

# California uses wasps in battle against apple moths

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California agricultural officials will release hundreds of tiny, stinger-less wasps this month to combat the fruit- and leaf-eating light-brown apple moth, in a move to find alternatives to aerial pesticide spraying.

The California Department of Food and Agriculture will deploy the [wasps](#), no bigger than a grain of rice, in San Luis Obispo and Sacramento counties and may expand the program to other counties with more serious infestations. The wasps lay their eggs inside [light-brown apple moth](#) eggs, where they incubate until the larvae emerge and kill the developing moths.

"These tiny wasps are harmless to people and pets, but they have a big appetite for the eggs of light-brown apple moths," said California [Agriculture Secretary](#) Karen Ross. She added that the "[integrated pest management](#) approach" minimizes detrimental effects.

The new, nontoxic approach comes after environmental groups took issue with the agency in 2007. The agency attempted to eradicate apple moths in Monterey and Santa Cruz by quarantining crops and spraying a pheromone mixture without first conducting an environmental impact report. Hundreds of people reported falling ill, and environmental groups successfully fought the method in court. Since then, the agency has moved from trying to eradicate the species to controlling its population, but critics say the moth was never a threat in the first place.

"Using wasps may be a preferable solution in a situation where crops are

going to be devastated," said Nan Wishner of California Health Initiative, "but the insect hasn't been a threat."

A 2010 state environmental impact report confirms that there have been "no published studies of crop damages," but Steve Lyle, a spokesman for the Department of Food and Agriculture, said the [apple moth](#) has "caused a small amount of damage to California crops and plants and may have the potential to cause much more." The agency's preventive measures stem from apple moth infestations that damaged crops in Australia, where the moth originates, and New Zealand.

Although the apple moth's population in California is small, Lyle said, the agency is working to keep it under control. "If we waited for damage, it would be too late," Lyle said. "The hope is that there is never much damage."

Tom Kelly, a California Health Initiative member, says the apple moth has long been in California, where farmers have fought it the same way they fight the native leaf-rolling moth. "Farmers deal with them day in and day out, but we don't spend tens of millions of dollars on an eradication program," Kelly said.

The group says the state goes after the moths because the U.S. Department of Agriculture labeled the insect a pest in the 1950s. To assure trading partners that California produce isn't a host to moth eggs, the state is required to eradicate the bug from crops.

International trading involves highly complex partnerships among the USDA, county agricultural commissioners, the agriculture industry and homeowners, Lyle said. "Any major changes to the current model, which serves us well, would require many years of scientific inquiry," Lyle said. "So theoretically, even if we decided tomorrow to adopt the proposals of the coalition, there are many other pieces in the puzzle that

would have to concur, and that would take a long time."

Environmental groups submitted two petitions to the USDA to take the apple moth off its list of pests, but the USDA so far has declined.

Wishner said the agency is misconstruing the apple moth, and warned that introducing wasps may create more problems. "Any intervention in an ecosystem has a consequence," she said.

Wishner said the wasps don't discriminate among eggs and could kill other insect larvae, including those of beneficial insects, such as butterflies and insects that birds eat. The wasp may also attract its own predators.

"Whoever likes to eat the wasps will rush over to the area where the wasps are released," Wishner said. "But once the wasps die out after their short lifespan, the predators will still be hanging around."

Lyle said wasps are not being released in areas with endangered butterfly populations. "They have a short lifespan and limited mobility, and with releases intended for just six sections of the state of 50 acres or less, they will have limited opportunity to cause problems," he said.

Wishner recommends planting pest-repelling plants near crops, using netting, or physically removing insect egg sacs. The agency says it uses these types of methods, but they are following the suggestions of a team of advisory scientists with apple moth experience.

In Sacramento and San Luis Obispo counties, crews will place small cards with the wasp pupae on outdoor plants in the infested neighborhoods. Residents will be contacted by crews as the wasp cards are placed. "If somebody had a serious reservation, we'd talk with them to see how we could work with them," Lyle said.

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