



Flour Beetles

Insect pests are relatively common in stores foods. Although unpleasant they do not cause damage to our homes (i.e. they do not burrow into cupboards etc) and they do not carry diseases. Usually if you find you have a problem the solution is straight forward:

- **Find the food with has the problem and discard it**
- **Thoroughly clean the area, and protect other foods**

This leaflet tells you a little more about common insect pest found in cereals and flour.

Common Pests

CONFUSED FLOUR BEETLE (*Tribolium confusum*)

Adult elongate 2.6 – 4.4 mm in length; colour, reddish-brown; antennae with loose, indistinct, 5 or 6 segmented club which may be lacking; slightly ridge evident above each eye.



RUST-RED FLOUR BEETLE (*Tribolium castaneum*)

Adult elongate, 2.3 – 4.4 mm in length; colour, reddish-brown; antennae with distinct, 3 –segmented club at tip; no ridge present above each eye.

Other species

DARK FLOUR BEETLE (*Tribolium destructor*)

Adult elongate, 4.5 – 5.75 mm long; colour, black or very dark brown

SMALL-EYED FLOUR BEETLE (*Palorus ratzeburgii*)

Adult elongate, 2.4 – 3 mm long; eyes small and round; antennae with no well marked club.

LONG-HEADED FLOUR BEETLE (*Latheticus oryzae*)

Adult elongate, 2.75 – 3 mm long; colour pale yellow; antennae with compact 5 – segmented club.

BROAD-HORNED FLOUR BEETLE (*Gnathocerus cornutus*)

Adult elongate, 3.5 – 4.9 mm long; male with conspicuously enlarged, toothed mandibles, broader at the base than near apex

SLENDER-HORNED FLOUR BEETLE (*Gnathocerus maxillosus*)

Adult elongate, 3 – 4 mm long; male with conspicuously enlarged, toothless mandibles, slender and in curved.

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Where are they found?

Flour beetles may be found throughout the U.K. The two most common species in the U.K are the **Confused flour beetle**, which is commonly encountered in bakeries and flour mills, and frequently imported **Rust-red flour beetle**. Both are serious pests of cereal products, including grain, flour porridge oats and rice bran.

Other products which may be effected are oil seed, oil cake, nuts, dried fruit, spices, chocolate – even bones and other animal products. The beetles are not cold hardy so they will only over winter in heated premises. They are active insects which will seek cover if disturbed and, because they are so small, can exploit the smallest crevice. They are a particular problem in machinery where cereal and other food residues accumulate.

Their Importance

When present in large numbers, flour beetles will:

- Cause flour to become prone to moulding and will also turn the product grey;
- Taint commodities with secretions from scent glands.

Life Cycle

Up to 450 eggs are laid singly at a rate of 2 – 10 per day, depending on temperature. The white eggs are sticky and rapidly become coated with food particles and other debris. At 22 – 27 °C they hatch in 46 – 14 days. The larvae are white tinged with yellow and pass through 5 – 11 moults before reaching a full grown length of 5 mm. This process takes 3 – 9 weeks. They are initially white, but gradually darken in colour prior to adult emergence after 9 – 17 days. Adults feed on the same food as the larvae and live for 15 – 20 months. There may be five generations per year.

Control

(a) Hygiene/management – 10 tips

1. Check foods regularly and take action at the first signs of an infestation
2. Infested food should be thrown away – take it out of your home straight away and put it in your wheelie bin
3. Try not to purchase damaged packs
4. Use foods within their '*Use By*' or '*Best Before*' dates.
5. Use food boxes with snap top lids, or bags which have clips or ties to prevent insects passing from one food to another
6. Clean out containers before refilling with fresh stocks
7. Spilt food should be removed regularly and cracks and crevices brushed or vacuumed to remove food debris
8. Try not to stockpile too much cereal and flour
9. Keep foods cool and dry.
10. Keep cupboards well ventilated. Dampness can make the problem worse.

(b) Insecticidal control

Chemical controls are available, but are not usually necessary. Usually cleaning and discarding affected foods will suffice.

Services from Us

The Borough Councils Pest Control Service can assist with pest identification and treatment. You should ensure that the effected areas has been thoroughly cleaned and contaminated foods discarded

- To request our help please call **01782 742590** during office hours or see our website.
- Our current charges are detailed on our website at www.newcastle-staffs.gov.uk , or available by calling our Customer Services Team on 01782 742590
- Some landlords may pay this charge on your behalf if you live in rented accommodation.
- Our waiting times are typically 3-5 working days.

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