Darkling/Mealworm Beetles Can Cause "Blister Beetle Scare"

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May 1, 2012 – A variety of insects and a mite can infest grass or alfalfa hay, feed grain, or processed feeds. Common species include the mealworm/darkling beetle, flour beetles, drugstore beetle, Indian meal moth, fungus beetles, weevils, and grain mites. Some feed and develop only in intact kernels; others prefer fines and cracked kernels. Fungus beetles and grain mites tend to sweet feeds or grain with excess moisture.

Many of these species are naturally present in small numbers around barns and buildings; occasionally, some arrive as accidental contaminants in feed or grain. Over time, they find spills or residual feed to use as breeding sites. Their numbers can increase dramatically in just a few months and they can disperse to other feed bunks or storage areas.

Darkling beetles are very common. They avoid light and tend to accumulate under objects on the ground. Large numbers can be found under stored hay bales or feed. As a black beetle, there is concern that it is a blister beetle. Fortunately, there is a distinct difference in appearance.

Consumption of a small amount of these arthropods probably does not pose a threat to animal health but long term infestations can lead to a significant loss of quality or condition so that the feed is rejected. Also, bringing infestations under control requires a significant amount of work. A thorough, persistent effort is needed and accomplishments may be short-lived if high standards of sanitation are not maintained.

Unfortunately, infestations in feed may not be noticed until large numbers of individuals are present. Identification of the species present, sometimes more than one, is important in developing a control strategy. In some cases, there is confusion because different life stages of the same insect are not recognized. The adult stages of most stored grain insects are "hard-shelled beetles" but they have a larval stage, too. Often this is a very small, white, worm-like creature that is not seen or thought to be unrelated.

Sanitation is the key to eliminating the problem. In addition to obvious places, infestations can linger in cracks and crevices where fines collect, or on the ground around feeders. Thorough sanitation and even correction of moisture problems are vital steps to solving current infestations and reducing chances of chronic troubles.

It is relatively easy to clean up around feeding sites but infestations in stored bulk feed are more difficult to address. Complicating factors include type of feeds that are present, volume on hand and use rate, type of storage, and time of year. If a small supply is on hand, it may be best to feed it out, and then thoroughly clean the storage area and surroundings before they are re-filled. Brooms and shop vacs need to be used to clean all accessible fines. A pyrethrins spray labeled for use in feed storage areas after cleanup will help to eliminate surviving insects. Δ

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Figure 8. Darkling beetle/mealworm beetle adult is about 3/4 inch long.

Figure 9. Blister beetle (left) with distinct "neck", the darkling beetle (right) does not have a narrow neck behind its head.

Figure 10. The wireworm-like larval stage is often called a mealworm. They can be found in accumulations of spilled feed or in bags that have been around for some time.