

## Indian Meal Moths

The Indian Meal Moth, *plodia interpunctella*, is a moth that has an approximate 5/8 inch wing span. It is distinctively marked; the outer two thirds of the forewings are red brown with a copper luster and the inner portion whitish gray. The very distinct coloration sets it apart from other stored product moths.

Each female moth lays one hundred to three hundred eggs on food material. The eggs hatch within a few days and dirty white or cream colored larvae emerge (although sometimes the larvae have a pink or green tinge). The larva is usually about ½ inch long. The larvae spin a silken cocoon in the vicinity of their food source. The silken webbing is very noticeable in infested bags and boxes, especially at the closures of the packaging. The larval period has been observed to last from 13 to 288 days depending on food, humidity and temperature. In one study the complete life cycle was observed to be 25 days at 86°F.

The Indian Meal Moth will feed on a wide variety of food materials. It has been found in various milled grains (not usually whole kernels) and grain products, chocolate powder, seeds, nuts, graham crackers with a preference for dried fruits. The grain materials it prefers are coarse milled such as whole wheat, graham flour and corn meal. In supermarkets and homes bird seed and dried fruits such as raisins are often sources of infestation. In food processing plants, dried fruits are often found as a source but because of its cosmopolitan nature any of the food mentioned previously could serve as a point of infestation. Careful inspection of food facilities often with the aid of pheromone traps can be helpful in pinpointing the source of an infestation.

Food processing plants and warehouses can use pheromone traps to monitor areas. These devices are very effective in attracting and capturing these insects. The traps need to be checked on a regular basis, at least every two weeks in warm weather. If any insects are caught, they need to be counted. The trap count, date and location should be recorded. If there are large numbers in a trap, more traps should be added to the area to form a grid. The monitoring frequency should be increased in response to increased number of moths. It is sometimes possible to locate the source of infestation by reducing the area of the grid; as traps close in on the source the number of insects caught will go increase. The traps themselves need to be replaced at least every ninety days. ULV space treatments of 3% pyrethrin are helpful in control of the exposed life stages. However, these treatments are not the entire answer as careful inspection, use of traps, good rotation of ingredients and finished goods are integral parts of any Integrated Pest Management program.