

# Flour Beetles

## A CAROLINA™ CareSheet

### Care and handling

Although the flour beetle (*Tribolium*) can survive on a number of finely ground grains, we recommend a medium of 4 parts white flour, 4 parts whole wheat flour, and 1 part brewer's yeast.

A 1-gal jar with a cloth top makes a suitable rearing container. About 20 to 50 adults placed in the jar  $\frac{1}{4}$  to  $\frac{1}{2}$  full of medium will produce a large culture. Keep humidity at 70%. If conditions are dry, add a small slice of potato or lettuce, replacing when it shrivels or molds.

Since a female flour beetle may live for a year or more and lay 400 to 500 eggs, a culture can quickly become overpopulated. Check the population in the culture each month and set up new cultures if overcrowding occurs (the jar contains more than 50 adults). Flour beetles are cannibalistic—adults will eat eggs, while larvae will feed on eggs, pupae, and other larvae. Overcrowding in a culture increases cannibalism.

Additionally, overcrowding aids in the transmission of a protozoan parasite, *Adelina tribolii*. If present, *A. tribolii* will reduce colony vigor and can kill the colony. Beetles under stress often produce a gas containing certain quinines that can cause the appearance of aberrant forms of *Tribolium* and, again, can kill the colony.

### FAQ's

#### *How large are flour beetles?*

They are about 4 mm (1/8") long.

#### *Are flour beetles harmful?*

They cannot sting or bite, and they do not damage wood or cloth. They do, however, cause damage to milled grains, especially wheat flour, which is why you should never release them.

#### *What are flour beetles used for?*

Research. They have been the model organism of choice for many population studies.

**Problems?** We hope not, but if so contact us. We want you to have a good experience.

**Orders and replacements:** 1-800-334-5551 then select Customer Service

**Technical Support and Questions:** [caresheets@carolina.com](mailto:caresheets@carolina.com)

