

MONITORING GUIDELINES

Warehouse Beetle

Trogoderma variabile

Description

Adults: This beetle is about 1/8 inch long and is brownish black in appearance. Their elytra (hardened wings) are covered with fine hairs which can produce a mottled pattern in coloration.

Larvae: The immature form are about ¼ inch long and have a yellow white to dark brown coloured body which is covered with tufts of setae (hairs) on each body segment. There are paired patches of concentrated setae on the last four abdominal segments and usually a tuft of longer hairs at the tip.

Pupae: Pupal cases are oval in shape and hairy. Inside the pupal skin a whitish larva to blackish beetle may be visible.

Damage and Detection

This beetle and larvae can feed on a wide variety of stored foods including cereals, candy, flour, fishmeal, noodles, dried spices, nuts, dead animal carcasses, and pet foods. The larval stage prefers to hide in dark areas where food is stored, including processed and packaged foods, or in cracks and crevices where waste food has accumulated. The use of pheromone traps and inspections can determine the location and degree of infestation.

Life Cycle

This insect occurs in all life stages in warm buildings, throughout the year with two or three generations occurring each year. Females mate within one day of emerging from the pupa. Five to sixty eggs are deposited near a food site. Larvae will moult 5 or 6 times before pupating. The life cycle is completed in approximately 35 days. Larvae rarely move from the site of egg laying if sufficient food is available.

Lure

BULLET LURE® Contains sex pheromone to attract male beetles. Effective duration of attraction is 6-8 weeks.
BIO-LURE.® Contains sex pheromone to attract male beetles. Effective duration of attraction is 6-8 weeks.

Lure Storage

Keep unopened foil pouches in cool storage (less than 60° F) or place in freezer for extended storage. Lures can remain frozen for up to 12 months to retain their full effectiveness for use afterwards. Shelf life of lures at room temperatures is 6 months.

Trap Designs used with Lure

No Survivor Traps® are diamond shaped sticky traps designed to be hung.
Flat traps are low profile flat rectangular sticky traps that can be placed on level surfaces.

Trap Placement Techniques

Timing - Traps can be placed year round but should be in greater numbers during the warmer months.

Density - It is recommended that traps be placed near materials susceptible to attack at one per every 20 feet. In large warehouses traps may be placed every 30 feet apart.

Location - Place hanging traps at just above eye height in rooms or warehouses where food is stored. Stealth traps can be placed inside drawers, under or above cabinets, inside cupboards and more confined spaces where hanging traps cannot fit.

Trap and Lure Maintenance

Traps must be replaced when filled with beetles or become dusty. Traps may remain sticky for many months. Lures must be replaced every 6-8 weeks. The old lure should be removed from the trap. Trapped beetles should be recorded regularly on a separate monitoring Data Sheet to determine trapping trends.

Expectations and Interpretations

1 beetle per trap per week -- Inspection of materials susceptible to attack should be carried out.
3-5 beetles/ trap per week -- Serious damage is likely on a single product or location in the area of the trap.
10 + beetles/trap per week -- Serious wide spread damage has occurred to food products in the storage area.

Important Notes:

Large numbers of beetles require other means of control and management to eradicate infestations. Traps may catch sufficient number of males to prevent females from becoming fertile. Female beetles however, may actively fly around and not be attracted to the traps.