

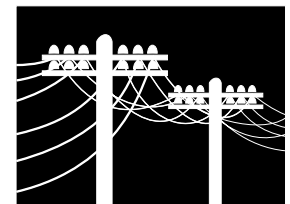
# Pesticides and You

News from Beyond Pesticides / National Coalition Against the Misuse of Pesticides (NCAMP)



## Pole Pollution

New Utility Pole Chemical Risks Identified by EPA  
While Survey Shows Widespread Contamination



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Approaches to Dealing With Mosquito-Borne Illnesses • Campaign to Stop  
Poison Poles • School Environment Protection Campaign •  
Pesticides and Plastic Mulch

# Letter from Washington

## Marketplace Drives Safety, Regulatory System Lags Behind

It has been true that safer products are marketplace and consumer driven. The regulatory system lags behind in effecting pesticide restrictions that protect human health and the environment.

A number of developments over the last several months have affirmed this simple and disturbing truth. Disturbing because it results in slow change that puts the public at unnecessary risk for unreasonable periods of time. This rang painfully true recently with EPA's preliminary risk assessment of the wood preservative pentachlorophenol (penta), the focus of our report, *Pole Pollution*, featured in this issue of PAY.

Before getting into penta, it should be said that the Environmental Protection Agency (EPA) keeps on reregistering unnecessary and outdated toxic pesticide products—and registering some new ones—despite the fact that viable less toxic or non-toxic alternatives are found in the marketplace. These alternatives challenge benefit assumptions in a risk benefit calculation. That is, there is no benefit to a toxic substance when the need for its use can be met with less risk at about the same or less cost (and even less costly when considering the reduction in secondary costs). However, much of the regulatory system, politicized as it often is, creates an un-level playing field, providing disproportionate advantage to polluting technologies or products. Yet, public advocacy must push for change, rather than cede control of the regulatory arena to the regulated chemical and user industries.

Marketplace driven health and environmental protection can certainly be seen in the area of food production. Here, people in growing numbers buy organic, reject safety claims based on risk assessments, support the environmental and improved worker safety associated with non-chemical farm operations, and demand food free of genetically modified organisms (GMO). We report in this issue on food retailers, Whole Foods and Wild Oats, which decided to keep GMO ingredients out of their house brands. Frito-Lay recently announced that it will do the same, as did Gerber previously. Yet, EPA keeps on registering plant pesticides in the form of genetically modified organisms.

Now, wood preservatives. They are some of the most hazardous chemicals known to humankind, accounting for hundreds of toxic waste Superfund sites. The wood preservatives keep on coming through the EPA reregistration pipeline. These chemicals include penta, creosote, copper, arsenic and chromium, and contaminants like dioxin, furans and hexachlorobenzene.

Since more wood preservatives are used than any other group of pesticides by hundreds of millions of pounds annually, and given the availability of alternative materials to treated wood, this is a critical problem. Our marketplace focus is utility companies that have the ability tomorrow to decide to stop the contamination by purchasing utility poles constructed out of alternative pole materials, such as recycled steel, or burying lines, where possible. Consider this: If we could stop the use of penta on utility poles, we would finally

see an end to nearly all of its uses in the U.S., and join 26 countries that have already taken this action. It would mean that a chemical Rachel Carson warned us about over three decades ago would finally be removed from the market.

If things were to go as they should, the regulatory process would ban penta. However, EPA's compartmentalized review of individual pesticides does not lend itself to a comprehensive assessment that includes *all* associated hazards. In reviewing EPA's preliminary risk assessment of penta and in a number of meetings with EPA staff, it is clear that the agency review does not include an analysis of the chemical's lifecycle, from its production to its disposal in treated wood. As a result, the impacts associated with the disposal of pesticide treated utility poles, at a rate of 3 million a year, is not currently considered by EPA in determining whether the chemical should be banned. We found in our study that utility companies, after taking poles out of service, promote their reuse as various wood products used in the construction of outdoor classrooms and bird boxes and for fence posts. This results in back end exposure scenarios not assessed by EPA. Since there is no adequate way to dispose of treated wood, it is not reasonable to allow its introduction into the environment. Similarly, at the front end, the agency does not consider the availability of less toxic alternatives.

On the alternative note, an article in *Business Week* recently exclaimed *Yesterday's Tires, Today's Railroad Ties*, and pointed out the economic and environmental advantages of replacing chemically treated wood railroad ties with recycled material. This new product costs less because it lasts two to tens times as long. It is stronger than wood and therefore fewer ties are needed per mile of track. This is not a small concern since U.S. railroads buy 20 million ties a year.

There is a parallel in the utility industry. U.S. utilities replace at least three million out of 130 million utility poles every year. Treatment of at least half of these poles accounts for 95% of all penta use. Some utilities, like The Energy Cooperative in Newark, Ohio, have made the switch to recycled steel. They report long-term savings on poles and reduced energy costs associated with installing the poles (because of the lower weight of the finished steel pole, and uniform parts for mounting equipment).

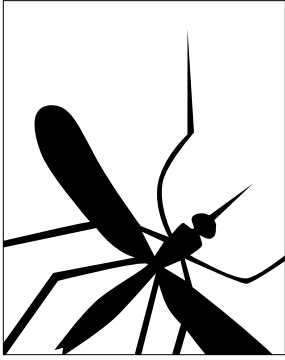
The switch to alternative pole materials will occur only with consumer pressure. Similarly, we need to turn up the political heat on EPA to stop penta use.

Please consider joining us to continue on strategy at the 18<sup>th</sup> National Pesticide Forum, *Beyond Pesticides: Solving a Public Health Crisis*, in New York City, April 7-9, 2000.



— Jay Feldman is executive director of Beyond Pesticides/NCAMP

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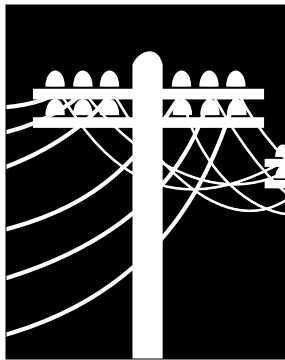
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## Jailhouse Lindane Use Threatens Inmate Health

Dear Beyond Pesticides/NCAMP,  
This past year I was sentenced to fifty-two weekends in our local jail for not reporting a crime that I witnessed. During my incarceration they make us wash with Kwell™, which is a lice shampoo, for the entire body. After fifty-two applications to my body, will I suffer any damage? Thank you.

Anonymous  
Nashville, TN

Dear Anonymous,

The practice of dousing prisoners with pesticides is one that has disturbed us for a long time. Pesticides are poisons and so their use should be treated very seriously. First, dousing prisoners without identifying a pest problem, such as lice on the prisoner's body, is a violation of the product label use. Second, there are less toxic ways of controlling lice. Kwell™ contains the active ingredient lindane, which is a toxic organochlorine compound. Most agricultural and dairy uses of lindane have been cancelled by the EPA because of concerns about the compound's potential to cause cancer. The chief toxic action is on the nervous system. Animal studies indicate immunotoxic effects, fetotoxicity, reproductive effects, and its acute toxicity to aquatic wildlife. Acute symptoms may include central nervous system stimulation, mental/motor impairment, excitation, convulsions, increased respiratory rate and/or failure, pulmonary edema, dermatitis, loss of balance, grinding of the teeth, and hyperirritability. Continuous pesticide applications increase your risk of having immediate, acute and/or chronic health effects. Because everyone has been exposed to different levels of toxic materials over our lives, at different vulnerable points in our lives, and have different genetic make-ups, the effect of pesticide exposure incidents differ. While you may not react at first, you may develop sensitivity over time. If you are having health effects from the pesticide treatment, seek medical treatment.

## Bird Nests Treated

Dear Beyond Pesticides/NCAMP,  
I am involved with a national organization of people who attract and aid Purple Martins. It has come to our attention that some people are using various chemicals, including Sevin™, to rid the Purple Martins' nest cavities of nest mites and other insects. Most of us feel that it is improper, at best, to use pesticides in wild bird nests. Kenny Kleinpeter  
Baton Rouge, LA

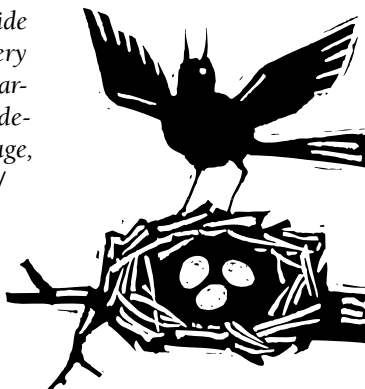
Dear Mr. Kleinpeter,  
Pesticides should not be used to control pest problems in wild bird nests. Sevin™ contains the active ingredient carbaryl, which is a carbamate broad-spectrum insecticide and is moderately to very toxic. Studies show that carbaryl can cause birth defects, reproductive damage, neurotoxicity, and kidney/liver damage. It is also a sensitizer/irritant and an endocrine disrupter. Both parent and breakdown products are considered to have low to moderate persistence. Carbaryl is lethal to many non-target insects, including bees and beneficial insects. In California, more bee-kills are associated with the use of carbaryl than with the use of any other pesticide, and reports have also surfaced in many other states and Canada. Carbaryl occasionally causes fish-kills and the breakdown product, alpha-naphthol, has been found to be quite toxic to mollusks, and possibly to other estuarine organisms. It has also been detected in groundwater and is toxic to birds. Martin populations decline in areas of pesticide use.

