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 (MCAPA) 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 MCAPA 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, Salash said.

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