

EPA Takes Enforcement Actions Against Biotech Companies

On August 5, 2002, EPA for the first time took enforcement actions against two biotechnology companies, Dow AgroSciences and DuPont, whose plantings of experimental genetically engineered crops were found by EPA inspectors to violate federal law. Although the \$5,500 fines are a mere slap on the wrist, environmentalists found it encouraging to see EPA enforcing the law. In one case, Mycogen Seeds, a unit of Dow AgroSciences, failed to isolate its experimental insect-resistant corn with a buffer zone of conventional corn and failed to plant trees to act as wind-breaks. In the second case, Pioneer Hi-Bred International, a DuPont subsidiary, planted its experimental corn crop at an unapproved location too close to other crops. Both companies' violations were in Hawaii and uncovered by EPA Region 9 inspectors.

The provisions violated by the two companies are designed to protect neighboring corn crops from cross-pollinating with the experimental biotech crops. The two corn crops at issue are engineered to be resistant to corn rootworm by using genetic material from *bacillus thuringiensis* (Bt), a soil bacterium with pesticidal properties. Such bioengineering of food is controversial because the use of genetically altered Bt crops raises serious safety concerns for agriculture. Plants can crossbreed and share genes, spreading potentially dangerous attributes far beyond the original experiment and potentially into the general food supply. In addition, EPA has not considered the widespread allergenic ef-

fects of Bt plant pesticides. This area needs further study and raises some of the most serious implications for a technology that has not been fully evaluated prior to its widespread introduction into the marketplace.

EPA Warns of Possible Pesticide Use by Terrorists

Pesticides cause harm when used according to label instructions. When applied improperly, the results are even worse. But if pesticides were used as chemical weapons, the damage could be horrific. On September 12, 2002, U.S. Attorney General John Ashcroft announced that the threat of a terrorist attack had been elevated to "high." Following the announcement, EPA released a statement warning that individuals who work with pesticides should be especially vigilant regarding physical security of the chemicals. Toward that end, EPA recommends that workers

in pesticide related industries review EPA's Pesticide Security Alert, entitled *Pesticide Alert: Pesticide Security and Your Business*, available on the EPA website. The alert highlights some general security areas that companies may want to review to ensure that appropriate measures are being implemented. In related news, on September 10, 2002, the *Washington Post* graded various sectors of government and industry on their response to the September 11th terrorist attacks. They gave the chemical industry a grade of "D." The same day *Newsweek* magazine gave them an "F." EPA, the U.S. Army, Brookings Institute and others have all warned of the frightening ease with which U.S. chemical



plants could be turned into weapons of mass destruction and threaten millions of Americans. *For more information contact Beyond Pesticides. If you have questions regarding EPA's Pesticide Security Alert, please contact Dennis Deziel of EPA's Office of Prevention, Pesticides, and Toxic Substances at (202) 564-0331. A copy of the recent alert is available at http://www.epa.gov/pesticides/citizens/pest_secu_alert.htm.*

EPA Allows Use of Cancelled Pesticide on 2,500 Acres, Broader Use Denied After Public Comment

Cancelled in 1991 for its deadly effect on birds, granular carbofuran was originally approved for use under a *Federal Insecticide Fungicide and Rodenticide Act* (FIFRA) section 18 emergency exemption for a 2,500-acre application on Louisiana rice on June 19, 2002, then denied for broader use on July 24. FIFRA section 18 allows EPA to allow pesticides not registered for a specific purpose to be used under "emergency circumstances," such as a risk to human health or in cases of possible "significant economic loss." Under the statute, a pesticide cannot be given a specific use exemption unless there is "movement toward registration of the proposed use by the interested party." This means that previously banned pesticides cannot be given this



