

**ASEANplus**

Thailand yesterday launched sterilised mosquitoes (*Aedes aegypti*) in the world's first open-environment trial of a new method to control mosquito-borne diseases. >> **3A**

# Sterilised mosquitoes released

MANY FOREIGN COUNTRIES INTERESTED IN GROUNDBREAKING RESEARCH BY MAHIDOL SCIENTISTS

**PRATCH RUJIVANAROM**  
THE NATION

Thailand yesterday launched sterilised mosquitoes (*Aedes aegypti*) in the world's first open-environment trial of a new method to control mosquito-borne diseases.

The experiment in Chachoengsao marked Asean Dengue Day.

Dengue is a serious health threat in tropical countries, especially the Asean region. Since New Year in Thailand, 18,337 patients were hospitalised with dengue and there were 16 deaths.

However, research by Mahidol

University's Centre of Excellence for Vectors and Vector-Borne Diseases, has resulted in what it sees as a new mosquito-control method.

It distributes sterilised mosquitoes to naturally reduce the mosquito population, aiming at fighting mosquito-borne diseases such as yellow fever, dengue, chikungunya, and zika.

Dr Pattamaporn Kittayapong, leading researcher at the centre, said this was the world's first project using sterilised mosquitoes in a trial in an open environment. If the experiment is a success, it will be a turning point for mosquito-borne-disease control.

"The trial period is three months long and we will release 100 sterilised male mosquitoes per house in Ban Nongsatit Village in Chachoengsao's Plangyao district once a week. Then we will monitor the change in mosquito population," Pattamaporn explained.

"The sterilised male mosquitoes that we released will mate with female mosquitoes, which are the vector for the diseases. After that, the females' eggs will be

unfertilised so they cannot reproduce. The result will be the mosquito population will decline without any impact on other mosquito species or the environment."

For the sterilising method, the mosquitoes were injected with two strains of bacteria from the garden mosquito, which make them unable to transmit the virus. Then researchers select male mosquitoes to irradiate with mild levels of radiation to sterilise them. [The procedure] can control the mosquito population without any environmental harm.

"This is the safest way to control the mosquito population and reduce the disease infection. There is no genetic modification at all during the process and the

released mosquitoes will also die within three weeks without reproducing the new strain of mosquito," she said.

She disclosed that if the trial were successful, the university would inform the World Health Organisation and consult with them about introducing this new mosquito-control method to



Sterilised mosquitoes, developed by Mahidol University, are being released in an attempt to control the mosquito population. It is the first trial in an open environment at Ban Nongsatit School in Chachoengsao province.

NATION/JELLAPIT ONLAMOON

dengue hot spot areas. Some countries such as Singapore and Brazil have contacted the university to learn about this technology, she said.

Dr Vu Sinh Num, senior expert in Vector Borne Diseases and Training of the Vietnamese Health Ministry, congratulated Thailand on reaching the successful research to this level. He said he was interested to learn the techniques to adapt to the Vietnamese mosquito-borne diseases prevention programme.

"We also have our own research about modified mosquitoes that cannot transmit viruses and we have a slightly differ-

ent idea from Thailand, so it is very interesting to learn from the Thai programme to develop our research," Num said.

Dr Somphon Sulapee from the Lao Diseases Control Department said the Thai project to sterilise mosquitoes could also be an example for Lao mosquito sterilising by using radiation as well.

"Lao has just started research into this kind of mosquito control and I think this experiment will be successful and be a good example for the Lao project to learn from," Somphon said.