Purple Martins, in the swallow family, are aerial insectivores that feast on mosquitoes, dragonflies, damselflies, flies, midges, mayflies, stinkbugs, leafhoppers, Japanese beetles, butterflies, moths, grasshoppers, cicadas, bees, wasps, and flying ants. They spend the non-breeding season in Brazil then migrate to North America

to nest. Purple Martins can be lured into your area by hanging up natural or artificial gourds with holes cut in them or elaborate birdhouse condominiums. Once you have put up Purple Martin birdhouses, check their nest regularly for competitors and pests. If nest parasites become too numerous, replace the nest and clean out the birdhouse. Purple Martins are a terrific contribution to natural pest management.

## Corn Gluten Alternative

Dear Beyond Pesticides/NCAMP,  
Thank you for sending me information on using corn-gluten meal as a herbicide. It is a great asset to be able to consult Beyond Pesticides/NCAMP for advice and data when I have special problems with some local activity. Our recent problem was in nearby Bibb County where the highway managers were planning to intensify their use of herbicides. A big meeting was called by local citizens to protest, and I presented data cited in the article, *The Schooling of State Pesticide Laws* (Pesticides and You, vol.



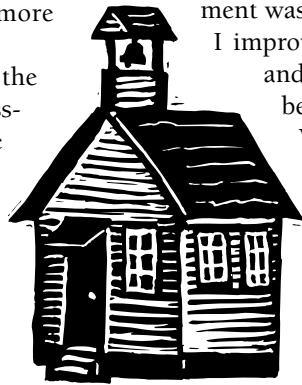
18, no.3, winter 1998-99). It quoted several references in the literature on the relationship between 2,4-D and Non-Hodgkin Lymphoma, and that impressed a lot of people. The County managers have promised to suspend herbiciding for a year. The Bibb County citizens wanted to make it possible for roadside wildflowers to become as plentiful as they were before mowing and herbiciding became the preferred management method of highway engineers. Now, one of the Bibb County mothers is planning to get seeds for school children to sow under the supervision of their parents. Can't you imagine the rumpus that will be raised if the highway people mow or spray the children's blooming flowers next summer? We are glad you are there doing much-needed work.

Robert Burks  
Birmingham, AL

Dear Mr. Burks,  
 We are glad we were able to assist you in organizing for the reduction and elimination of pesticides. Another article that may be useful to your work with Bibb County is *The Right Way to Vegetation Management* (Pesticides and You, vol. 19, no. 1, Spring 1999). This article reviews state pesticide policies regarding rights-of-way and where states are at regarding integrated pest management. Thirteen states provide right-to-know provisions regarding rights-of-way herbicide applications and at least six states have incorporated the principles of IPM into their rights-of-way management policies. If your community has a right-to-know or integrated pest management policy, please send it to us or let us know how we can get a copy. We share this information with others working with their communities to use as an organizing tool.

### Teacher Hadicapped by Use of Pesticides

Dear Beyond Pesticides/NCAMP,  
 Following is my story of becoming sensitized to pesticides used in public schools. I taught for more than 20 years.  
 September 3, 1985, I spent the day in my third grade classroom preparing for the opening day. There were several teachers present in the building. Around 4 o'clock there was an exterminator in the building, spraying in the halls and every classroom. He came into my classroom and sprayed near the sink. Some teachers talked about the smell, and many left for the day. I had doors and windows open, as it was a pleasant day. I didn't smell anything and gave it no more thought. Then my head ached and I became aware of a terrible leg ache and back pain. Concentrating became difficult and I felt nauseous. My ankle hurt so much I had trouble walking. I never associated my problems with pesticides. I was in so much pain I stopped at the local hospital to have my ankle x-rayed,



which came back negative. The next morning the pain was gone, and I went to greet my new students. It was only an hour or two before I was in terrible pain again. I wondered if I had an early case of the flu.

I finally found a physician who understood what was wrong with me, that my illness was caused by pesticides used at my school and that I was seriously ill. I could not believe that such a small amount of a product considered "safe," and "EPA-approved," would make me so ill. I called OHSA; they said they had no jurisdiction. I called the local health department; no help. Teachers asked as a group for the use of pesticides to be stopped in the classroom. In March, the building was surreptitiously sprayed and fogged on Saturday. I learned on Tuesday from a parent that pesticide trucks had been there all day, but I was never given the information. The union demanded and received material safety data sheets (MSDS) for five pesticides. By then, I weighed 50 pounds less, my heart beat erratically, my sensitivity spread to everything synthetic, and my judgement was impaired.

I improved some over the summer and hoped I would be able to do better with a new school year. When the lunchroom was sprayed in October, I became so ill I was unable to leave home. I finally had to accept my illness was incurable, and that my life was changed forever. My doctor ordered me not to go into the school building. I tried to bring a lawsuit against the extermination company, but I was unable to find an attorney to take the case.

In that small school of 18 classes, another teacher was also ill from the pesticide exposure. She had to resign from teaching, and remains disabled today. The custodian, forced to retire at a young age with heart problems, died shortly after of a heart attack, and so did two other male teachers. The school psychologist died of a heart attack shortly after he retired. The children were hy-

peractive, and more than one-third had learning disabilities. They complained of headaches, stomach aches, and of being tired. Some had asthma attacks during the night after the building was treated. Others suffered from incessant runny noses that stopped at home. The head custodian testified at my last Worker's Compensation hearing that nothing dangerous was ever used.

Jane Thomassen  
 Gouldsboro, PA

Dear Ms. Thomassen,  
 Thank you for sharing your story. Unfortunately, incidents as you have described happen all too often. Students, teachers, and other school staff must be better protected from unwanted chemical exposure while at school. This is why we support the School Environment Protection Act (SEPA), S.1716 and H.R. 3275. See page 20 and [www.beyondpesticides.org](http://www.beyondpesticides.org).



Kagan Owens is Beyond Pesticides/NCAMP's program director

### Write Us!

Whether you love us, hate us or just want to speak your mind, we want to hear from you. All mail must have a day time phone and verifiable address. Space is limited so some mail may not be printed. Mail that is printed will be edited for length and clarity. Please address your mail to:

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## Adverse Effects Reports Have Doubled Since 1997 FIFRA 6(a)(2) Rule

The Environmental Protection Agency (EPA) reports that the number of adverse effects incidents due to pesticide exposures have more than doubled since the 1997 implementation of the Section 6(a)(2) Rule of the *Federal Insecticide, Fungicide, and Rodenticide Act* (FIFRA), according to *Bureau of National Affairs* (BNA) *Daily Environment Report* (No. 246, Dec. 23, 1999). Section 6(a)(2) of FIFRA details what type of information chemical manufacturers must report and lowers the threshold for the

type of incidents reportable to EPA, which means that the number of pesticide poisoning incidents are now more accurately represented. EPA expected to see an increase in the number of reports submitted, since the 1997 rule is much more explicit about what information is reportable, according to BNA.

This increased amount of data submitted to EPA on exposure incidents can help the agency identify products or product lines that show increased risk, said EPA staff to BNA. Based on adverse effects reports, EPA may take regulatory action when needed or may inform manufacturers of trends in incidents. An example of regulatory action could be adding warnings to product labels. Beyond Pesticides/NCAMP has criticized the agency for reversing itself on the collection of pesticide exposure incident data that “may cause a delayed or chronic adverse effect in the future.” Without this information, EPA can not track possible long-term effects associated with exposure.



## New York State Attorney General Calls For Cancellation of Products Containing Chlorpyrifos

The organophosphate chlorpyrifos (commonly known as Dursban™ or Lorsban™) should be banned, according to New York State Attorney General Eliot Spitzer. His position was submitted in response to a October 27, 1999 *Federal Register* notice on re-registration eligibility for the insecticide

chlorpyrifos (see *Pesticides and You*, Vol. 19, No. 3, Fall 1999). A Reregistration Eligibility Decision (RED) is made in accordance with the *Federal Insecticide, Fungicide, and Rodenticide Act* (FIFRA) as amended by the *Food Quality Protection Act* (FQPA) and must be based upon finding that chlorpyrifos residues on food, in conjunction with other exposures, have a “reasonable certainty of no harm,” or have an acceptable risk, as defined by the Environmental Protection Agency (EPA). Chlorpyrifos is one of the most widely used organophosphates in the U.S. — because of this widespread use, human exposure is extensive and no acceptable tolerance levels in food can be set, says Spitzer.

