



CEREAL AND PANTRY PESTS INTRODUCTION

A variety of different insects attack cereals, flour, herbs, spices, chocolate, dried fruits and similar items in our homes. A few of these insects may be present but go unnoticed. The pests are usually not noticed in the home until they become abundant.

Insects found in flour and cereal are often referred to as weevils; however, the most common insect pantry pest in Pennsylvania is the Indian meal moth. It prefers such foods as chocolate, dried fruits, bird feed, and dry dog food. A common flour, pasta and cereal pest is the saw-toothed grain beetle. Various other species of beetles are also common pantry pests and infest a wide variety of food items. Cigarette beetles and drugstore beetles are occasional pests, but they prefer dried plant materials such as herbs and spices.

How do these pests get into our food? Occasionally, some may find their way inside from outdoors; however, the majority of these pests are in food products brought into the home. The initial infestation can originate at the processing plant, the warehouse, the delivery vehicle, or the retail store (chances of becoming infested increase the longer a food item is stored at the same location).

Beetles and moths have four stages in their development: egg, larva, pupa and adult. All stages may be present in the food, but the eggs are so tiny they are seldom seen. The larval stage is most destructive, but the adult stage is most often seen.

The following thumbnail images are some of the more commonly encountered pantry pests (both common & scientific names), average size (length) of adults, and some of the foods they may be infesting.



Cigarette beetle - *Lasioderma serricorne* (2-3 mm) Food: Rice, ginger, raisins, pepper, dates, seeds, spices, dried flowers and other dried botanicals



Drugstore beetle - *Stegobium paniceum* (2.5 mm) Food: Dry pet foods, flour, meal, cereals, spices, pepper



Confused flour beetle - *Tribolium confusum* (4.5-5 mm) Food: Flour, cereals, meal



Red flour beetle - *Tribolium castaneum* (4.5 - 5 mm) Food: Flour, cereals, meal



Sawtoothed grain beetle - *Oryzaephilus surinamensis* (2.5 mm) Food: Cereals, pasta, flour, meal, nuts, cracked seeds, seed dust



Merchant grain beetle - *Oryzaephilus mercator* (2.5 mm) Food: Cereals, pasta, flour, meal, nuts, cracked seeds, seed dust



Rice weevil - *Sitophilus oryzae* (2.1 - 2.8 mm) Food: Whole grains, rice, corn, millet, rye, beans, bird seed, and caked meal



Maize weevil - *Sitophilus zeamais* (3.2 - 3.5 mm) Food: Whole grains, rice, corn, millet, rye, beans, bird seed, and caked meal



Granary weevil - *Sitophilus granarius* (3.1 - 4 mm) Food: Whole grains, rice, corn, millet, rye, beans, bird seed, and caked meal



Indian meal moth - *Plodia interpunctella* (9mm) Food: Grain and grain products, dried fruits, seeds, crackers, nuts, powdered milk, candies, dried red peppers, dry pet food, meal, cracked corn

CONTROL

The key to successful control is to find the source of infestation. Unless this is found, you will continue to see the insects. Finding insects in one area of the home does not mean the infestation is in that area. Many cereal pests can fly; therefore, you may see them in places distant from their breeding site. Pantry or stored product insects can feed on anything edible: cereals, various grains, crackers, spices, macaroni, dried fruit, chocolate, candy, nuts, dried peas or beans. Don't overlook pet foods such as bird seed, fish food, dog food and cat food.

Once you locate and eliminate all infested foods, the number of pests should decrease rapidly. Those you see will be adult beetles or moths looking for another food source in which to deposit their eggs. Store all pantry items in air-tight, hard plastic containers, jars, etc. Be sure to check cake mixes and other unopened items because they might also be infested.

Thoroughly vacuum and wash cupboards, pantry shelves, floors, etc. to remove any spilled food stuffs. Insecticide sprays are of little value in controlling pantry pests when infested materials are removed and cracks and crevices are cleaned.

WARNING

Pesticides are poisonous. Read and follow directions and safety precautions on labels. Handle carefully and store in original labeled containers out of the reach of children, pets, and livestock. Dispose of empty containers right away, in a safe manner and place. Do not contaminate forage, streams, or ponds.

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October 1998 Revised January 2013

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Issued in furtherance of Cooperative Extension Works, Acts of Congress May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture and the Pennsylvania Legislature. D. Jackson, Director of Cooperative Extension, The Pennsylvania State University.

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