

Malaysia releases lab mosquitoes to fight dengue

January 26 2011, By JULIA ZAPPEI , Associated Press

(AP) -- Malaysia released about 6,000 genetically modified mosquitoes into a forest in the first experiment of its kind in Asia aimed at curbing dengue fever, officials said Wednesday.

The field test is meant to pave the way for the use of genetically engineered *Aedes aegypti* male mosquitoes to mate with females and produce no offspring or ones with shorter lives, thus curtailing the mosquito population. Only female *Aedes aegypti* mosquitoes spread dengue fever, which killed 134 people in Malaysia last year.

A similar trial in the Cayman Islands last year - the first time genetically modified mosquitoes have been set loose in the wild after years of laboratory experiments and hypothetical calculations - resulted in a dramatic drop in the mosquito population in a small area studied by researchers.

The plan has sparked criticism by some Malaysian environmentalists, who fear it might have unforeseen consequences, such as the inadvertent creation of uncontrollable mutated mosquitoes. Critics also say such plans could leave a vacuum in the ecosystem that is then filled by another [insect species](#), potentially introducing new diseases.

Government authorities have tried to allay the concerns by saying they are conducting small-scale research and will not rush into any widespread release of mosquitoes.

The Malaysian government-run Institute for Medical Research said it released about 6,000 sterile male lab mosquitoes in an uninhabited forest area in eastern Malaysia on Dec. 21. Another 6,000 wild male *Aedes aegypti* mosquitoes were also placed in the area for scientific comparison, it said in a statement.

The institute provided few details of the experiment, but said it was "successfully" concluded Jan. 5, and that all the mosquitoes were killed with [insecticide](#). It said it is not planning to release any more mosquitoes until it analyzes the results.

It was the first such trial in Asia, an official in the Ministry of Natural Resources and Environment said on condition of anonymity because he was not authorized to make public statements.

Duane Gubler, a professor specializing in infectious diseases at Singapore's Duke-NUS Graduate Medical School who was not involved with the research, said the plan is likely to be effective in fighting dengue if it is combined with other biological control methods.

"We need new tools. Nothing we've done in the past 40 years has had an impact" on dengue, Gubler told the AP.

Using genetically altered sterile male insects against fruit flies and other flies that cause damage in cattle has been successful in places like the United States, Gubler said. He added that environmentalists should not be concerned, because the genetically modified mosquitoes would die quickly.

In the Cayman Islands, genetically altered sterile male mosquitoes were also set loose by scientists in a 40-acre (16-hectare) region between May and October last year. By August, mosquito numbers in that area dropped by 80 percent compared with a neighboring area where no

sterile mosquitoes were released.

Malaysian Prime Minister Najib Razak said last year the project was an "innovative" way to fight dengue after a lack of success in campaigns urging Malaysians to keep neighborhoods free of stagnant water where [mosquitoes](#) can breed.

The number of dengue-linked deaths in Malaysia increased 52 percent last year from 88 in 2009. The total dengue infections rose 11 percent from 2009 to more than 46,000 cases last year.

Dengue fever is common in Asia and Latin America. Symptoms include high fever, joint pains and nausea, but in severe cases, it can lead to internal bleeding, circulatory shutdown and death. There is no known cure or vaccine.

©2010 The Associated Press. All rights reserved. This material may not be published, broadcast, rewritten or redistributed.

Citation: Malaysia releases lab mosquitoes to fight dengue (2011, January 26) retrieved 25 April 2024 from <https://phys.org/news/2011-01-malaysia-lab-mosquitoes-dengue.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--