The preliminary risk assessment does not indicate that no harm will result from combined exposures, including exposures from food and other unforeseeable exposures, says Spitzer. New York State’s pesticide poisoning data shows that the New York State Department of Health (NYSDOH) reported



139 acute poisoning incidents due to chlorpyrifos between 1991 and the first

half of 1999. NYSDOH says that this number may not represent the number of poisonings that occur due to chlorpyrifos, since many poisoned individuals may not seek medical attention, health care providers may not recognize symptoms of poisoning, and many poisonings may not be reported. EPA’s preliminary risk assessment for chlorpyrifos applies a safety factor of 3X (or three times) in considering tolerance levels, instead of the factor of 10X mandated by FQPA when insufficient data exists on infant and children’s vulnerability to the chemical. This reduction from 10X to 3X is contrary to FQPA and not based on complete or reliable data showing safety to infants and children and the 10X safety factor must be retained, says Spitzer. *For a copy of A.G. Eliot Spitzer’s comments on chlorpyrifos, send \$4 to Beyond Pesticides/NCAMP.*

## White House Announces Increase in Funding for Toxic Exposure Tests

President Clinton announced on January 13, 2000 that his fiscal year 2001 budget will include \$27 million in funding to research the environmental causes of diseases such as breast and prostate cancer. This is a 56% increase from last year’s funding level. The funding will go to the Centers for Disease Control and Prevention (CDC) Environmental Health Laboratory to help communities investigate clusters of can-

cer and other diseases, to identify areas of the U.S. where individuals are at a greater risk of exposure to carcinogens and toxic substances, and to ensure rapid evaluation of the impact of public health emergencies. While environmental factors are linked to an increased incidence of cancer and other diseases, studies pinpointing the environmental causes of these diseases do not always exist.

Among the many diseases linked to environmental contaminants, the Clinton administration hopes to find definite links between environmental toxins and a wide range of birth defects, and breast and prostate cancers. CDC's Environmental Health Lab has developed tests that can be used in the field to monitor people for exposure to over 100 potentially toxic substances and in the case of chemical accidents, to determine quickly if people have been exposed to dangerous poisons. "The lab is developing ways to look for dozens or hundreds of chemicals in just a teaspoon of blood," says Dr. Richard Jackson, director of the CDC's Center for Environmental Health.



to the report, overall pesticide use in the U.S., in pounds of active ingredient, went up just under 2% in 1996 from the previous year and down about 1% in 1997. From 1964 to 1997, conventional pesticide use has increased from 617 million pounds of

active ingredient used to 975 million pounds, an increase of 58%, according to the report. When wood preservatives, specialty biocides, chlorinated pesticides, and other pesticide chemicals (sulfur, petroleum, etc.) are included, the amount of active ingredient used in 1997 totals 4.63 billion, up from 4.52 in 1995. There are currently 890 active ingredients registered in 20,700 products, says the re-

port. Of the 28 new active ingredients that were registered in 1997, EPA considers two-thirds as "safer" pesticides (biological or other reduced risk), which sounds good, but EPA applies a very broad definition to this term. In the future, EPA plans to report on the extent to which biologically based pesticides are used. The report employs tables, graphs and fact sheets to inform the public on pesticide use in the U.S. For a copy, contact U.S. EPA, NCEPI, P.O. Box 42419, Cincinnati, OH 45242-2419, 513-489-8190, or see [www.epa.gov/oppbead1/pestsales/](http://www.epa.gov/oppbead1/pestsales/).

## EPA Market Estimates Show Increase in Total U.S. Pesticide Use

The U.S. Environmental Protection Agency (EPA) has come out with its periodic edition of *Pesticide Industry Sales and Usage, Market Estimates* for the years 1996 and 1997. This publication reports data on pesticide usage and sales values, based on information from EPA records of registrations, U.S. Department of Agriculture reports of pesticide use, and other public and proprietary sources. According

## EPA Inerts Disclosure Group Formed

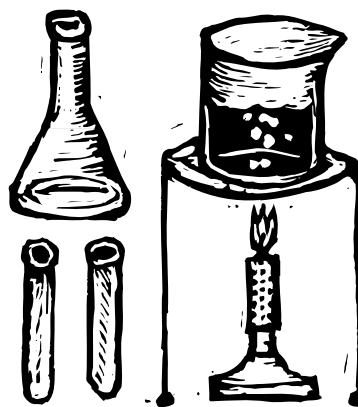
An Inerts Stakeholder Workgroup has been formed to advise the Environmental Protection Agency's (EPA) office of Pesticide Programs on matters regarding listing of inert ingredients on pesticide product labels. Group members are fairly well bal-

anced, in that the group includes representatives from industry and trade groups such as Bayer and Responsible Industry for a Sound Environment (RISE) as well as from environmental and public interest groups such as the Northwest Coalition for Alternatives to Pesticides (NCAP) and Farmworker Justice Fund. Also, according to *Pesticide Report*, nine group members indicate that they do not support disclosure of inert ingredients on pesticide labels while eight say they do. Listing inert ingredients would give the public its right to know what chemicals are in the products it buys and would allow for more informed decision-making. Also, disclosure will assist doctors in diagnosing adverse health effects after a person has used a particular product.

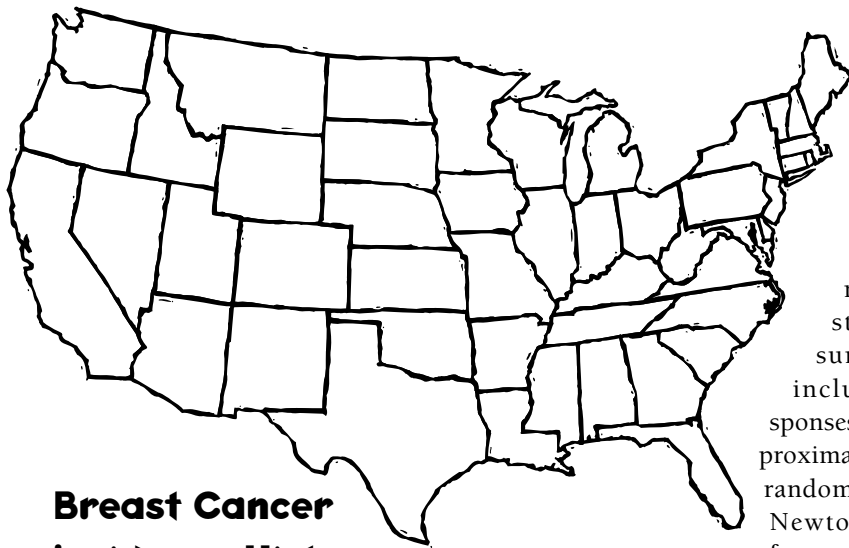
Pesticide companies insist that disclosure of inerts would be equivalent to giving out trade secret formulations of their products. In a 1996 lawsuit, NCAP and NCAMP v. Carol Browner, 941 F. Supp. 197, 201-02 (D.D.C. 1896), a federal district court judge found that EPA could not claim that disclosure of inerts posed a competitive disadvantage, but would have to prove it on a case by case basis. In this case, the court ordered EPA to disclose the common chemical names of inert ingredients of certain pesticides,

finding that this information does not constitute a "trade secret" within the meaning of either the *Federal Insecticide, Fungicide, and Rodenticide Act*, 7 U.S.C. § 136h, or the *Freedom of Information Act*, 5 U.S.C. § 552. The judge found that in the case of these pesticides, trade secret

claims were not valid because ingredients could be identified through Material Safety Data Sheets, scientific literature, and through laboratory analysis (see *Technical Report*, Nov. 1996).



# Around the Country



## Breast Cancer Incidence Higher Among Affluent Women

Affluent women living in Newton, MA have a higher than average risk of breast cancer, says a study by the Silent Spring Institute, a non-profit research organization in Newton, MA, entitled *The Newton Breast Cancer Study*. According to the study, the incidence of breast cancer in Newton ranges from 55% above to 22% below the statewide average for the years 1982-1992. It finds that residents of Newton's high breast cancer incidence area typically have higher income, education, and other indicators of a high socioeconomic status. Women in high incidence areas also report using professional lawn care services more often than women in lower incidence areas (65% compared to 36%), report using termite treatments more often (17% compared to 9%), and report high routine use of pesticides more often (30% compared to 23%). Additionally, 45% of women in the high-incidence area report using dry-cleaning services once a month, compared to 32% in lower-incidence neighborhoods. The study stresses that it does not establish a link between certain chemicals and breast cancer incidence, but that the results provide evidence that future research should pursue the question of whether chemical exposure may, in part, explain why higher

socio-economic status is linked to breast cancer risk. The study uses surveys and includes responses from approximately 1,350 randomly chosen Newton women from both the

high and low breast cancer incidence neighborhoods. *For a copy of the study, send \$16 ppd to Silent Spring Institute, 29 Crafts Street, Newton, MA 02458.*

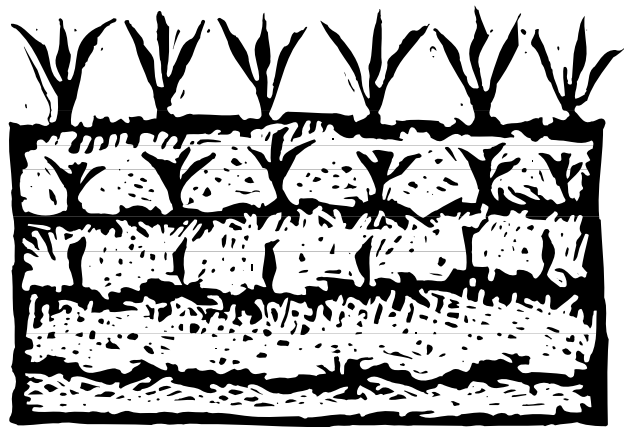
## Bt Corn Releases Pesticide into the Soil

In a New York University study, microbiologist Guenther Stotzky, Ph.D., finds that the biological pesticide *Bacillus thuringiensis* (Bt) genetically engineered (GE) into corn is released into the soil from the roots of the GE corn plant. The study, which is published in *Nature* (December 2, 1999), is the first to show this effect. Soil bacteria can normally break down the Bt toxin, but Stotzky and his colleagues found that the Bt binds to clay particles and humic acids found naturally in most soils, making it unavailable to such organisms. Instead of breaking down in about 25 days, the Bt can stay active for at least 234 days, says the study. The study also notes that pollen falling on the ground and corn stocks plowed back into the soil can add to the Bt level in the soil. These findings are particularly troubling, considering that in 1999, GE corn made up about one third of the total acreage of corn planted in the

U.S. "There is a potential hazard that it [the toxin] builds up and could enhance the selection of resistant target organisms and could possibly affect non-target organisms," said Stotzky in an interview with *Reuters*. Past studies have already shown that Bt corn pollen drifting to milkweed can harm Monarch butterflies that feed on the plant. Now, according to this study, non-target organisms in the soil may be harmed as well. Stotzky has called for more studies to determine the impact of the toxin's build up in the soil on insects and other organisms. "Those studies need to be done. They should have been done a long time ago before the regulatory agencies allowed the release of these plants," he said. Because the consequences of an extended life of Bt in soil are unknown, Stotzky said, "We should stop at this point and consider these things." Beyond Pesticides/NCAMP agrees.

