Device targets mosquitoes with deadly nectar

May 6 2009, By GREG BLUESTEIN , Associated Press Writer

(AP) -- The ProVector Bt may not look too much like a real flower, but the artificial device sports bright, finely tuned colors and sweet nectar that can lure and kill mosquitoes that potentially carry diseases.

The ProVector uses sugar, chemicals and a biopesticide called Bacillus thuringiensis to attract and kill the bugs. The insects feed on the deadly nectar through a metal screen on the artificial flower.

Results are so far encouraging. Studies conducted by a Walter Reed Army Institute of Research laboratory found the contraption killed half to all of the insects it attracted within days.

Georgia Southern University professor Thomas Kollars, a former U.S. Army entomologist stationed in southeast Asia, began the project 11 years ago after pondering over the shortcomings with traditional, pesticides-based approaches to fighting mosquitoes.

"Why don't we feed an anti-malarial right to a mosquito?" he wondered.

Kollars concluded the best way to do so was target their food source, as mosquitoes feed on sugar sources 10 times more often than blood. He also had to find a way to use Bt, a pesticide that has long been used to kill mosquito larvae, to strike down mature adults.

He spent years developing a deadly concoction that mosquitoes would actually eat.

Almost as challenging was finding a color scheme that could attract the different species of mosquito that carry the deadly diseases.

The malaria-carrying anopheles species, for example, is attracted to red and black while the culex species - which carries the West Nile virus - likes gold and yellow. But the colors had to be precise.

"I had to be an artist," said Kollars. "We had to get the exact wavelength, because the flowers look a certain way to mosquitoes."

He ultimately came up with a six-color scheme - black, white, red, green, yellow and blue - aimed at attracting an array of the pests.

Kollars is now looking to market the devices where mosquito-borne illnesses thrive. He said the ultimate design is expected to cost between $7 and $10.

Although the ProVector alone won't halt a disease that has been waging war on humanity for centuries, Kollars hopes it could at least slow down the disease cycle.

"One man can't defeat mosquitoes," he said. "They have killed more people than all wars combined. But I can start being part of the team that defeats them."

On the Net:

http://www.georgiasouthern.edu