

Thai firm claims plant vaccine first



The plant fed with vaccine (left) shows better growth. Green Innovative Biotechnology expects large-scale production of the new vaccine in two years. (Photo by Yuthana Praiwan)

After half a decade of research, Green Innovative Biotechnology Co (GIB) has succeeded in creating the first vaccine in the world to protect plants from diseases, bugs and unfavourable weather.

The product is expected to be gradually developed from a small business to large-scale production over two years.

Dr Karsidete Teeranitayatar, chief of innovation and the founder, said the original vaccine was a kind of polysaccharide extracted from the shells of crab and shrimp, the licence for which the company bought from Chulalongkorn University in 2007.

"The original vaccine only prevented orchids from being destroyed by fungi but still lacked the ability to protect plants from other diseases and bugs, so we needed to do a lot more research," he said.

Being a veterinarian, Dr Karsidete and his brother, who graduated with a degree in science, examined the original substance using R&D services provided by the National Science and Technology Development Agency (NSTDA).

In 2008, GIB set up a research work station at Thailand Science Park in Pathum Thani province, coordinating with many subsidiaries and researchers at the NSTDA.

After years of hard work, GIB finally created a vaccine — commercially called BIG — that not only makes plants immune to diseases but also enhances crop productivity.

"It can enhance the fragrance of Hom Mali rice and basil," Dr Karsidete said.

BIG went through several field tests on major Thai commodities including rice, rubber, palm oil, cassava, corn and sugar cane.

The team also conducted field tests on vegetables and fruit and got good results.

The product can also be used to make some plants produce their fruit unseasonally, Dr Karsidete said.

"Though our research was successful, we initially launched the product under the Aom Sin brand and failed to penetrate the local market, as growers and traders were not familiar with it and had no brand loyalty," he said.

GIB found more success and prominence by entering an innovation contest last year, Thailand's National Innovation Award, winning a silver medal.

That led to BIG being noticed and tested by many agricultural traders including Malaysia's Geomico Sdn Bhd.

This prominence pushed GIB to enter international contests, winning a silver medal from South Korea and a special award from Taiwan. In April, it won a gold medal from the 43rd Geneva International Exhibition, known as the Olympic Games of innovation. GIB also won a grand prix award from Romania's Technical University of Cluj-Napoca.

GIB recently signed a contract with Geomico to be its sales agent in southern China's for two years, targeting sales of 70 million baht in the first year.

The company projects sales growth of 66% to 100 million baht this year, with annual sales expected to exceed 200 million baht in 2017.

Geomico director Lim Jit Soun said his company had conducted field tests in four provinces in southern China the past three years and found the product could kill diseases in plants.