## Studies Link Glyphosate to Cancer

What goes around comes around. Another Roundup™ story. After analyzing various studies linking the popular herbicide Roundup™ (glyphosate), manufactured by Monsanto, to cancer in laboratory animals, EPA originally listed the pesticide as a "Group D" carcinogen, finding carcinogenicity "inconclusive." In 1991, EPA changed this labeling and listed the pesticide as "Group E" or non-carcinogenic. Now, recent studies are again





showing the chemical's connection to cancer. In *A Case Control Study of Non-Hodgkin's Lymphoma and Exposure to Pesticides* (Cancer, March 15, 1999, Vol. 85, No. 6), Swedish scientists Lennart Hardell and Mikael Eriksson connect Roundup™ to



non-Hodgkin's lymphoma (NHL). According to the study, exposure to this herbicide increases the risk of this cancer by a factor of three. NHL has increased by 80% in the world since the early 1970s, and is one of the most rapidly increasing types of cancer in the western world, according to the American Cancer Society. Glyphosate use is expected to increase both here and abroad, especially with the continued use of "Roundup-Ready" crops, also manufactured by Monsanto. 1997 USDA statistics show that expanded planting of Roundup-Ready soybeans have resulted in a 72% increase in the use of glyphosate.

In another important study, *P-Post-labeling Detection of DNA Adducts in Mice Treated With the Herbicide Roundup*, scientists in Genoa, Italy found that the product Roundup™ is mutagenic, but that the active ingredient, glyphosate, is not the mutagenic factor. In other words, scientists determined that one or more of the product's inert ingredients are causing the problem. In a yet to be released study on glyphosate, produced by the German government as part of an extensive review process to determine what pesticides will be allowed for use in the European Union (EU), beneficial insects were found to be harmed by glyphosate. The scientists are calling for further study of glyphosate. Send \$5 to *Beyond Pesticides/NCAMP* for copies of these studies and related current studies on glyphosate.

## American Airlines Violates Law Restricting Dangerous Chemicals on Flights

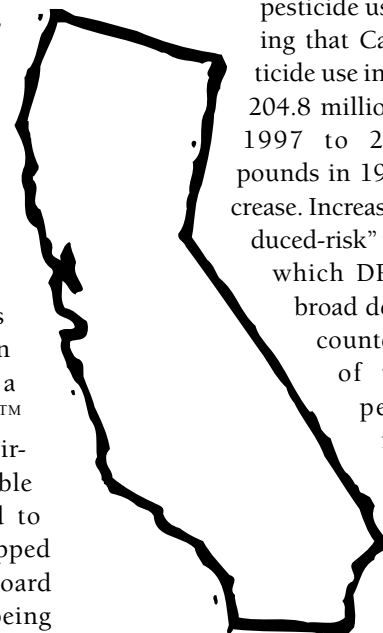
American Airlines has admitted to illegally carrying hazardous chemicals on passenger flights. In a settlement, the airline has agreed to pay \$8 million. This is the first ever guilty plea by a major air carrier in a criminal

hazardous waste case, according to *USA Today* (December 17, 1999). In 1997, the fungicide Dovicide™ (sodium ortho-phenylphenate), which has since been discontinued by Dow Chemical, was spilled while being loaded on to a passenger jet at Miami International Airport. After breathing the fumes, passengers were evacuated. An investigation following this incident uncovered a 1995 spill of the chemical Dioxital™ and a subsequent fire at the same airport. Dioxital™ is highly flammable and can explode when exposed to heat. The chemical had been shipped illegally from Mexico to Miami aboard an American jet and instead of being disposed of after the fire, it was left at the airport for more than three years, according to *USA Today*. This incident was only "one of a series," admitted American. In other cases, airline employees transported cartons without finding out what they contained and mishandled cargo even though they knew it carried hazardous materials. American was charged with violating federal regulations from 1995 through 1999 by carrying flammable, corrosive and poisonous chemicals on passenger carriers. American must pay \$2 million to the Miami-Dade Fire Department's hazardous materials division and \$6

million to the federal government and also must begin a court-supervised program to monitor hazardous waste handling at each airport it serves.

## California Department of Pesticide Regulation Reports Increase in Pesticide Use in 1998

Pesticide use keeps going up in California. The California Department of Pesticide Regulation (DPR) released a



pesticide use report saying that California pesticide use increased from 204.8 million pounds in 1997 to 215 million pounds in 1998, a 5% increase. Increased use of "reduced-risk" pesticides (to which DPR applies a broad definition) accounted for much of the overall pesticide use increase, says the report.

However, use of pesticides classified as probable human carcinogens by EPA increased by about 3%, from 24.5 million pounds in 1997 to 25.3 million pounds in 1998. Data also shows that the use of some highly toxic pesticides dropped to their lowest levels in years. Methyl bromide, a highly toxic fumigant, declined to its lowest level since 1991. Chlorpyrifos and diazinon also show a decline in use, according to the report. Use of cholinesterase-inhibiting pesticides and pesticides classified as reproductive toxins also dropped. For a copy of the report, see [www.cdpr.ca.gov/docs/pur/purmain.htm](http://www.cdpr.ca.gov/docs/pur/purmain.htm).

## Oregon Governor Signs Victories in the Right-to-Know Bill Biotech Arena

With the passage of the Oregon Right-to-Know Bill, HB 3602, in September, Oregon became the third state (joining California and New York) to establish a system to closely track pesticide use. Beyond Pesticides/NCAMP applauds Governor Kitzhaber for signing the bill and all organizations involved in the pushing of this legislation.

The Oregon Department of Agriculture (ODA) will now develop a system to collect and organize information on pesticide use in Oregon and make that information available to the public. Businesses and government agencies will be required to report their pesticide use by type and quantity applied, purpose and type of site, month applied, and location of application. ODA will review this data and collection procedures in order to ensure accuracy, reliability, and validity.

The Oregon Pesticide Education Network (OPEN), a coalition of groups founded by the Northwest Coalition for Alternatives to Pesticides (NCAP), the Oregon Environmental Council, and the Oregon State Public Interest Research Group, pushed for the signing of the legislation. OPEN will watchdog the bill's implementation process. OPEN will also push for specific locations of pesticide applications to be reported so that detailed environmental monitoring, studies of human exposure to pesticides, and site specific research on pest management can be conducted in the future. OPEN will also urge that pesticide data be made available to the public in a user-friendly, electronic format. *Contact Neva Hassanein, NCAP, P.O. Box 1393, Eugene, OR, 97440, 541-344-5044.*

As consumers' opinions weigh in against genetically engineered (GE) food products, major food companies are following suit. Major health food companies

Whole Foods and Wild Oats are the largest U.S. food retailers to ban GE ingredients in products carrying their brand name.

Whole Foods, which is based in Austin, Texas, operates 103 stores in 22 states and Washington,

DC, and has more than 600 food products carrying its name. Boulder, Colorado-based Wild Oats operates 110 stores in 22 states and British Columbia and has approximately 700 products under its own brand. 60% of U.S. grocery products have been estimated to contain ingredients derived from GE crops, such as corn or soybeans, but major supermarket chains show no signs of considering a ban on GE ingredients, according to a spokesman for major food processors.

