

INSIGHT

Toxic COCKTAILS

Despite two years of attention to the problem, farming communities are still falling ill from poisonous pesticides



Above, Kumpan Louwongsri prepares a natural pesticide for his organic farm in the northeastern village of Dorn Daeng.

By Lim Li Min

Farmer Kittipong peels back his shirt to reveal an ugly mass of sores; some ooze pus, others are red and engorged. The orange farmer, who works in Mae Ai, Chiang Mai, has an illness that area doctors have no name for. "My head hurts. It still hurts. And I feel dizzy. I have a fever. I feel cold for a while and then I feel hot. My eyes lose focus and I must sit down," he says, wiping his rheumy eyes.

Kittipong, who has asked that his real name not be used for fear of reprisals by the big industrial farmers in his village, may not understand his symptoms. But as for what caused them, environmental activists are pointing to a cocktail of pesticides that he and many other farmers in the area regularly use. Mixed largely by uneducated farmers who disregard the manufacturers' instructions, Kittipong is one of many Chiang Mai residents interviewed in Teena Amrit Gill's documentary, *Orange Alert*. Since her film was completed in 2003, Gill says, conditions there are worse than ever, with toxic chemicals leaking into water supplies.

In Chiang Mai, orange farms are becoming increasingly sealed off to outsiders. Armed guards watch over the orchards, which are staffed by Shan Burmese, who now do most of the spraying. Because they are mostly illegally hired, little is known about the conditions under which they work. During the course of making her documentary, Gill had to conduct interviews on the sly, with the help of local campaigners, fleeing the scene when they thought they were spotted.

Jutamart Jaikham, a researcher with the Health Systems Research Institute, a health-policy think tank, says orange farmers in Chiang Mai routinely use pesticides and herbicides such as paraquat, malathion and aldicarb. The World Health Organization (WHO) classifies many of these chemicals as highly or extremely hazardous. Made by American, Asian and European companies, some of these products are

banned in their countries of origin and in Thailand, yet are smuggled in anyway. In addition to using imported pesticides, Thailand also produces its own under different brand names. Some of these pesticides are formulated illegally and sold by unregistered traders.

Environmental groups maintain that government legislation concerning the use of dangerous pesticides is inadequately enforced.

"They are just concerned about food safety...because it affects consumers. Unfortunately the health implications [for the farmers] are secondary," says Sarojeni Vengam, of the Pesticide Action Network Asia-Pacific. They also contend that the measures taken to counter pesticide poisoning by multinational companies and smaller businesses are inadequate, a charge that the corporations deny.

Thailand is a signatory to the 1998 Rotterdam Convention, which aims to protect humans and the environment from certain hazardous chemicals. Having come into force in 2004, the convention lists 44 pesticides commonly used in Thailand that might pose "unacceptable risks." Nineteen more are prohibited, and 23 require a permit to use, manufacture or export.

Even so, this country is among the biggest producers and consumers of pesticides in the region, says Piao Yongfan, a plant protection officer with the United Nations Food and Agriculture Organization (FAO). Thailand spends more on pesticides than any other country in Southeast Asia, with annual sales of US\$247 million. In Indonesia, pesticides may only be used with government approval. Neighboring Malaysia has banned paraquat, which WHO has recorded as having caused tens of thousands of deaths around the world.

Long-term exposure to pesticides causes birth defects, damage to the nervous system and cancer. Pesticide contamination of food in Thailand may cause some 50,000 new cases of cancer each year, and some estimate there are as many as 40,000 people poisoned annually by pesticides.

Activists say it is impossible to

regulate the use of pesticides because large-scale operations using intensive farming methods have moved into the area. "There are powerful people in the orchards," says Saengthit Khemarat, of the Chiang Mai-based Institute for a Sustainable Agricultural Community. Often influential and secretive, with close ties to the government, they have bought up smaller farms, or simply encroached on forest reserves. Since 1995, the total area of orange farms has increased to 100,000 acres, nearly tripling in size. This has led to bitter fights over land and water resources between the villagers and the orange farmers.

