



**PARTNER COUNTRIES:** Thailand, Vietnam  
**PROJECT:** Integrated control of mango insect pests using green ants as a key element (CP/1997/079)  
**DESCRIPTION:** To keep mango pests under control, old technology is being reintroduced, but with adaptive research to improve it  
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# FEISTY ANTS GUARD MANGOES

For some farmers in Vietnam, making the move from growing rice to fruit has depended on keeping forest ants happy

BY BRAD COLLIS

Six years ago, says Huynh Van Lai, life was, quite simply, very, very hard. “We barely existed,” he says, reflectively. The reason was that he and his family, like many thousands of others in South Vietnam’s Mekong Delta, were among the remnant subsistence rice-growers, just eking out a traditional existence.

Not everyone had become part of the

Mr Van Lai’s farm covers just 2000 square metres, which illustrates the difference that a comparatively high-value retail crop makes.

He says he would not have survived the tough years when he was establishing his trees if it was not for the support, encouragement and knowledge being offered by agricultural extension staff from Vietnam’s Southern Fruit Research Institute (SOFRI).

His experience of the hard years has

separate, otherwise Mr Van Lai says they fight and excrete formic acid, which leaves black marks on the fruit.

“To start with I hang chicken or duck intestines from the trees and, once the ants seem to be settling in, I gradually reduce this to force them to start hunting for the insects I want them to control,” he says. “It takes patience, but if it means I don’t have to use pesticides it saves me a lot of money



Mekong Delta farmer Mr Huynh Van Lai with his income-generating mangoes that he protects with armies of green ants.

(Far left) The green ants use wire bridges to move from tree to tree, reducing territorial conflicts between colonies on the ground.

PHOTOS: BRAD COLLIS

modern new rice-growing regime being developed as a vibrant export industry.

Instead, the plan was for farmers like Mr Van Lai to be assisted out of rice and into a new industry, fruit growing, to break the poverty cycle and to meet the steadily increasing demands for fresh fruit in expanding urban populations.

The transition for Mr Van Lai began 10 years ago, but the first four years were the hardest because rice land had to be set aside for the new fruit trees, which were yet to bear fruit. The first crop—in Mr Van Lai’s case, mangoes—was finally harvested six years ago and the change in his circumstances since then has been extraordinary.

“Our income has multiplied by six times, we have built a new house and bought a motorbike,” he says. “We are now enjoying modern living.”

made him a keen advocate of new farming systems and his farm has become a model for the use of integrated pest management. Instead of pesticides, Mr Van Lai uses green tree ants (also known as weaver ants)—fierce predators of caterpillars and black ants, which damage mangoes when they are flowering.

This has been part of an ACIAR-supported project run by SOFRI, Charles Darwin University, the Prince of Songkla University in Thailand and the Department of Agricultural Extension of Thailand.

The green tree ants are forest creatures and have to be brought into the orchard. In Mr Van Lai’s case, they are fed with chicken and duck offal to encourage them to stay and colonise the mango trees. It is a tricky business because they will return to the forest if they are not kept happy.

Different groups also have to be kept

and my fruit will be acceptable to the larger supermarkets.”

Across the project generally, yield and fruit quality in orchards that use weaver ants and some environmentally friendly chemicals have proved to be similar or better than orchards using chemical insecticides. In a parallel program in the Northern Territory, profits from orchards that have abundant weaver ants have been increased by more than 70%.

To stabilise weaver ant populations in mango orchards, research has shown it is best to mix mango trees with other tree crops such as citrus. If mango orchards are a monoculture, the ants need to be fed when the trees are dormant and pest insect levels are too low to sustain the ant colonies.

Mr Van Lai has planted oranges to help with the insect mix—a preferable option to draping offal over his trees. ◀