

Malaysia's drive towards sustainable agriculture

A public-private partnership promoting the recycling of empty pesticide containers aims to educate farmers and plantation companies on socially and environmentally responsible farming practices.



From left to right: Salasah Elias, Senior Manager of the Sustainability Department at Kulim; farmers Tang Song Yeoh of Tringkap Floriculture and Lim Jew Ming.

Amid lush tracts of palm oil trees at Malaysia's Kulim Plantations in Johore, rows of empty pesticide containers are stored away in barns. The used containers, earmarked for recycling into items such as planter pots and door frames, have been punctured and marked with red paint to show that they have been rinsed three times, a responsible industry practice. Every container is accounted for. The objective: sustainable palm oil production.

In collaboration with the Malaysian CropLife and Public Health Association (MCPA) and Malaysia's Department of Agriculture, Kulim is Malaysia's first plantation company to launch a Pesticide Stewardship Program in September 2007, whereby collection of used pesticides containers is scheduled quarterly.

The public-private sector initiative targets pesticide users including plantation companies and small farmers, with the aim of protecting the environment through the recycling of used pesticide containers in a socially responsible manner. Used pesticide containers are regarded as scheduled waste under Malaysian legislation and subjected to stringent standards for disposal.

The recycling of used high-density polyethylene (HDPE) pesticide containers under the National Recycling Program was made possible when the Department of Environment issued a letter to the Pesticides Board of the Department of Agriculture exempting pesticide containers that have been rinsed three times from being classified as scheduled waste.

"Plantations participating in the National Recycling Program have the option to recycle instead of sending used pesticide containers for incineration, which would have been extremely costly," said MCPA Executive Director Chooi Lam Khong.

Kulim, through its subsidiary EPA Management Sdn Bhd, manages 29 oil palm estates in Malaysia's Johore state. Driven by a mandate by its Board, the company formally embarked on a sustainable development program in early 2007. Kulim embraces the principle of sustainable development and defines it as encompassing social responsibility, resources stewardship, appropriate environmental control and the capacity to produce efficiently.

Besides recycling HDPE pesticide containers, the company implements Good Agricultural Practices, including the responsible use of pesticides, Integrated Pest Management and conservation tillage. Kulim is a member of the Roundtable on Sustainable Palm Oil (RSPO) – a not-for-profit organization that develops and implements global standards for sustainable palm oil production.

Because of the program, Kulim has trimmed its operation costs as a result of savings from the disposal of scheduled waste. "It's a win-win situation for the company and all our stakeholders," said Salasah Elias, Senior Manager of the Sustainability Department at Kulim.

"The program allows us to work with an appointed contractor who is willing to collect the containers from the estates at no charge. Besides playing a part in environmental conservation, we are able to reduce disposal costs in the process," she added.

Kulim's designated contractor collects the triple-rinsed containers quarterly. They are crushed and processed into pellets for making products such as planter pots, seedling trays and door frames. Salasah estimated that if the used containers were sent for disposal instead of recycling, it would cost each Kulim-managed estate RM5,000 (US\$1,400) annually. This works out to total annual savings of US\$40,000 for 29 estates.

"We send about a quarter of the containers for recycling while the remainder is used by workers to carry pesticide premixes to the field," Salasah said. "We target zero waste for pesticide containers and are also committed to upholding RSPO standards for sustainable palm oil production.

"This includes full ground coverage to prevent soil erosion, reducing pesticide use and other ways to conserve natural resources," she added.

In 2008, Kulim recycled 6.1 tons of used pesticide containers. Between January and August of 2009, the company has recycled 2.8 tons and the quantity in the 12 months ending December 2009 is expected to be 6.1 tons, Salasah said.



Recycling used pesticide containers to useful products such as planter pots.

Recycling: A perspective from small businesses and growers

Cameron Highlands in Malaysia's Pahang state is a key producer of fruit, vegetables, flowers and tea. In 2003, the highlands' vegetable farmers were part of a pilot project on the Recycling of Used HDPE Containers. The initial success of the project spurred the Department of Agriculture to subsequently launch a National Recycling Program in 2006. Thanks to the efforts of the MCPA and the government, more of Cameron Highland's farmers understand the importance of sustainable farming.

However, more needs to be done to generate greater awareness among small growers as the initiative is in danger of losing momentum due to a lack of incentives for small growers, said Chua Boon Hock, a pesticide dealer with Cameron Far East.

"I would say that about 20 percent of farmers in Cameron Highlands actively recycle their used pesticide containers," Chua said. "The project was highly successful in the early days and when the price of oil was high. Now that oil prices have fallen, recycling companies and farmers seem to be gradually losing interest in recycling."

Tang Song Yeoh, who manages family-owned Tringkap Floriculture and has participated in the MCPA's training workshops on Good Agricultural Practices, knows about the importance of recycling. The 38-year-old farmer who grows flowers and vegetables locally and for export on his 5-hectare farm, has in turn trained his workers to triple rinse the containers before selling them to recyclers. About 2 kilos worth of containers are recycled monthly, he said.

For Lim Jew Ming who grows corn, cabbage and French beans on a 1-hectare farm in Cameron Highlands, recycling pesticide containers is an effective way of keeping the environment clean. Like Tang's, his farm hands help to triple rinse the used containers before selling them to recyclers.

"In the past, the river near my farm used to be choked with pesticide containers," he recalled. "It's cleaner these days and the overall environment is better."

Going forward, the partnership that is comprised of the Department of Agriculture, MCPA and the Malaysia Plant Protection Society plans to expand the recycling initiative in Cameron Highlands in 2009 and beyond. The partners will work closely with dealers in cascading the recycling message to farmers and enhance outreach with publicity materials in multiple languages such as Mandarin, Bahasa and English, MCPA's Chooi said.

About CropLife Asia:

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