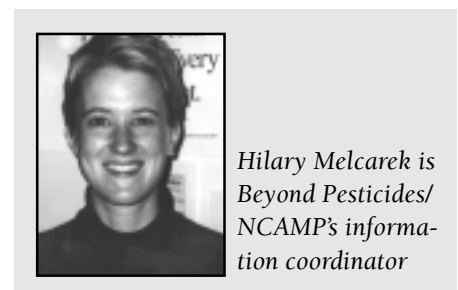
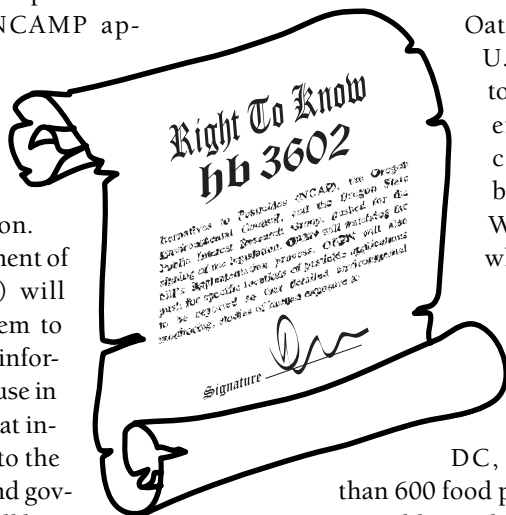
To be sure its products are truly GE-free, Whole Foods will test all ingredients that can be genetically modified, while Wild Oats will take the word of its suppliers. "It's really not my position to say genetically engineered is a good thing or a bad thing," said Jim Lee, president and chief operating officer of Wild Oats. "It's a matter of having a shopping choice." Wild Oats products will be labeled sometime in the next year to say that the foods contain no GE ingredients, said Lee. According to Margaret Wittenberg, vice president of governmental and public affairs for Whole Foods, all but a handful of Whole Foods products are already GE-free. Whole Foods has not labeled prod-

ucts, but has distributed brochures in stores about the plan.

In another big development, Frito-Lay, owned by PepsiCo, recently announced that the company will tell its corn suppliers it will no longer accept GE corn for its products. The anti-biotech plan is contained in contracts Frito-Lay is currently sending to its hundreds of farmers. Last year the company bought 1.2 billion pounds of corn for its products — a tiny fraction of the U.S. crop, according to the *Associated Press*.

Johnny's Selected Seeds, a supplier to organic growers, based in Albion, Maine, has also announced its decision not to sell or buy GE seeds. The Northeast Resistance Against Genetic Engineering (NERAGE), an umbrella group of anti-biotech activists in the Northeast, targeted the company for publishing a statement in its 1999 seed catalog suggesting it might offer GE varieties in the future. Several major growers in New England said they would not buy from Johnny's until the company stated it would not use GE seeds.

Also, EPA announced that it will require farmers growing Bt corn to plant structured refuges containing at least 20% conventional corn. Farmers growing Bt corn in cotton areas must plant at least 50% non-Bt corn. These refuges are expected to help delay the development of resistant insects. EPA is asking that farmers voluntarily establish refuges as buffers on the perimeters of fields to protect non-target species, such as monarch butterflies. Registrants are required to conduct expanded field monitoring to determine whether insects are developing resistance to Bt.



Hilary Melcarek is Beyond Pesticides/NCAMP's information coordinator

# An Open Letter to Public Officials on Mosquito-Borne Disease Control from Beyond Pesticides/National Coalition Against the Misuse of Pesticides

Dear Local and State Public Officials:

While we believe that something must be done to control adult mosquitoes that are known to carry dangerous diseases that pose a public health threat, we believe it is essential that local and state governments adopt procedures to: (i) identify the diseases that it considers a threat (including its life threatening and long-term effects); (ii) establish a disease surveillance system; (iii) release information on the numbers of mosquitoes found to carry the disease and their location; (iv) take steps to eliminate and control breeding areas and those areas that have been found to be inhabited by the disease carrying mosquitoes; and, (v) disclose any chemical use before application with information on potential adverse effects. Before taking action to control adult mosquito populations, you should explain to the public why breeding site reduction, biological larviciding and protective repellants have not achieved adequate control.

We share the concern about the potential for mosquito-borne disease in our community. However, we are also concerned about the potential exposure of large portions of our population to toxic pesticides that can also have serious adverse health effects.

The active ingredients in pesticide products are, as a rule, toxic materials that are intended to kill living things. While their human toxicity and ecological effects vary, depending on the specific materials, they can cause harm. A product's "inert" ingredient(s), which more often than not composes the majority of the pesticide formulation, can be more toxic than the active ingredient, even though it is not disclosed on the product label, nor made known to decision makers.

The locality and state should expand its larviciding efforts with biological controls at the front end, rather than focus on the less efficient and effective practice of adulticiding at the back end with toxic materials. With a more aggressive education campaign on the hazards of pesticides used in adulticiding programs, the public would better appreciate the need to help in the effort to eliminate breeding sites, such as containers and other objects/areas that can collect water, on their property.

Given findings of pesticide adverse effects, incomplete safety data, and clear legal restrictions on pesticide safety claims, public officials should never refer to pesticides as "safe" or "harmless." The *Federal Insecticide, Fungicide, Rodenticide Act* (FIFRA), 7 U.S.C §§ 136 et seq., requires that pesticides are registered and prohibits those who sell or distribute pesticides from making claims that substantially differ from claims made during the registration process. 7 U.S.C. § 136j(a)(1). The Environmental Protection Agency (EPA) has limited what can be said regarding the safety of pesticides. Pursuant to 40 CFR 162.10(a)(1), EPA has defined "false or misleading statements" to include the following: "(ix) Claims as to the safety of the pesticide or its ingredients, including statements such as "safe," "nonpoisonous," "harmless" or "non-toxic to humans and pets . . ."

As you may know, EPA is beginning to more fully evaluate the family of organophosphate pesticides, which includes malathion and naled (Dibrom™), because of the additive and cumulative effects associated with human exposure. The agency has already found that public exposure to most of the organophosphates exceeds acceptable risk standards from dietary exposure alone. This raises serious questions when considering non-dietary or non-agricultural exposure that certainly occurs as a result of mosquito adulticiding.

I have attached *Approaches to Dealing with Mosquito-Borne Diseases*, which outlines what we believe are the necessary steps in a program to protect the public from infected mosquitoes and pesticides. We hope that you can agree to this approach.

We look forward to working with you and other government agencies in taking proactive measures to protect public health.

Sincerely,

Jay Feldman  
Executive Director

# Approaches to Dealing with Mosquito-Borne Diseases

**Mosquito control and pesticide spraying.** Mosquito control is best achieved through a prevention pro-gram that eliminates breeding areas and, when necessary, disrupts the breeding cycle of the insect through the use of biological larvicide. (See *Beyond Pesticides/NCAMP's mosquito management packet*.) A growing number of mosquito abatement officials reject pesticide spray programs aimed at adult mosquitoes, calling these approaches ineffective in controlling mosquito populations. However, in a public health crisis, where infected adult mosquitoes have been identified and people's lives are in danger, spray programs are intended to "knock-down" the large mosquito population and supplement prevention efforts.

Does this mean that Beyond Pesticides/NCAMP endorses aerial or ground spraying with pesticides for mosquito control? No. Does it mean we accept spraying in a documented public health crisis, assuming full public disclosure to the public? Yes, reluctantly, and only if the program is accompanied by strategic efforts to eliminate/control breeding areas of the specific mosquito. Mosquito species vary in their habitat.

**Establishing a good prevention program.** Prevention is the best cure for pest problems. It is simply ineffective to ignore all the preventive steps that can be taken to limit the potential for mosquito infestation. If jurisdictions are worried about the spread of mosquito-borne disease, prevention efforts should be increased substantially so that standing water, including small amounts such as puddles, are eliminated.

**A Tiered Approach.** It is critical to adopt an ecologically sound approach to mosquito control, one that integrates a number of practices, in order to reduce the risks to human and environmental health. In order to manage mosquitoes, and thereby reduce the risk of disease outbreak, we recommend the four-tiered hierarchical program, adapted from the February 18, 2000 proposal by the New York Department of Health (See Table 1):

**Responding to a crisis.** Before the decision to spray for mosquito control is made, several steps must be taken:

- ▶ Surveillance data must show that there are indeed infected mosquitoes carrying the disease (the identification of infected carriers, such as birds, should not be a trigger for spraying);
- ▶ Public health officials must disclose the hazards of pesticides, explaining that they are not registered as "safe" materials, but as poisons intended to kill, and the spray area must be limited to the extent possible
- ▶ Choose the lesser of evils if spraying is to occur by avoiding the use of organophosphate pesticides and choosing

**Table 1: Tiered Approach to Mosquito Management\***

Tier	Circumstances	Responses
I	No historical or current evidence of life-threatening virus	<ul style="list-style-type: none"> <li>• Education campaign</li> <li>• Larval mosquito surveillance</li> <li>• Larval mosquito habitat source reduction</li> <li>• Passive human and bird surveillance</li> <li>• Adult mosquito surveillance, document species and distribution, lower lab testing priority</li> <li>• Local environmental assessments</li> <li>• Local disease risk assessments</li> </ul>
II	Historical evidence of virus (or local health units bordering those with historical evidence)	<ul style="list-style-type: none"> <li>• Education campaign, general public and provider community</li> <li>• Local environmental assessments</li> <li>• Local disease risk assessments</li> <li>• Active human and bird surveillance</li> <li>• Larval mosquito surveillance</li> <li>• Larval mosquito habitat source reduction</li> <li>• Larval mosquito control with biologicals</li> <li>• Adult mosquito surveillance and lab testing</li> </ul>
III	Current evidence of life-threatening virus presence in individual locations (virus isolation or evidence of infection)	<ul style="list-style-type: none"> <li>• Education campaign, general public and provider community</li> <li>• Active human and bird surveillance</li> <li>• Larval mosquito surveillance</li> <li>• Larval mosquito habitat source reduction</li> <li>• Larval mosquito control with biologicals</li> <li>• Larval mosquito habitat source reduction</li> <li>• Adult mosquito surveillance, lab testing</li> <li>• Adult mosquito control, ground application</li> </ul>
IV	Current evidence of life-threatening virus presence in several locations (virus isolation or evidence)	<ul style="list-style-type: none"> <li>• Education campaign, general public and provider community</li> <li>• Active human and bird surveillance of infection)</li> <li>• Larval mosquito surveillance</li> <li>• Larval mosquito habitat source reduction</li> <li>• Larval mosquito control with biologicals</li> <li>• Adult mosquito surveillance, lab testing</li> <li>• Adult mosquito control, ground and aerial application, if required</li> </ul>

\* adapted from New York State Department of Health proposed Prevention, Response, and Control, February 18, 2000.

botanical-based chemicals, including synthetic pyrethroids. (See *Beyond Pesticides/NCAMP factsheet.*)

**Key disclosure issues.** To avoid deceptive and misleading proclamations about pesticide “safety” from public officials, it should be said that pesticides are hazardous materials that can and do harm people. Their use should be described in the context of the public health crisis, but the potential harm associated with pesticide exposure should not be discounted or dismissed.

