

# Hay Beetles Cause Concern

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**F**our separate samples of live black beetles found in horse hay were received. Naturally, owners were concerned about blister beetles and the potential for toxicity to their animals. In each case, the insects were darkling beetles, they are rel-

atively common in stored grain and feed. Darkling beetles do not contain cantharidin, the defensive chemical found in blister beetles. Consumption of limited amounts of these arthropods is unlikely to pose a threat to animal health; however, if nothing is done, their numbers probably will increase dramatically over time, and may cause feed to become unpalatable or unacceptable to animals. Fortunately, the beetles will tend to leave the hay when it is put out to feed animals.

Darkling beetles are similar to blister beetles in size and shape but do not have a distinctly narrow segment between the head and abdomen; this is a key identification characteristic that separates them from many other beetles. In blister beetles (left), this segment is narrow, giving the insect a distinctive "neck". The segment behind the head of a darkling beetle (right) is as wide as or wider than the head. Darkling beetles typically hide under objects on the ground during the day. It is natural for them to accumulate under hay bales, boards, or other shelter where they can survive on seeds, plant matter, or other things that they can find. Over time, residual feed in bunks, buckets, or troughs can harbor small numbers of insects. They are most likely to occur under bins or bunks with cracks can crevices where fines can collect or on the ground around feeders.

If large numbers of beetles are found, sources of the infestation should be determined. Unfortunately, insects usually aren't noticed until

large numbers are present so a problem can be out of hand before it is recognized. The wire-worm-like larvae (mealworms) live in infested products but may be found in barns and feed rooms as they wander in search of a pupation site. This situation can be dealt with by thor-



ough sanitation. Infestations in stored bulk feed are more difficult to address, depending on the volume that is present and how quickly it will be used, and time of year. If the time frame is relatively short, it may be best to feed out the supply and thoroughly clean the storage area and surroundings before re-filling the storage units. Brooms and shop vacs need to be used to clean all accessible fines. A pyrethrin spray labeled for use in feed storage areas after clean up will help to eliminate surviving insects. Activity of most stored grain insects stops when temperatures drop below 50F, so cool temperatures can allow a longer time to use feed and clean the storage area with a minimal increase in pest numbers.

Regardless of the size of the infestation, stored feed insects will disperse to new resources. Thorough sanitation and upgrading of storage units to eliminate or seal cracks and crevices is vital to managing these insects. Then, thoroughly clean storage areas before adding new feed. Placing new feed on top of old feed is a sure way to have problems.  $\Delta$

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