

ORGANIC CONTROL OF SWEET CORN EARWORM

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Central Coast Family Farm Report, August 1989

Corn earworm (CEW) is a serious pest of sweet corn that requires some control measures to have saleable ears. Control measures range from cutting the infected tips off to spraying 2-4 times with synthetic insecticides during silking. Several options work, and how you intend to market your sweet corn will determine which system you choose. If you are selling to marketing outlets that are not concerned whether a synthetic pesticide is used, then the available registered pesticides can be used with proven success. However, if you sell to the organic or pesticide-free market, then the situation is not so clear cut, and CEW control becomes a matter of matching wits with both the worm and the demands of the consumers.

Besides cutting the ends off of the ears, there are some promising means of controlling CEW for the organic or pesticide-free market:

1. Mineral oil injected into the corn ear tip just after pollination. This technique is probably too labor-intensive for most commercial applications.
2. Use of *Bacillus thuringiensis* (Bt) materials. This microbial disease of CEW has been shown in several tests to offer, on the average, about 75% clean ears. One study conducted by a Fresno State University student, James Leap, showed that applications every two days during the silking period, for a total of five applications, were needed to achieve this level of control. Jim compared the Bt material with Sevin dust, which gave 91% clean ears. Good coverage of the silks with the Bt material is essential, as the newly-hatched worm must eat some of the Bt before entering the ear. [If you would like a complete copy of Jim's study, call Dr. Mark Mayes at (209) 294-2150 for a copy of the California Agricultural Technology Institute Newsletter.]
3. Use of botanical insecticides. Ryania dust has shown some promise in a study conducted last summer; however, rates and efficacy are still not well known. Rotenone and pyrethrums have not been shown to be effective against CEW due to their rapid degradation in sunlight.