The public should be alerted that pesticides:

- ▶ are not safe;
- ▶ adversely affect the nervous system and can cause long-term effects;
- ▶ can contain toxic ingredients that are protected as trade secrets and contaminants not disclosed on the product label or to public officials;
- ▶ most often have *not* been fully tested for a range of effects, their additive and synergistic properties, or for their impact on vulnerable population groups like children and the older population.
- ▶ should be avoided and steps should be taken to minimize exposure, such as closing windows, turning off air conditioners, removing shoes before entering homes, cover outside furniture, etc.

If pesticides are sprayed indiscriminately from the air or ground, the public should be notified in advance of exactly where and when the spraying will take place, and what is being used, so that people can take some precautionary measures.

**Choosing the less of pesticide evils in a public health crisis.** A number of synthetic pyrethroids have been used or proposed for use in the battle against disease-infected mosquitoes. As a chemical family, synthetic pyrethroids, while often shorter-lived than many other chemicals such as organophosphates like malathion and naled (Dibrom™), are neurotoxic and pose a special threat to those with allergies. Their hazards should not be minimized or trivialized. Pyrethroids are usually very toxic to fish and bees. Some have been shown to disrupt the endocrine system, putting developing organisms at future health risk. Pyrethroids are often mixed with synergists such as piperonyl butoxide (PBO), which can depress liver function and the body’s ability to detoxify chemicals.

Pyrethroids break down more rapidly than organophosphates. Organophosphates often break down to other compounds of equal or greater toxicity than the parent compound. For example, malathion breaks down to malaoxon, another highly toxic substance. Organophosphates, as a family of chemicals, have a common mechanism of toxicity and thus exposure to them must be evaluated together, recognizing that the effects of exposure are additive and cumulative. Chronic effects to the nervous system have been documented from organophosphate

exposure. A preliminary review by EPA in 1997 found that current level of exposure to organophosphates just from the diet far exceed even EPA’s acceptable limits, which are thought my many to be too weak.

**Looking at the long-term.** A public health crisis involving mosquitoes should be controlled in the long-term through proper preventive action aimed at public education and programs to eliminate breeding areas, accompanied by biological controls to disrupt insects in their larval stage. A sustained insecticide spray program will not only put the public and the environment at considerable risk, it will diminish the effectiveness of the chemicals used because of insect resistance. The spraying kills off natural predators of insects, including birds, fish and other insects, and results in insect resistance, which in turns leads to a larger problem in the future.

**Table II. Precautionary Measures if Pesticides Are Used**

If pesticides are used, the following steps should be taken by the jurisdiction (town, city, county or state) conducting the spraying:

- ▶ Notify the public in advance of the spraying so that precautionary actions can be taken by people.
- ▶ Provide the public with precautionary measures to reduce exposure to pesticides, such as leaving area, closing windows, turning off air intake on cooling or air handling equipment, taking toys and lawn furniture inside, and covering swimming pools.
- ▶ Monitor public for adverse health effects by setting up a hotline for receiving reports, collecting hospital records, and requiring physician reporting of incidents.
- ▶ Monitor pesticide levels in the environment through wipe tests of outdoor and indoor surfaces, checking air conditioner filters, evaluating water samples from bodies of water, and conducting soil and food residue tests from gardens and farms.
- ▶ Advise hospitals, schools and other buildings with especially vulnerable populations to take extra precautionary measures to try to prevent pesticides from making their way inside buildings.
- ▶ Monitor pesticide equipment calibration and application procedures to verify that there is strict compliance with any label instructions, including prohibitions on spraying and drifting of certain pesticides over bodies or water, as well as requirements for storage and disposal, and equipment cleaning.

# Campaign to Stop Poison Poles

## A Beyond Pesticides/NCAMP Education and Action Project

Jay Feldman and Greg Kidd, J.D.

The chemicals used as wood preservatives are among the most toxic pesticides known to humankind. Used in wood utility poles, railroad ties and in other similar applications, wood preservatives constitute the single largest pesticide use in the United States, accounting for nearly one billion pounds annually. Beyond Pesticides/NCAMP began to work for a more responsible federal policy on these chemicals back in the early 1980s when the Environmental Protection Agency (EPA) put them into a special review process (then known as Rebuttable Presumption Against Registration) because of the recognized hazards associated with their continued use. The process ended in 1987 with the prohibition of a number of uses of pentachlorophenol.

Beyond Pesticides/NCAMP's campaign continued with the publication of our report *Poison Poles: A Report About Their Toxic Trail and the Safer Alternatives* in 1997. Since the release of *Poison Poles*, we have continued to scrutinize EPA as the agency continues its plodding reevaluation of the three major wood preservatives, pentachlorophenol (penta), creosote and arsenicals. EPA is currently focusing its attention on penta, 95% of which is used to treat utility poles. With the release of our second report, *Pole Pollution: New Utility Pole Chemical Risks Identified by EPA While Survey Shows Widespread Contamination* in December 1999, we present EPA's hazard and risk evaluation of penta, released for the first time. Beyond Pesticides/NCAMP conducted a survey of over 3,000 utility companies in the U.S. and Canada in order to supplement EPA information with data on the real world use patterns of wood poles containing these toxic chemicals.

What we discovered is shocking. For example, EPA calculated that people hired to apply penta to in-service utility poles face a risk of cancer that is 3.4 million times higher than acceptable. Through our survey, we discovered that over 69% of the responding utilities are in the practice of giving away poles taken out of service. These poles are then milled and used around people's homes for fencing, land-

scaping and other building projects. EPA has failed so far to consider this type of exposure in calculating the risks associated with residential exposure to penta. There is no good method to dispose of treated wood without causing further contamination. Penta use should stop and the pipeline should be shut down. EPA has not yet considered the contaminants of penta, namely dioxin, furans, and hexachlorobenzene (HCB) – all of which rank at the top of the toxicity list – in its risk assessment. Because of this, the agency now has to draw out this process even further as it assesses the additional risks caused by the contami-

nants. Beyond Pesticides/NCAMP awaits the latest science chapter on penta, which EPA has promised to provide us with in late spring of 2000. We will follow the release of that information with a supplemental report.

Beyond Pesticides/NCAMP's campaign on utility poles now has two major prongs: to convince utility companies to be responsible corporate citizens and stop using toxic wood utility poles; and, to advocate that EPA ban all uses of penta. We know this can be done because of the outstanding efforts of a utility that has stopped using treated

wood poles, The Energy Cooperative in Newark, Ohio. Under the leadership of Mr. George Manning, that utility is now replacing all its wood poles with recycled steel poles. The Energy Cooperative has proven the economic feasibility of using alternative materials. EPA can no longer justify the continued use of penta, given the health risks associated with penta and the availability of alternative materials. We will continue to provide our input to EPA and inform the public as the agency moves toward a final decision on the continued use of penta and the other wood preservatives in 2000.

The following article is a summary of the most important findings contained in the full *Pole Pollution* report. The entire report can be found on our website at <http://www.beyondpesticides.org>. Excerpts from our earlier report *Poison Poles* can also be found on our website or is available for \$22 ppd. Contact Beyond Pesticides/NCAMP at 701 E St., SE, Suite 200, Washington, DC 20003.

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# Pole Pollution

## New Utility Pole Chemical Risks Identified by EPA While Survey Shows Widespread Contamination

Jay Feldman and Greg Kidd, J.D.

### Introduction

We do not normally think of a utility or telephone pole as a hazardous material, but it is. It is so hazardous that EPA, in a preliminary science review, recently disclosed that a child exposed on an ongoing basis to the soil around a pole treated with pentachlorophenol (penta), one of several wood preservatives used in this way, has a chance of getting cancer that is 220 times higher than normal. This exposure alone accounts for at least 17,000 cases of cancer among children. Two children born every day are destined to a fate of cancer from just this exposure to penta.<sup>13</sup>

Beyond Pesticides/NCAMP produced this study (i) to disclose and critique EPA's current effort to reevaluate the hazards of wood preservatives, including pentachlorophenol, and (ii) evaluate utility companies practices with regard to the use, storage and disposal of utility poles treated with these chemicals. The findings are troubling and at points shocking. They call for action to better protect public health and the environment from pentachlorophenol.

