

F A C T S H E E T

Pest Management Office 491 College Avenue Orono, ME 04473-1295
 (207) 581-3880 1-800-287-0279 (in Maine) Fax (207) 581-3881

Grain Beetles

Bulletin #5034

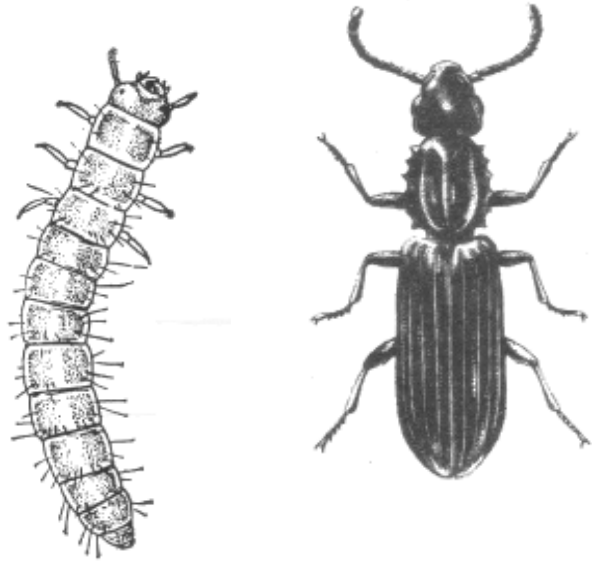
Description & Biology

Tiny sawtoothed grain beetles and the closely related merchant grain beetles are found throughout the world. These beetles attack such foods as cereals, breakfast foods, biscuit mixes, sugar, macaroni, flour, rice, dried meats, and dried fruits. They are primarily found where these dry foodstuffs are stored. Their presence in food makes it undesirable for human consumption. No diseases are associated with the insects. The beetles are unable to break or eat through hard shelled seeds such as corn, but they may be found in grain containing broken kernels or in processed cereal products.

Grain beetles are most likely to be found in foods that are stored for long periods. Food containers that are replenished without first emptying and cleaning the containers are susceptible to infestation. Cereals and flours are most likely to be infested.

The adult beetles are brown and about an 1/8" (2.5mm) long. Their flat, narrow bodies make it easy for them to enter cracks in storage areas or packaged materials. The thorax, the middle section of the beetle's body, has saw-like projections on each side. Although they have fully developed wings, the beetles rarely fly. The worm-like larva is yellowish white, with a black head and three pairs of legs. A mature larva is about 1/8".

The adult sawtoothed grain beetle female lays up to 300 eggs, singly or in small batches. The eggs hatch in about eight days. In about 37 days, after molting from two to four times, the larvae are fully mature. The pupal stage lasts about seven days. Under ideal conditions, this insect can complete its life cycle (egg to egg) in 27 to 35 days. Six generations per year are easily possible under



normal conditions. The development of the merchant grain beetle is similar but females lay only about 1/2 to 2/3 as many eggs.

Management

Sanitation

To control grain beetles and the merchant grain beetle, first try to locate the main source of infestation. Remove all dishes and food from cabinets and check for signs of insects. All insects in food should be killed before the food is discarded. Infested foods packaged or stored in paper, waxed paper, metal, and some glass containers can be placed in an oven for one hour at 135°F or in a freezer at 0°F for six days to kill all stages of the insect. After removal of the foods, vacuum thoroughly all cabinets, drawers, etc., with special attention to cracks and crevices. Always be sure that the insects in food or in the vacuum bag are killed or confined so they cannot escape to start another infestation elsewhere.

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To lessen the chances of grain beetle infestations, store food in glass, plastic or metal containers with tight fitting lids. Infested cat, dog, and bird food can be used after the hot or cold treatments.

If you find beetles in newly purchased foods, report the infestations to the place of purchase. That way the problem can be traced to its source and cleared up. Remember that the trend toward home use of raw and unground grains increases the likelihood of infestation by sawtoothed grain beetles and other pantry pests.

Insecticides

If you use an insecticide, select a ready-to-use product that is labeled for the insect and location in which you plan to use the material. Some labelled materials include cyfluthrin, permethrin, resmethrin, and tetramethrin. For beetles, do not bother to spray walls, ceilings and shelves; these insects generally prefer cracks and crevices and other undisturbed places.

Do not spray food, dishes, cooking equipment, or areas that will come in contact with food. After the pesticide has dried, cover the shelves with paper then replace utensils and uninfested foods. After about one week, you might want to spray the cracks and crevices again, especially if you are see more larvae or adult beetles.

**When Using Pesticides
ALWAYS FOLLOW
LABEL DIRECTIONS!**

**Clay A. Kirby, Insect Diagnostician
James F. Dill, Pest Management Specialist
2009**

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