

MINT ROOT BORER *Lepidoptera: Pyralidae Fumibotys fumalis*

DESCRIPTION

The forewings of **adults** are fawn to chocolate-brown, marked with darker lines, with a wingspan of about 22 mm. The hind wings are tan or gray. Adults are commonly called "snout moths" because of the enlarged labial palpi that project forward from the front of the head. **Larvae** are cream or yellow-tan with a reddish-brown head and about 15 mm long when mature. **Eggs** are nearly transparent to white, oval, and flattened. The color of the eggs changes to a greenish-brown when about to hatch.

ECONOMIC IMPORTANCE

Mint root borer feeds in underground rhizomes of mint killing the plants or seriously weakening the stand. Damage resulting from feeding injury in the fall weakens mint stands, which overwinter poorly and regrow slowly in the spring. Damaged fields often have spotty stands in the spring. Spring flaming for rust control further weakens the planting.

DISTRIBUTION AND LIFE HISTORY

Mint root borer is found wherever mint is grown in the northwest. Mint root borer overwinters as a prepupa within an earthen cell 2 to 4 cm below the soil surface. Pupation occurs within the cell during April and early May. Adult emergence begins in June and early July, continuing through the summer until early August. Peak emergence occurs during July. Females deposit eggs that resemble tiny scales along the leaf veins on both lower and upper surfaces. Eggs hatch in five to 10 days, and first-stage larvae feed on the leaf surface for one to two days before dropping to the soil surface to tunnel into rhizomes at the bases of buds. Larvae feed for 70 to 80 days during August, September, and early October. They emerge from rhizomes and construct earthen cells in October in which to overwinter. There is one generation each year.

MANAGEMENT AND CONTROL

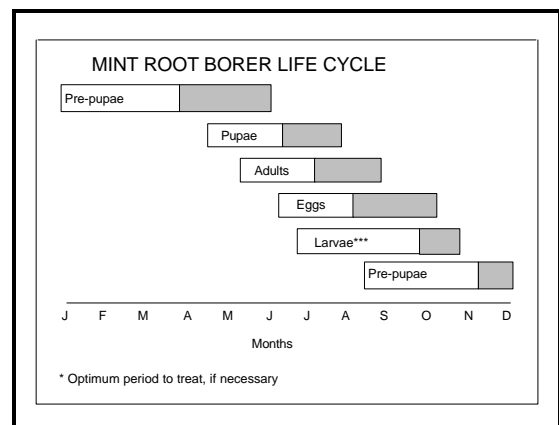
Inspect fields during the growing season when adults are active. A sex pheromone is available to monitor adult emergence. Place at least two pheromone traps in the field and count the number of adult males captured each week. No threshold has been set for pheromone trap catches, but they may serve as indicators of potential infestations and may be used



Mint root borer mature larva.



Mint root borer adult.



to time treatments for larvae. Larvae can be sampled by taking square foot soil samples in August, September and early October. Take at least two samples every 2 to 3 acres. Take a minimum of 25 samples per field at several different sites. Samples may be screened in the field or larvae may be recovered in Berlese funnels in the laboratory. Treatment is justified if an average of two to three larvae is found per sample. If justified, insecticides can be used after harvest to reduce larval populations or parasitic nematodes can be injected through irrigation at 2 billion infective juveniles per acre. Tillage, performed after mint root borer enters the overwintering stage in the fall or before adults emerge in early June, is an effective method of control. Plowing and double disking or strip tillage both provide adequate control of mint root borer.

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