This June, a monk was stabbed to death in what campaigners say was a land dispute, after industrial orange farmers allegedly tried to encroach on

land belonging to his temple. But the intimidation hasn't stopped there, say the environmentalists. Villagers who speak out against the powerful farms have been threatened; some have been forced to leave their communities.

Practices" scheme involving thousands of farms, which were asked to comply with food safety regulations for export purposes. But government officials realize this is not enough. "We are aware of the problem and are considering adding more toxic pesticides [to the list]," says Prommoon Picheat, director of license and regulation at the Agriculture Ministry.

But banned chemicals are still imported illegally, or old stocks of these chemicals continue to be used.

Aldicarb, which causes damage to the nervous system, is one of the pesticides on the Thai government's watch list, yet it remains commonly used. Categorized by WHO as extremely hazardous, it is made by multinational chemical company Bayer under the brand name Temik. The first-quarter

2005 financial results of Bayer's Crop-Science division lists Temik as one of the company's global bestsellers.

Bayer representatives said in an interview that the company does not market Temik in Thailand. However, activists such as Jutamart Jaikham, of the Health Systems Research Institute, insist that Temik is one of many chemicals regularly used in Chiang Mai. Illegal smuggling of the insecticide ensures that it continues to find its way into the mixing vats of farmers in Chiang Mai's orange groves.

British environmental group Friends of the Earth calls aldicarb "one of the most toxic chemicals still approved." According to Friends of the Earth, "Bayer successfully lobbied to prevent a Europe-wide ban of aldicarb last year and continues to keep the product on the market beyond 2007."

CropLife Asia, an industry umbrella group that lists Bayer as one of its members, says the industry as

a whole takes the issue of pesticide misuse very seriously. "The plant science industry is fully committed to the safe and responsible use of its products in all contexts, from use in small-holder farms to that in large plantations, and use as part of public health programs," says Andrew Roberts, the Bangkok-based communications director of CropLife Asia. "All products should be used strictly according to label recommendations and for prescribed applications only. We stringently undertake our responsibilities under the FAO code of conduct on the distribution and use of pesticides and report to UN FAO regularly on our compliance with the code," Roberts wrote in response to questions.

Activists say the best solution is to drastically minimize the use of industrial pesticides and promote environmentally safer farming practices. Integrated pest management, a system that uses natural predatory insects to control crop-consuming insects, uses significantly reduced amounts of pesticides.

These methods have been taught by government-funded field schools for farmers since 1995, and the Agriculture Ministry continues, at least in theory, to promote "a natural approach to pest control." Organic farming, which eschews pesticides, benefits both farmers, consumers and the environment in the long run; over time, environmental activists maintain, such methods yield just as large crops as current chemical-based pest control solutions provide.

But these methods have been adopted by only a small percentage of farmers. The reality is that many still are dependent on pesticides.

Since the flurry of publicity over the farmers' pesticide poisoning that began in 2003 has died down, a veil of silence has settled over the orange farms, where year-round spraying goes on unwatched, and the villagers and workers in direct contact with the chemicals continue to suffer. In Gill's film, a kindergarten teacher near a farm complains that her students have unusual symptoms. Their tiny bodies suffer more of the same complaints: pus-filled ulcers, skin lesions, almost daily bouts of diarrhea. Her eyes grow dreamy as she recalls a happier time, before the advent of the massive orange farms. "Earlier, it just wasn't like this," she says.

Up to 40,000 people may be poisoned by pesticides every year in Thailand.

Thailand may now have the legal framework to deal with its pesticide problem, but appears to lack the ability to enforce it thoroughly. The government has banned 84 pesticides, and maintains a separate "watch list" of dangerous chemicals. The Hazardous Substances Act of 1992 has penalties for anyone who imports, produces or possesses a banned chemical. But "the practice is different in reality," says FAO's Piao.

In 2003, Prime Minister Thaksin Shinawatra ordered an investigation into the country's excessive use of pesticides. In 2004, the Agriculture Ministry introduced a "Good Agriculture

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