

Scientific review finds flaws in USDA apple moth research

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WATSONVILLE -- The U.S. Department of Agriculture had the authority to mandate quarantine and eradication programs for the light brown apple moth, but its reasoning for doing so was in part "not based on sound science," according to a independent review by a scientific panel.

The report by the National Academy of Sciences' National Research Council, released Monday, questions the USDA Animal and Plant Health Inspection Service's predictions of the moth's potential spread and the level of economic damage it could cause and recommends the agency use "more robust science" to back up its claims.

The panel reviewed the USDA's response to petitions from private citizens and groups seeking to downgrade the threat status of invasive pest from Australia and end quarantine and eradication programs in favor of strategies to control the moth.

"Overall, the committee found that the federal Animal and Plant Health Inspection Service response would greatly benefit from the use of more robust science to support its position," chair May Berenbaum writes in the introduction to the 31-page report.

In a written statement APHIS administrator Cindy Smith said the agency would use the panel's analysis to strengthen its response to the petitions and that the revised response would be posted for public comment in coming weeks before the agency made a decision on reclassifying the moth.

"The information we provided was perhaps not as well documented as they would

have liked, but it was sufficient for that pest to be listed as a quarantined pest," said APHIS spokesman Larry Hawkins.

But UC Arboretum Director Dan Harder, who co-wrote one the two petitions with Soquel herbalist Roy Upton, said the report amounted to a "pretty strong rebuke" of the USDA.

"They have the mandate, but there's a lot of buts," Harder said. "The report constantly reiterates the lack of real science."

Upton said the USDA is required by law to base its decisions on sound science. But he doesn't think the USDA will back down because the emergency eradication program brings in "too much

funding."

"I really believe the next step is a lawsuit against USDA," Upton said.

Since the moth was first detected in a Berkeley backyard in 2006, more than 150,000 light brown apple moths have been trapped in the state, two-thirds in Santa Cruz and San Francisco counties. More than 23,000 moths had been found in Santa Cruz County so far this year. Close to 3,500 square miles have been quarantined, requiring inspection of vegetables, fruits, flowers and plants to confirm they are pest-free before shipment outside the area.

In June, state agriculture officials reported damage to blackberries in a field near Watsonville, the first actual crop damage reported in California.

Federal and state agriculture officials launched an aggressive campaign from the start in hopes of eradicating the moth before it became entrenched. But aerial spraying of a pheromone over urban areas of Santa Cruz and Monterey counties sparked outrage and lawsuits.

The current strategy, under environmental review prior to implementation, relies heavily on releasing millions of sterile male moths to reduce moth reproduction.

KEY FINDINGS

The National Academy of Sciences reviewed U.S. Department of Agriculture arguments in support of maintaining the light brown apple moth as a reportable/actionable invasive pest and found: 'The biological data presented ... to support the invasive nature of LBAM, its history in California and its potential geographic distribution in the United States are problematic and in some cases not based on sound, rigorous science.'

Sufficient information is not available to determine the true age of the LBAM invasion in California. For example, unpublished genetic analysis of LBAM by the USDA Animal and Plant Health Inspection Service, APHIS, points to multiple introductions in California over an unknown period of time.

Predictions of geographic spread, and the economic analyses based on them, are questionable and 'in need of a reassessment with a more rigorous approach.'

The available literature does not provide 'compelling evidence' to support claim that LBAM is an important threat to forests.

'It is debatable' whether the APHIS has met two of the most important criteria for successful eradication programs: early detection and public support. 'APHIS may be well advised to reconsider the available alternatives.'

APHIS is within its broad regulatory authority to classify California's invasive Light Brown Apple Moth as an 'actionable' pest.

