

MONITORING GUIDE

Red Flour Beetle & Confused Flour Beetle

Tribolium castaneum & *Tribolium confusum*

Red Flour Beetle



Confused Flour Beetle



Suggested Traps

Detector Trap



Product No. 2050223

Window Trap



Product No. 2050221

PC Floor Trap



Product No. 2050226F

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GENERAL INFORMATION

The insect Family - *Tenebrionidae*, consists of about 15000 different species, which are found throughout the tropical and temperate regions of the world. Fortunately only a few of this insect family are important in stored foodstuff areas and of those, the two most common are the Red and Confused Flour Beetles. Both insects are considered an international pest of stored cereals, nuts, spices, coffee, dried fruits and cocoa, and can cause considerable financial losses in storage areas.

These two insects are only found in domestic or stored product premises and not in the wild, which indicates that they have evolved in a situation created by humans over a relatively long period of time, and have therefore become very well adapted to it.

LIFE HISTORY

The *Tribolium spp.* have one of the highest rates of population increase in storage product areas, with the females laying between 2-11 eggs per day for 2 months. The larval stage lasts 2 - 3 weeks and after a short pupation period, the emerging adults feed continuously and mate frequently for the following 6 months.

TRAP PLACEMENT

The adults are winged and can fly well, so initial trapping should be fairly intensive in suspected food storage and processing areas, with traps placed every 5 - 10 metres. These traps can be of various types and can be baited with a pheromone lure or a food attractant, but regular inspections must be made to record the trapcatch. (See monitoring guide [#1902-20](#) 'An Overview of Traps and Attractants for Storage and Grain Beetles')

Cannibalism is a factor that helps to control the levels of these two *Tribolium* insects, and there is often competition between them, and although *T. confusum* thrives better under cooler conditions, it is usually less successful than *T. castaneum*.

The aggregation pheromone should be replaced in the traps every 6 weeks to ensure a constant rate of attraction.

Monitoring should continue throughout the year once infestations are found in a storage building, but improved hygiene and sanitation are essential in order to keep the populations under control.