

Studies into snails and ant larvae win Thais prizes at top science research contest in the US

Studies into the effect of Siamese snails on rubber plants and the nutritional quality of weaver ant larvae by Thai students in science research projects won Grand Awards last week in this year's Intel International Science and Engineering Fair (ISEF), a major pre-college science research competition.

Both projects won second place in Animal Science categories, and the Thai researchers involved will receive US\$1,500 (about Bt47,000) for each project.

The effect of Siamese snail mucus on natural rubber was studied by Nattapong Chinnara, Jatuporn Chawepak and Nantakan Longlod from Surat Pittaya School in Surat Thani.

And the effect of food types on quantity and nutritional quality of weaver ant larvae was studied by Kitthanaet Thanaroungrochthawee of Kanthararom School in Si Sa Ket province.

Nattapong, who worked on the snail/rubber project, said: "I was so excited that we won the award because I saw a lot of other outstanding research by foreign students. So, it proved one thing: If we try our best, we will accomplish. And the award proved [our] success."

His colleague Jatuporn said he thought the reason their research won the award was because it was related to a local issue in their hometown - Surat Thani - and it showed uniqueness.

"We all are from rubber-farming families in Surat Thani. We tried to look into a problem they have and to solve it. Now, they know that snails are an enemy of the rubber farmers and they know how to cope with the problem," Nantakan said.

The study showed that Siamese snails consume fresh rubber latex at tapping sites and their mucus leads to faster coagulation of fresh latex, thus reducing the amount of latex that farmers can collect.

Nattapong said that their work could be developed or studied more in the future as the results also found that snails' mucus contains proteinase enzyme, which could digest an allergy protein in rubber.

"Instead of killing the snails, we suggested farmers to remove snails from plantations and distil their mucus so it

can be developed for the rubber industry," Nattapong said.

Kitthanaet, the other winner, who studied weaver ant larvae, said he was glad and very excited.

"I could not hear anything after they announced my name," he said. He thought his research won the award

because it was a new and creative idea.

"Several judges wondered how I could think about the topic because it was strange. They seemed amazed. They did not know about the ant larvae before. Moreover, the judges may think the project will benefit local people, communities and the environment as

well," he explained. A student from Si Sa Ket, Kitthanaet said he chose the topic because weaver ant larvae are normally collected and commercialised as a popular delicacy, with an expensive price in northeastern Thailand.

"Ant larvae is my favourite dish and a popular food in the Northeast of Thailand. They consume it as an alternative food," Kitthanaet said.

His results found that the larvae have higher protein than fresh cow's milk. He suggested promotion of weaver ant farming, as his research proved that ants prefer to eat crickets. Although a mixture of rice, crickets and fish yields the highest quantity of larvae without a decrease in nutritional value, compared to other food types.

The exotic taste of weaver ant larvae could be commercially promoted as an international delicacy, he believed.

"I want local people to use my discovery to [help] produce more ant larvae to increase their income, and help them to solve poverty problems and promote the quality of their lives," he said.

Moreover, he found that the ant larvae contain amino and formic acid,

which could produce alternative medicine and have a cosmetic use.

This year, nine Thai students presented their research on five projects to panels of esteemed judges, as well as the public, at a week-long fair held in Pittsburgh, Pennsylvania, in the United States.

The ISEF competition attracted more than 1,600 of the world's most promising young scientists and innovators. They were selected from more than 550 qualifying science fairs held around the globe, which involved more than 65,000 participants.

Each of the nine students earned top honours at local and regional competitions before being selected as finalists at the US fair. The scholarships and awards in this competition are valued at more than US\$4 million (Bt125.4 million).

The ISEF is funded jointly by Intel and the Intel Foundation. It has additional awards and support from dozens of other corporate, academic, governmental and science-focused organisations.

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FROM LEFT: Jatuporn Chawepak, Nattapong Chinnara, Nantakan Longlod, and Kitthanaet Thanaroungrochthawee at the Intel International Science and Engineering Fair in Pittsburgh, Pennsylvania.