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Exciting New Advances to Fight Apple Moth

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When a pest like the light brown apple moth comes along—a pest that threatens not only crops but forests, habitat and landscapes—The California Department of Food and Agriculture (CDFA) and our colleagues in public service are called upon to eradicate the infestation using the safest, most effective tools available. When we began this eradication effort more than a year ago, aerial pheromone treatments were the clear choice, and they remain a remarkably progressive option.

Behind the scenes, CDFA and USDA scientists are always hard at work looking beyond current circumstances and developing tools to eradicate not only the light brown apple moth, but many other invasive species. I'm proud to announce that these diligent scientists have made exciting advances in a program that will add another safe eradication method to our toolbox.

In early 2007, we sought the advice of an international panel of scientists who are apple moth experts, and they advised us to begin emergency eradication efforts using the pheromone treatments—but they also advised a substantial investment in adapting the “sterile insect technique” (SIT) for use against this pest.

SIT eradicates an infestation by releasing large quantities of sterilized, infertile insects so that the wild population cannot reproduce. SIT has been successful for more than 30 years in California and around the globe against a variety of insects; indeed, it was the alternative that ended California's use of aerial Malathion treatments against the Mediterranean fruit fly.

Raising a captive insect colony and adapting SIT to the new pest are technically and biologically complex tasks, so we were advised that this work could take several years to bear fruit. Fortunately, our scientists have surprised us with a breakthrough—we now plan to begin releasing the sterile moths in early 2009.

Before 2007, this pest had never been detected in California before—or anywhere in the continental U.S., for that matter. But the speed and frequency of international commerce and personal travel have brought with them an increased threat that invasive pests, diseases and other organisms will arrive on our shores. The apple moth threatens not just crops but more than 2000 kinds of plants found in our forests, our landscaping and our natural habitats. It's a serious pest that we need to eradicate, and SIT will help us achieve that goal.

SIT is the central element of our updated eradication plan. Aerial pheromone treatments will still be an option in more limited, non-urban settings (such as densely forested areas), but these treatments will not proceed until all of the environmental reviews are completed. Other tools, such as pheromone-infused twist ties and organic-approved pesticides, will also continue to be necessary due to the varying densities of local infestations and other factors.

Farmers, as stewards of the land, should always seek the most environmentally friendly pest control methods available. Those who do should be proud of the way they feed their community and their world. As part of the larger organic movement and the push toward more sustainable farming, our agricultural community is steadily replacing many of the past century's chemical pesticides with alternatives that are vastly superior for the environment—and still get the job done. Sterile insect releases are on the leading edge of that progression, and we are fortunate to have this alternative available to fight the light brown apple moth infestation in our Bay Area and Central Coast communities.

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