



# CALIFORNIA STRAWBERRY ADVISORY BOARD

UNDER AUTHORITY OF THE DIRECTOR OF AGRICULTURE, STATE OF CALIFORNIA

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## STRAWBERRY NEWS BULLETIN

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### THE STRAWBERRY CROWN MOTH

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The strawberry crown moth (crown borer) which occurs in most strawberry growing areas is usually not very abundant, but on occasions may almost completely destroy entire strawberry fields. In addition to strawberries it also attacks blackberries and raspberries.

The crown moth, like many of the root feeding pests, causes strawberry plants to wilt and die rapidly in both the fall and spring of the year. Nevertheless, damage caused by the crown moth is easily distinguishable. In the first place, since the larvae arise from eggs laid singly by a flying moth, injured plants occur sporadically throughout a field. Since the resulting larvae do not move from plant to plant, injured plants are often found immediately adjacent to healthy plants. This is in direct contrast to the root feeding insects whose damage nearly always occurs in circular expanding areas.

Unlike the root feeding insects crown moth larvae do not feed on the roots, but instead feed entirely inside the crown of the plant. The larvae by the time they have finished development completely hollow out the crown so that it is packed with small brown pellets of excrement.

The adult moths are predominately black, with yellow stripes on their bodies and legs. These moths are often compared to yellow jackets because of their clear wings and general body shape. The larvae when full grown are almost an inch long. They have a brown head and a white or pinkish body which is distinctly segmented. Crown moth larvae can easily be distinguished from the weevils by their elongate shape and distinct legs.

Adult moths emerge from strawberry crowns in June and July. They may be seen resting on the foliage or flying erratically about the field close to the ground. Soon after emergence egg laying begins. The brown, flat eggs are laid singly on the undersides of the leaves near the crown of the plant. The eggs hatch in about 10 days and the larvae immediately crawl down to the crown and burrow into the wood. Rather extensive tunneling is done before the larvae form thin silken cocoons in which they spend the winter. Feeding is resumed in the spring and continues until pupation takes place in May or June. The larvae pupate within the crown of the plant after spinning a second silken cocoon.

Control of the crown moth is very difficult. The moths fly in June and July when it is impractical to use most insecticides because they will leave a residue on the fruit. Once the larvae enter the crown they remain there for about eleven months, where it is almost impossible to contact them with an insecticide. Numerous materials have been tried as drenches over the crowns of infested plants, but in all cases little or no control has been obtained, even though some have been highly toxic systemic materials.

Methyl bromide fumigation as carried out for cyclamen mite control will give good control of crown moth larvae. Seldom, if ever, would it be practical to fumigate for crown moth control alone, however, at times it might be desirable to modify the time of the cyclamen mite fumigation so that the crown moth would also be controlled. This would involve delaying mid season fumigation until after the flight in June and July.

In most cases the crown moth can be kept under control by pulling and destroying plants that show damage. Since the larvae remain within the same plant for most of the year it is quite easy to destroy them before they emerge in June and July. After infested plants are removed they can be immediately replaced without danger of further injury.

Since rouging of infested plants helps greatly in keeping the crown moth under control, build-up is usually limited in areas where strawberry fields are well attended. On the other hand, if a field is allowed to become run down or is left unattended without being disced out, it can become a source of infestation for all of the surrounding fields. When fields are known to be heavily infested with the crown moth a serious effort should be made to destroy unproductive portions of the fields prior to emergence of the moths in June. This can usually be done in a practical manner, for fields can be left until after the first crop has been harvested.

**NOTICE: STRAWBERRY ACREAGE SURVEY:** We have been informed that to date over 50% of the strawberry growers have returned their acreage questionnaire. This is very commendable. However, we strongly urge those of you who have not yet returned your questionnaire to do so right away. This will reduce the time and expense in accounting for the acreage of non-respondents during the field portion of the survey in mid-March. The survey is being conducted by the California Crop Reporting Service in cooperation with the County Agricultural Commissioners.

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