Study after study show that penta and other wood preservatives have made their way into the environment. Penta has been shown to migrate out of poles, contaminating soil, and water.<sup>14</sup> 100 percent of children tested in one study were found to have penta in their urine.<sup>15</sup> At least 314 Superfund or chemical waste sites in the U.S. have been contaminated with penta.<sup>16</sup> Concern for human health risks posed by wood preservatives lead twelve leading scientists to write the Administrator of EPA, Carol Browner, urging the agency to take action to stop this exposure. This same concern lead Beyond Pesticides/NCAMP to ask utility companies how they were handling their treated wood utility poles.

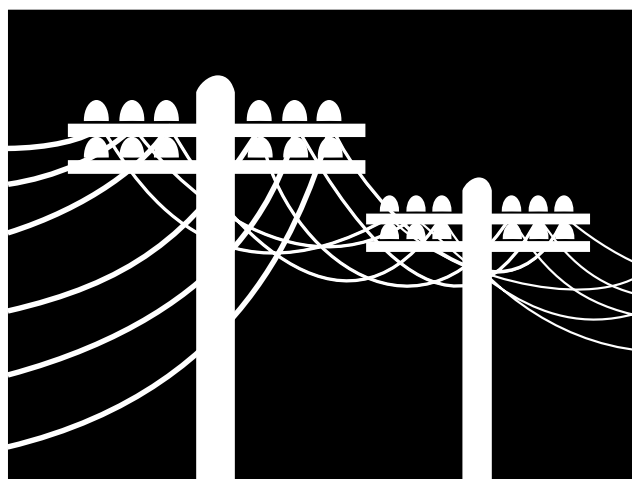
### Survey Sent to Over 3,000 Utilities in the United States and Canada

In light of EPA's review and the known hazards of wood preservatives, including pentachlorophenol, a survey was conducted

by Beyond Pesticides/NCAMP of utility companies across the United States and Canada to determine company practices with regard to utility poles. Since 93 percent of all penta produced is used to preserve wood utility poles,<sup>17</sup> this is no small issue for these companies. Beyond Pesticides/NCAMP also launched this study to bring real world or operational data to EPA's decision making process on continued use of wood preservatives, some of the most hazardous materials know to humankind. We began this effort with a survey of 3,000 plus utilities, which include investor owned utilities (IOUs), municipal utilities (MUNIs), rural electrification associations (REAs) and public utility districts (PUDs). Only 39 utilities in 24 states and Canada responded. None of the largest 100 IOUs chose to respond.

Beyond Pesticides/NCAMP views the survey as a basic tool for public right to know about the environmental practices of utilities across the country so that producers of treated wood poles can be adequately regulated to protect public health and environmental safety. After the distribution of the survey, the trade association for the wood treaters, the American Wood Preservers Institute (AWPI), immediately started a campaign to squelch participation in this survey. AWPI wrote to the utilities urging them not to cooperate with the survey. AWPI has a long history of seeking to weaken EPA's regulatory position on wood preservative restrictions and was extremely successful to that end during EPA's last review of the chemicals in the 1980's. In a memo from the association's president, utilities were told,

*It has recently come to the attention of the American Wood Preservers Institute that the National Coalition Against the Misuse of Pesticides (NCAMP) is surveying utilities around the country on their use of poles treated with creosote, penta and CCA—as well as their use of poles made of alternative materials such as concrete and steel. The survey includes a wide range of questions about usage and disposal practices.*



*Cooperating with this survey is not in the best interests of utilities. NCAMP is extremely biased against the use of preserved wood and will use the survey results to support their arguments against wood poles.*<sup>18</sup>

Thanks to those utilities that believe in disclosing basic business information as requested in the survey, the survey results provide a good sampling of what is going on across the country from utilities that inventory over one million utility poles covering at least 38,886 square miles (or 57,000 miles of road/pole miles).<sup>19</sup>

The culture of using utility poles treated with toxic wood preservatives runs deep in the utility industry. Furthermore, the method of managing, storing and disposing of poles shows a trail of poisoning and contamination with resulting hazards that surpass anyone's definition of acceptable. The public and the environment are at serious risk because of wood preservatives, including penta, and their use on utility pole.

Are utilities using utility poles that put the health of people and the environment at unacceptable risk? Yes. Could utilities decide not to use wood preservative-treated poles and utilize alternative approaches that do not present the same environmental and public health threat? Yes. Are they taking or planning to take this responsible step? No, gener-

ally they are not. These are the findings of Beyond Pesticides/NCAMP's survey of utility companies in the United States and Canada.

The survey reveals a number of widespread utility company practices that are of concern to Beyond Pesticides/NCAMP: storage of wood poles and giving away discarded poles to the public. It has been established that penta can, and does, leach out of wood utility poles.<sup>20</sup> The survey finds that 86 percent of the utilities store chemically treated wood poles on site. One utility reports storing as many as 7,200 poles at their facility. A typical utility pole of 12 inches in diameter and 45 feet in length contains 40 pounds of penta.<sup>21</sup> A utility yard storing 7,200 penta poles represents 288,000 pounds (144 tons) of penta that could leach into the soil and ground water.

One of the most shocking findings in this report, in addition to the extraordinarily high risk factors associated with children and worker exposure, is the fact that the majority of utilities surveyed give away or sell to the public poles taken out of service. This practice exposes the public to serious hazards associated with handling, sawing and using the contaminated wood. Despite this widespread practice, EPA does not currently consider this exposure in its risk calculation. Apparently, the agency assumes that the activity does not go on.

## Just How Hazardous is Pentachlorophenol?

Penta is currently banned in 26 countries around the world. It is a chlorinated aromatic hydrocarbon, which enables it to bioaccumulate in the human body, wildlife, and the environment. Commercial grade penta is contaminated with polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), and hexachlorobenzene (HCB): three related chemicals, which are all recognized as carcinogens, mutagens, teratogens and endocrine disruptors.<sup>1</sup> EPA's newly released draft review of penta finds extraordinary risks associated with typical exposure that a child might experience in communities across the United States that are dotted with pentachlorophenol-treated utility poles. What makes these findings even more shocking is EPA's failure to consider the risks associated with exposure to any of the contaminant ingredients that go into the alphabet toxic soup that is penta. EPA says it will get to that in the near future.

Penta is acutely neurotoxic, i.e. short-term exposure can cause sickness or death; at least 30 cases of penta exposure have resulted in death. Symptoms of mild penta poisoning include stuffy nose, scratchy throat, and tearing of the eyes. Skin contact can produce contact dermatitis and chloracne. A person experiencing systemic poisoning by penta would show symptoms of profuse sweating and intense thirst, rapid breathing and heart rate, fever, abdominal pain, nausea, weakness, lack of coordination, dizziness, anorexia, and coma.<sup>2</sup>

Penta targets the liver, kidneys and central nervous system with toxic effects occurring at low doses. Autopsies of victims

of fatal exposure to penta reveal changes in the brain, heart, kidneys, lungs, and liver.<sup>3</sup>

Chronic health effects from long term exposure to penta include: impairment of the immune system,<sup>4</sup> interference with reproduction, birth defects,<sup>5</sup> cancer,<sup>6</sup> genetic mutation,<sup>7</sup> and hormonal problems.<sup>8</sup> Clearly, penta is highly toxic.

Equally dangerous is that penta has been shown to be ubiquitous in the environment. A study in Arkansas found 100% of 197 randomly selected, 2-6 year old children tested had penta in their urine.<sup>9</sup> The National Health and Nutrition Examination Survey II (NHANES II) found penta in 79% of the general U.S. population.<sup>10</sup> A study of human milk samples provided by nursing mothers found that penta was present in all of the milk samples; there were no special, identified sources of penta exposure of the mothers.<sup>11</sup>

The combination of high toxicity and widespread contamination dictates that EPA treat the wood uses of penta no differently than the nonwood uses banned in 1987. As a result, it would be prudent and responsible to cancel all remaining uses of this unnecessary poison.

The new data disclosed in this report raises troubling issues about the risks to children and utility workers from utility poles. The report challenges utility companies to seek out alternative utility pole materials that once and for all put an end to the need for pentachlorophenol.

Utility companies must develop policies that minimize the risk to the public and the environment and move toward elimination of chemically treated wood utility poles.



One utility, Western Resources in Topeka, Kansas actually received an award in 1999 from the Kansas Department of Health and Environment for donating and converting discarded treated wood poles into such things as bird boxes and outdoor classrooms. Only one utility that we could identify distributed these poles with a Material Safety Data Sheet, which warns people that penta treated wood can cause irritation of the eyes and respiratory system. The MSDS says, "Pentachlorophenol has been found to have toxic effects in laboratory animals. . . Exposure to treated wood should be kept to a minimum. . . Exposure to penta during pregnancy should be avoided. . . Penta contains trace amounts of Hexa, Hepta, and Octochloro-dibenzo-p-dioxins, Hexa, Hepta, and Octachlorodibenzofurans, and Hexachlorobenzene. The State of California has listed Hexachlorodibenzo-p-dioxin and Hexachlorobenzene as chemicals known to the state to cause cancer." The EPA's draft

science chapter confirms the dangers associated with exposure to penta spelled out in the MSDS.

