

Granary Weevil- *Sitophilus granarius* Maize Weevil- *Sitophilus zeamais* Rice Weevil- *Sitophilus oryzae*



Characteristics

Granary Weevil: This weevil is slightly large (4.8 mm) than the other two weevils. It is black brown in coloring although it can be red-brown shortly after adult emergence. If you examine the thorax closely you can see longitudinal punctures. Adults cannot fly.

Maize Weevil: This weevil also has small distinct colored spots on the forewings, and punctures on the thorax, including the midline. Adults can fly.

Rice Weevil: This weevil has small round pits on the surface of the thorax , four red to yellow markings on the forewings, and is able to fly. It is approximately 3 mm long. Granary / Maize / Rice Weevil

Diet :

Weevils can be found infesting a variety of grain and food materials. They attack all cereal grains, however are most often found in corn, paddy, oats, barley, and wheat. They cannot breed in finely processed grain but will readily breed in manufactured products such as macaroni, noodles and milled cereals that have become caked from excessive moisture.

Biology:

Eighty to 200 eggs are deposited on the outside of the kernel, grooves or holes made by other insects and the larvae bore into the kernel. The larva remains inside the kernel until adult emergence. The number of eggs is dependent on food, season, or temperature. Two or three larvae may develop on kernel of corn, but from other grains only one adult can be produced. There are three larval molts. The last larval instar usually spins a silken cocoon within the feeding cavity. The pupal case can be reddish brown to nearly black, depending on age. Adults emerge through a small round hole in the kernel. Upon adult emergence, females move to a surface above the food to release the sex pheromone. Males are attracted to this pheromone for mating. Development time from egg to adult varies with temperature from 30 days at 30°C and 40 days at 25°C . Minimum temperature / RH for development is 16°C /30% Rh ; optimum is 30°C / 75% Rh and the maximum is 36°C . Adults are generally short lived (about 7 days) and are non-feeding. Like many moths the peak time for flight activity is dusk. Females alight on grain and are simulated to oviposit. Air that has passed through the grain, especially grain that has some mold growth, acts as an attractant.