

Charcoal, compost, *mokusaku*

Going green in La Trinidad



Project manager Yoichiro Kawasaki (right) with Isaac Lauran and wife

From the mountain peaks at night, farming villages in the valley town of La Trinidad, in the mountainous northern province of Benguet, might appear as little scatterings of lights.

Dozens of greenhouses — small, makeshift, with sheer plastic roofs and walls — are kept lighted to slacken chrysanthemum blooms, so their stems can grow longer and they will fetch better prices.

In his greenhouse, La Trinidad native Westmoore Martini keeps some of his farm implements and inputs, including the *mokusaku* that he has made.

Taken from traditional Chinese technology, *mokusaku* is one of the means by which organic farming is getting a boost in La Trinidad, the Philippines' northern vegetable and cut-flower capital.

Mokusaku, also known as “wood vinegar”, is pyroligneous acid, a pesticide and insect repellent from the liquid that comes from water-

cooling wood smoke. The equipment used is simple and the technology, ingenious.

The smoke comes from making charcoal out of wood waste, for inserting into soil. Charcoal pores provide spaces for air, moisture, and microorganisms that become sources of nutrients.

A third, more commonly known input is compost, continuous application of which enriches the soil, increases moisture and improves water absorption.

Compost, charcoal, and *mokusaku* are made in a Japanese-funded facility in La Trinidad, applying technologies introduced by Masaki Yokomori, who uses them in his own eight-hectare organic vegetable farm in Japan.

Mr. Yokomori is chief adviser of the Japan Agriculture Exchange Council (JAEC), a non-governmental organization whose pilot project in organic farming in La Trinidad is supported by JICA.

Constantly propagating the organic technologies is his good friend, JAEC project manager Yoichiro Kawasaki, who refers to them as “safe vegetable production through enriched soil.”

JAEC trainees have come to La Trinidad from all over the Philippines, Mr. Kawasaki says.

For young farmers in La Trinidad, with JICA funding, JAEC has provided training in basic farming techniques in Japan. It sent 10 of them in 2008 and 14 in 2009, and will send 17 in 2010.

Westmoore went through such training with JAEC. “I learned a lot,” he says.

About *mokusaku*, composting, and charcoal insertion, he learned from Mr. Kawasaki in La Trinidad.

In his 1,500-square-meter farm, Westmoore has found that use of compost cuts his need for commercial fertilizer by as much as 50 percent, and with *mokusaku* mixed in, his use of commercial pesticide, which is quite expensive, is down to the minimum required.

Mr. Kawasaki describes Westmoore as one of his two best learners.

The other is Isaac Lauran, the first farmer in La Trinidad to use the technologies.

Isaac started composting in 2006 on a small portion of his 8,000-square-meter field, which that year he planted with Chinese cabbage.

The Chinese cabbages grew in size, from between 1.0 and 1.5 kilograms in the past, to between 2.0 and 2.5 kilograms.

Isaac subsequently began making his own compost and used it on more and more of the farm. As compost takes time to make and cannot be stored, he could do it only part by part, until 2009 when he applied compost on the whole farm.

Mokusaku Isaac began using in 2008, spraying it on chrysanthemums. He sprayed the whole farm, mixing *mokusaku* and commercial pesticide 50-50, thereby slashing his pesticide cost. The chrysanthemums grew in length — from mostly medium, with some long and some short, to mostly long and extra long.

The benefits of the technologies spread by word-of-mouth at first. Today the La Trinidad town government is promoting the technologies.

Seventy-five farmers in La Trinidad now use *mokusaku*, says Fely Ticbaen, the town agriculturist. About 500 have trained in its production and use, and plan to use it, she adds.

On average, Fely says, farmers' outputs have risen by 20 percent and their use of commercial pesticide has decreased by at least 20 percent.

The town government sells the compost, charcoal and *mokusaku* from its facility to farmers at cost, after training them in its use. Fely says it plans to enlarge the facility to make the undertaking more sustainable.

The JICA-aided JAEC project in La Trinidad, programmed for three years through to March 2010, is being expanded with a new, two-year project to spread its benefits throughout Benguet, as requested by the seven other towns of the province, says Fely.

Even the neighboring provinces have shown interest in La Trinidad's organic farming, as has a farmer group from the southern island of Mindanao that heard about it during a visit to a nearby resort city, she adds.

The La Trinidad project “has touched off many other activities,” Mr. Kawasaki observes. “There is a possibility of going widespread.”



Westmoore Martini sprays his farm with *mokusaku*.