exemption, and environmentalists believe that the carbofuran exemption granted by EPA was illegal. The original request, made by the state of Louisiana, asked for 100,000 acres worth of granular carbofuran. This exemption was denied after Beyond Pesticides and a coalition of environmental groups led by the Audubon Society protested and sent comments to EPA voicing strong opposition to the state's request. Over 6,000 comments were sent to EPA on the issue. Granular carbofuran is a toxicity class I pesticide, the highest acute risk assigned to a chemical by EPA. Granular carbofuran has had a tremendous impact on birds, due to its resemblance to seed. A single granule is lethal, and EPA estimates that prior to cancellation of the granular formulation, up to two million birds were killed each year by carbofuran. Scientists at the U.S. Fish and Wildlife Service say that "there are no known conditions under which carbofuran can be used without killing migratory birds. Many of these die-off incidents followed applications of carbofuran that were made with extraordinary care." See "The Emergency Pesticide Use Loophole" on page 21 of this issue.

EPA's Review of 28 Organophosphate Pesticides Called Into Question

Under federal law, EPA is required to evaluate the cumulative effects of pesticides with a common mechanism of exposure, such as organophosphate insecticides, all of which inhibit the body's production of the enzyme cholinesterase in the same way. When EPA completed the *Revised Organophosphate (OP) Cumulative Risk Assessment*, environmentalists saw this as a positive step towards this goal. Unfortunately, the report is sloppy, excluding several pesticide uses and specific vulnerable populations, like farm children. The risk assessment also lowered the 10-fold *Food*

Quality Protection Act (FQPA) safety standard to 3X or below, without, in the opinion of environmentalists, adequate justification. This sentiment was also shared by the Scientific Advisory Panel (SAP), an independent panel of scientists created by Congress under the *Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)*, which questioned the validity of portions of the *Revised OP Cumulative Risk Assessment*. The EPA review concluded that 28 of the 30 organophosphates reviewed could have a three-fold, or less, safety factor.

Under FQPA, all pesticides are assigned a 10-fold safety factor until sufficient evidence demonstrates that it can be lowered. SAP concluded that the 3-fold safety factor assigned to pesticides in the *Revised OP Cumulative Risk Assessment* are not

protective of infants and children and that there was not enough data to lower the baseline 10-fold margin of safety assigned by FQPA. Of the 30 pesticides included in the OP risk assessment, studies on the effects each had on the developing nervous system of animals was only included for six chemicals. *For more information on OPs or for a copy of Beyond Pesticides' comments to EPA on the Revised OP Cumulative Risk Assessment, contact Beyond Pesticides.*

USDA Tests Vinegar as an Alternative to Conventional Herbicides

For years organic gardeners have used a variety of household products, from black pepper to kitchen soap, as non-chemical substitutes for toxic pesti-

cides. Although generally ignored by the federal government, recently the U.S. Department of Agriculture (USDA) has taken notice. The Agricultural Research Service (ARS), the research division of the USDA, conducted a study showing the success of vinegar used as an herbicide. This non-toxic alternative has been used to combat weeds for years, but it has never been scientifically tested. In the first study of its kind, ARS scientists Jay Radhakrishnan, John R. Teasdale and Ben Coffman tested the efficacy of vinegar against such weeds as

Canadian thistle, giant fox-tail, velvetleaf, smooth pigweed and common lamb's quarters. The ARS uniformly coated leaves with varying potencies of vinegar solutions, using only vinegar made from fruits or

grains, to conform to organic farming standards, both in the greenhouse and in the field. ARS finds that a five to ten percent solution could kill younger weeds in the first two weeks of life. An 85 to 100 percent solution kills adult weeds. A 20 percent concentration used in a cornfield killed 80 to 100 percent of all weeds. For comparison, the vinegar in your kitchen cabinet is most likely a five percent solution. Canada thistle, one of the most tenacious weeds in the world, proves the most susceptible. A five percent concentration has a 100 percent kill rate of the perennial's top growth. The 20 percent concentration can do this in about 2 hours. The cost of spraying an entire field with a 20% solution is \$65 per acre. Spot spraying local weed infestations in the cornfield may only be \$20 to \$30. *For information regarding least-toxic weed management, please contact Beyond Pesticides.*

