting. Cuttings two, three, and four, harvested from mid-June through September, are the most likely to contain blister beetles.

Adult blister beetles overwinter in the soil as a pseudopupae. They emerge in early to midsummer and forage for a few weeks, mate, and then deposit eggs in the soil. Depending on

temperatures, adults emerge in June or July.

Depending on the species, beetles produce egg clusters of up to 100 eggs per capsule that usually hatch in a couple of weeks. The tiny larvae search for food in the soil, mainly grasshopper egg pods. They are predacious for the first two to four weeks of life, then become relatively inactive, losing their legs and growing a thick skin as they turn into pseudopupae for overwintering.

And the cycle continues the following June or July when they emerge as adults to contaminate the next year's alfalfa hay crop....

Knowing that blister beetles usually emerge as adults in June or July, it is logical then that the first cutting is probably free of blister beetles. In this part of Kansas we generally harvest our first cutting of alfalfa before the first of June, weather permitting.

Detecting crushed blister beetles in baled hay is not an easy thing to do, so visually inspecting hay isn't going to work. Every flake of hay would have to be examined, and then there is a possibility that the body parts fell out of the hay, but left behind body fluids (containing catharidin) contaminating the hay.

Blister beetles are gregarious in nature. Where you see a few, there are probably a lots and lots of blister beetles. It is possible for horse owners to be feeding hay, all baled from the same field, and have no problems until they get to the bale made from the hot spot in the field.

How many blister beetles does it take to kill a horse? Depending on the size and health of the horse, and the size of the beetles, it may take as few as 25 or as many as 300 or more beetles to kill a horse.

While the first cutting of alfalfa is likely the safest, there is still no guarantee hay will be free of blister beetles. Ashgray blister beetles have been detected in Kansas alfalfa fields as early

as the beginning of May. Numbers weren't large and the population didn't peak until June, but they were still there and posing a risk.

What's the bottom line? There will always be risk, but you can minimize the risk of blister beetle poisoning by feeding only first cutting alfalfa or late fifth cutting alfalfa.

If you have questions, you can reach me at the Riley County Extension Office at 785/537-6350. Or, you can send e-mail to gmcclure@ksu.edu.

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