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## Serious Doubts Regarding Pesticide Disposal in Paraguay

by George Kourous

**Ybycuí, Paraguay**— For the last six months, environmentalists in Paraguay have been struggling to focus international attention on a case of pesticide dumping that they say is an all-too-typical example of the state of environmental oversight here.

In late November 1998 Delta Pine–Paraguay dumped 660 tons of expired and pesticide-treated "Originator" cottonseed in Ybycuí, a small village some 120 kilometers west of Asuncion, the capitol of this impoverished, South American country. Hired townspeople used hands and shovels to mix 30,000 bags of seed with soil on a 1.5-hectare lot near the village center. In normal applications, half of one 50-pound sack of the seed is sufficient to plant a hectare of land.

Environmentalists accuse the company—which is a local subsidiary of the larger, U.S.-based Delta & Pine Land Company, inventor of the "Terminator Gene" and a recent Monsanto acquisition—of illegally disposing of what amounts to toxic waste.

However, Delta Pine–Paraguay contends it was conducting a "recuperation project" aimed at improving soil quality at Ybycuí.

Roger Malkin, CEO of Delta & Pine Land, backs that claim. "The disposal technique is termed 'landfarming,'" he says, "and is a common practice in the U.S. and elsewhere, as the biodegradation process enhances soil fertility and quality."

There is no specific U.S. regulation which covers the disposal of treated cottonseed, but it is considered a "used pesticide" and the recommendation of both the EPA and most manufacturers is that large quantities either be disposed of in a landfill approved to handle chemical waste, or by incineration. In the case of landfarming, the EPA says that seed disposal should occur at approved concentrations.

The substances contained in the seed are considered mildly toxic and biodegradable—provided proper disposal conditions are met. Over exposure can produce vomiting, skin and eye irritations, and, for those with certain heart problems, death. Studies on animals have shown that over time the pesticides are carcinogenic and can cause birth defects.

Dr. Allan Felsot, an expert with the Crop & Soil Sciences and Environmental Toxicology department at Washington State University, says that "there is nothing wrong with landfarming pesticide waste per se" if the old seed is used in

proper amounts. However, he adds, if the amounts reported by Paraguayan authorities are accurate, that would have produced concentrations well beyond acceptable levels.

If they are accurate, Felsot says, then the landfarming practice used at Ybycuí was not sound, because biodegradation of pesticides in soil proceeds much more slowly at high concentrations than at low concentrations.

Ybycuí residents complain of lingering health effects that environmental activists here attribute to exposure to the seed.

Mr. Malkin says that their claims form part of a "campaign of misinformation" being waged against the company.

But according to Dr. Pablo Balmaceda, a Paraguayan physician and environmental activist monitoring the case, tests of Ybycuí residents point toward pesticide intoxication.

"We have a lot of results that are pretty conclusive," he says. "Out of 20 children we tested, 16 had yellow skin, four had swollen livers—that is 20% of the sample—and 40% had enlarged spleens." Among adults tested, he adds, 20% exhibited skin irritations and enlarged livers, while 35% showed swelling of the spleen.

All these symptoms are associated with acute pesticide poisoning. Balmaceda and other activists say they believe the villagers were poisoned when they went to work burying pesticide-laced cottonseed for Delta Pine.

The company disagrees. In a statement issued to the Paraguayan media, Delta Pine officials declared that "no injury has resulted from the seed disposal.

Government authorities called in to investigate the case concur that the seeds pose no threat. The country's chief environmental enforcement agency, the Office of Environmental Regulation (DOA), says that the seeds "can be classified as moderately toxic, biodegradable, and in contact with the environment rapidly lose their chemical and physical properties."

The DOA is not an independent ministry but rather is a branch of the larger Ministry of Agriculture and Livestock (MAG), the government agency that controls all purchases of seed imports to Paraguay.

### **Slow government response prompts charges of corruption**

Activists here charge that authorities are responding slowly to the situation and have yet to undertake any rigorous scientific analyses of the dump site.

No official health studies of villagers involved in the dumping operation have been conducted, and the only soil samples taken at Ybycuí by investigators from the government Health Ministry turned out to be flawed and incapable of providing conclusive results.

Still, Paraguayan authorities have cited those faulty samples as evidence that the seeds do not represent any danger.

According to Myryam Caballero, director of AlterVida, an Asuncion-based nonprofit environmental organization, Paraguayan authorities simply don't have the resources or technical skills to conduct even basic tests. This might explain, she says, how Paraguay's Health Ministry could issue a statement claiming that the seeds disposed of at Ybycuí do not contain pesticides, when in fact they are openly advertised as being treated with pest-killing chemicals.

Angry Ybycuí residents say that corruption, not incompetence, is the problem. They claim that government authorities that permitted the treated seeds to be illegally imported into Paraguay are stalling investigations.

Each year, MAG buys a fixed amount of cottonseed for distribution to farmers as dictated by a national cotton harvest plan. Producers do not directly purchase their own seed overseas, but must acquire it from MAG. Some charge that corrupt MAG employees conspire with Paraguayan representatives of international seed vendors, overpurchasing seeds each year and skimming money off the top. They then allegedly dump the surplus seeds in remote locations like Ybycuí.

"We're up against a powerful and corrupt elite which pervades the government bureaucracies and is trying to protect itself," says Julio Paniagua, a resident of Ybycuí.

"Delta Pine has its share of guilt," adds Gerardo Iglesias of the International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers (IUF), which has been investigating the case, "but in Paraguay they found fertile ground for what they were trying to do."

## **Law required environmental impact assessment**

In a statement provided to local press, Delta Pine's local representatives said that they gave submitted an environmental impact statement to authorities prior to requesting permission to deposit the seed at Ybycuí, in accordance with Paraguayan law. However, the agency responsible for OK'ing such requests, MAG's Office of Environmental Regulation, asserts it was told of the company's actions only after the fact.

A source in Paraguay's Department of Justice says: "as to whether or not the seeds were disposed of improperly and were the dictates of the law ignored—it's pretty obvious that no, they didn't go about this in the legal manner."

Still, based on the Health Ministry's flawed samples, a federal judge concluded that the seeds do not contain pesticides and are not toxic—but did rule in February that Delta Pine's local representatives should at least cover them with a layer of earth.

To date, the firm has not complied with that order. Delta Pine's U.S. representative has left the country and their Asuncion office has been closed.

Whatever the potential merits—or dangers—of landfarming, the Ybycuí case illustrates that, some 30 years after the Green Revolution, many Latin American countries who rely heavily on pesticides continue to run tremendous risks as a result of improper use, lack of expertise and resources, and corruption.

In July the national media reported that another 5,000 tons of unused cottonseed, purchased from various overseas companies and treated with pesticides in Paraguay, sits stockpiled in government warehouses. An unknown quantity has reportedly already been sold to Paraguayan vegetable oil factories as fuel for their ovens—many of which do not attain the high temperatures recommended for pesticide incineration.

That discovery, coupled with the Ybycuí case, has raised attention regarding the use of pesticides here and highlighted the need for a national toxics strategy. Paraguayan environmental organizations have started to promote organic farming techniques and to market organic products, while the Pan American Health Organization is planning to work with government authorities to develop a Paraguayan toxic substances management plan.