Plan to eradicate moth in California causing controversy

July 14 2009, By Donna Jones

An effort to eradicate the light brown apple moth by introducing sterile males into the population is doomed to failure and will waste millions of taxpayer dollars.

That's according to UC Santa Cruz Arboretum Director Daniel Harder and UC Davis entomologist James Carey.

Carey and Harder are making their case in advance of a test of the eradication project planned for August on three square miles on vineyards in Napa and Sonoma (Calif.) counties.

"Honestly, it's a waste of money," said Harder, who initially worried about the potential damage to the arboretum's diverse plant collection when the moth was discovered in California in 2007, but came to believe the pest's rapacious reputation was overrated.

U.S. Department of Agriculture spokesman Lawrence Hawkins said to criticize the program before the planned test is jumping the gun. The test will provide data for the decision about whether it's worth moving forward, he said.

Scientists on the USDA's Light Brown Apple Moth Technical Working Group are the experts on the insect, he said.

"If they didn't feel it would work, if they didn't feel it was appropriate, we wouldn't still be pursuing it," Hawkins said.

State and federal agriculture officials pinned their hopes for eradication of the invasive pest from Australia on the sterile insect technique after losing a court battle over aerial spraying in Santa Cruz County. The idea is to deploy millions of sterile male moths to interfere with reproduction. USDA is breeding the sterile insects at a facility in Moss Landing, Calif.

Harder and Carey don't believe it will work, claiming:

• Of 12 moth species on which sterile insect research has been conducted, control occurred in only three species and eradication in none.

• The level of radiation needed to sterilize the males will reduce their ability to compete for mates and will prevent sperm transfer, which will result in females who mate with them continuing to seek mates.

• LBAM is a poor candidate for the technology because of its small size, fragility, continuous breeding, multiple matings, rearing difficulties, a 250-plant host range and widespread distribution in the state.

Further, Harder and Carey criticize the test as having inadequate measurement tools and controls, which will make results scientifically suspect.

Carey, an expert on the Mediterranean fruit fly, said while the light brown apple moth is too entrenched in the state to eradicate, it can be controlled by pest management methods already used on similar species.

"Even conceding that (the LBAM infestation) is serious, and I don't, you have to pick your battles. This one can't be for eradication," Carey said.

Hawkins disputed the assertions that form the basis of Harder and Carey's argument, though he couldn't provide more direct responses

pending feedback from USDA scientists. But he said even if it turns out the moth can't be eradicated with sterile insects, the technology could possibly be used to control it.

"Any chance we can deal with this pest without more pesticides ... that's got my vote," Hawkins said.

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