



ENTFACT - 135

INSECT PESTS OF STORED GRAIN: FLOUR BEETLES

Confused Flour Beetle--*Tribolium confusum*

Red Flour Beetle--*Tribolium castaneum*

(Coleoptera: Tenebrionidae)

Doug Johnson, Extension Entomologist

Flour beetles, often called “bran bugs”, are probably the most common stored grain insect pests in Kentucky. They are common throughout the state.

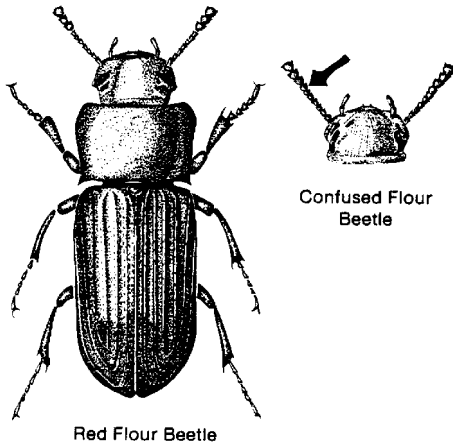
The red flour beetle head margins are nearly continuous with no ridge.

Full grown larvae are less than 0.3 inch long, yellow-white worms. The head and the pair of projections on the tip of the abdomen are dark.

FLOUR BEETLES

Confused Flour Beetle—*Tribolium confusum*
(duVal)

Red Flour Beetle—*Tribolium castaneum* (Herbst)



Damage—Flour beetles are secondary pests, which means that they feed on dust, fines and dockage. While both species cause damage by feeding, they are more important as contaminants. Large numbers of dead bodies, cast skins and fecal pellets, as well as liquids (quinones), can give grain an extremely pungent odor.

Description—Both beetles are red-brown and about 0.1 inch long. They are very similar in appearance, but can be distinguished by the shape of the club on their antennae. The club or last segments of the antenna of the confused flour beetle gradually enlarge toward the tip. The last few segments of the red flour beetle's antennae increase abruptly in size. In addition, the head margins of the confused flour beetle are enlarged and notched at the eye with a ridge over the eye.

Biology—Under favorable conditions, a female may lay 400 or more eggs at a rate of 6 to 12 per day. The eggs are covered with a sticky fluid which allows particles of debris to adhere to them resulting in almost perfect camouflage. There are generally four larval stages; the egg to adult life cycle takes about 30 days.

Prevention is always the most economic and efficient method of controlling these pests. Once they are distributed within the grain mass, the grain must be moved and sprayed as it is being moved, or fumigated in the bin to relieve the problem. Removal of fines and dockage will aid in control and prevention.

For specific insecticide recommendations for individual crops see:

- Corn, Field - Insecticides for Corn, ENT-16
- Corn, Pop - Insecticide Recommendations for Pop Corn - ENT-62
- Sorghum - Insecticide Recommendations for Sorghum (Milo) - ENT-24
- Soybean - Insecticide Recommendations for Soybeans - ENT-13
- Wheat - Insecticide Recommendations for Small Grains - ENT-47

These publications are available at your county extension office or view them on line at [http](http://)

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