### EPA's Preliminary Science Review of Penta

EPA's preliminary science review of penta finds extraordinarily high risks to children, workers, and the environment, including unacceptable risk from food and water. It should be noted that EPA's draft science chapter does not address perhaps the most toxic components of penta, the contaminants listed in the MSDS, which include dioxins, furans and hexachlorobenzene. Each one of these toxic components alone account for high risk factors in addition to those calculated for penta itself. In fact, the scientific peer review of EPA's *Inventory of Sources of Dioxin in the United States* (1998) notes that, "dioxin on treated wood appears to be

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**Despite warnings about their hazards, widespread contamination, levels in human body tissue and fluids, extreme effects on workers and special risks to children, pentachlorophenol and the other wood preservatives have escaped the regulation necessary to adequately protect public health and the environment.**

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the largest flow of dioxins that were quantified, thus making treated wood a large reservoir of dioxin in the environment."<sup>22</sup>

In addition, penta and its contaminants have been determined to be endocrine disruptors, which act like hormones in the body during critical times in fetal development, when organs are forming, adversely affecting development, reproductive capacity, sexual development and causing diseases like cancer later in life. What makes these effects different from others is that they defy classical toxicology models which embrace the notion that the "dose makes the poison." In fact, with endocrine disruptors, like these wood preservatives, it is the *timing* of exposure, to minuscule doses at the parts per billion and even trillion level, that make these chemicals so destructive.

### Regulatory issues

Can we expect the current regulatory review of wood preservatives, including penta, to take restrictive action that would stop the use of these chemicals and the resulting poisoning and contamination? The history of EPA's pesticide program would say no. The program engages in risk equations that ignore important pieces of information, such as the pole giveaway programs cited in this report and basic toxicology data that is missing but would only add to the mountain of hazards already established. Equally important is the failure of the agency to consider less risky approaches than wood preservative-treated utility poles, that are economically viable but not widely used by the utility industry. To determine a regulatory outcome by asking an industry that has used wood

### Table i. Pentachlorophenol is Banned in 26 Countries<sup>12</sup>

All uses prohibited by final regulatory action due to health or environmental hazards.

Austria	Jamaica
Benin	Korea
Columbia	Liechtenstein
Costa Rica	Luxembourg
Denmark	Malaysia
Dominican Republic	Moldova
Egypt	Netherlands
Germany	Nicaragua
Guatemala	Panama
Hon Kong	Paraguay
India	Sweden
Indonesia	Taiwan
Italy	Yemen

preservative-treated utility poles since its inception whether it could use alternative pole materials like recycled steel, concrete or composite is to seal the fate of the decision in the hands of the status quo. That is, no change. EPA did just that in its last review of penta and other wood preservatives in 1981 (completed in 1987) when it said, "Due to the non-substitutability of the wood preservative compounds and the lack of acceptable non-wood or other chemical alternatives for many use situations, the economic impact which would result from an across-the-board cancellation would be immense."<sup>23</sup> Not true today. Our own research shows that the cost differential between treated wood and recycled steel poles is negligible in the short-term and benefits utility companies in the long-term.

Like other major EPA decisions that require a change in an industry's culture, very similar to moving farmers away from DDT and more modern pesticide-intensive operations, the public must get involved. The public will want to know: what the risk from contaminated soil around the pole in front of their homes or in the school yard means to their children's health; what are the impacts of reusing treated poles for outdoor classrooms; and, what does the storage and disposal of treated wood in the community mean for the health of people and the environment.

Rachel Carson wrote in *Silent Spring*, "Since the chlorinated hydrocarbons are persistent and long lasting, each application is merely added to the quantity remaining from the previous one."<sup>24</sup> The persistence of pentachlorophenol and its contaminants dioxin, furans and hexachlorobenzene have been established. The fact that they are contained in body tissues and fluids is established. The harm that they cause is established. It is time for their uses to stop. Alternatives are available and can be successfully and economically employed.

## Findings

### Preliminary Science Findings by EPA

- ▶ Residues of penta "in drinking water (when considered along with exposure from food and residential uses) pose an unacceptable chronic risk to children."
- ▶ Children exposed to penta in the soil around treated poles face a 2.2 in 10,000 (or 220 times higher than acceptable) risk of cancer. Just this exposure accounts for at least 17,000 cases of cancer among children. Two children born

every day are destined to a fate of cancer from just this exposure to penta.

- ▶ 13 of 14 occupations considered by EPA have unacceptable cancer risk, including risks as high as 3.4 in 1! How is that mathematically possible? Beyond Pesticides/NCAMP has been left to speculate that the unfortunate men and women whose job it is to apply fresh penta to standing wood poles become so contaminated with penta that they go on to contaminate their family, friends, and colleagues leading to an additional two and one-half cases of cancer.
- ▶ Over four people out of 10 who apply penta to wood in joinery mills and two people in a thousand who mix and load penta at pressure treatment plants are expected to get cancer from their exposure.
- ▶ Applicators of grease formulations of penta, used for retreatment of poles, face certain cancer.

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**Rachel Carson wrote in *Silent Spring*,  
"Since the chlorinated hydrocarbons are  
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application is merely added to the quantity  
remaining from the previous one."**

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### Utility Survey Findings

- ▶ 98.5 percent of utility poles in service are chemically-treated wood poles, 1.5 percent are alternative materials
- ▶ 56 percent of the poles in the survey are treated with pentachlorophenol.
- ▶ 34 percent of the utilities retreat their utility poles with fresh poisons during the poles' service life.
- ▶ 86 percent of the utilities store chemically treated wood poles on site.
- ▶ 69 percent of utilities responding to the survey give away or sell to the public wood preservative-treated poles taken out of service.
- ▶ One utility donated to the community treated wood poles that had been converted into bird boxes and outdoor classrooms.
- ▶ 18 percent dispose of the treated poles in local municipal landfills.
- ▶ Only five percent of respondents consider wood preservative-treated wood poles taken out of service as hazardous waste and dispose of them accordingly.
- ▶ Only one survey respondent distributes a Material Safety Data Sheet on the hazards of penta with the treated wood poles being sold or given away to the public.
- ▶ 27 percent of respondents indicated that they were considering alternative pole materials.



## Recommendations

The EPA and other scientific finding taken together with utility company practices, raise serious concern about public and environmental health and call for the following recommendations:

### EPA should:

- ▶ Immediately cancel all uses of penta and other wood preservatives with similar effects.
- ▶ Recall all existing stocks of penta.
- ▶ Begin phase-out the use of penta-treated replacement poles in 12 to 24 months.
- ▶ Prohibit the use of any remaining stocks of penta and other wood preservatives with similar effects.
- ▶ Require that all storage sites of treated poles are covered from the elements of weather.
- ▶ Define penta treated wood poles as hazardous waste and require their disposal as hazardous waste.
- ▶ Prohibit the giving away or sale of penta-treated poles taken out of service.
- ▶ Require utility companies to alert the public to the dangers associated with penta-treated poles.

### Utilities should:

- ▶ Stop the purchase of treated utility poles, and begin purchase of poles constructed out of alternative materials.
- ▶ Develop policies to protect workers, the public and environment from exposure to penta and other similarly dangerous wood preservatives.
- ▶ Stop the sale or give-away of discarded treated wood poles for public use.
- ▶ Dispose of discarded treated wood poles at licensed hazardous waste sites.
- ▶ Increase the use of alternative types of utility poles, working towards elimination of the use of chemically treated wood utility poles.

## Conclusions and Recommendations

Despite warnings about their hazards, widespread contamination, levels in human body tissue and fluids, extreme effects on workers and special risks to children, pentachlorophenol and the other wood preservatives have escaped the regulation necessary to adequately protect public health and the environment. The latest EPA science review and recent findings on dioxin contamination associated with penta and treated utility poles calls for a break with the history of special interest politics that has allowed the continued use of wood preservatives. They can be economically replaced by safer alternative pole materials, such as steel, concrete and composite or by burying lines.

Wood preservatives, used to treat millions of utility poles across the country, pose a serious threat to public health and the environment. The chemicals, used widely to extend the life of wood products, including over 130 million utility poles, contain some of the most hazardous toxic contaminants on the market. The chemicals include pentachlorophenol, creosote, arsenic and chromium VI and contaminants such as dioxin, furans and hexachlorobenzene. The sole purpose of these chemicals is to preserve wood by killing organisms that come in contact with the wood poles such as insects, bacteria and fungus.

Penta leaves a toxic trail, which includes the production of wood utility poles, and their retreatment, storage and disposal. There are at least 795 wood preserving facilities across the country and hundreds of Superfund hazardous waste sites that are contaminated with penta. Treated poles continue to pollute after they are taken out of service and used as fence posts, bird houses, outdoor classrooms, or other building material.

Beyond Pesticides/NCAMP's Poison Poles Campaign began with the development and distribution of *Poison Poles: Their Toxic Trail and the Safer Alternatives*. *Poison Poles* successfully brought the issue of the widespread contamination and poisoning from the use of wood preservatives on utility poles and availability of alternatives in front of utility industry executives and decision makers, environmental regulators, consumer activists, utility regulators and the general public.



With an eye toward EPA's current reevaluation of the wood preservatives, starting with penta, Beyond Pesticides/NCAMP recognized the importance of following up *Poison Poles* with a survey of utility companies. The survey has provided real world numbers with which to measure the EPA's risk assessment of penta. What has been discovered is alarming.

Utility companies, in general, prefer penta treated wood utility poles to any other type, according to survey results. Most utility companies store treated wood utility poles on site. These stored poles represent large, concentrated reservoirs of penta and other wood preservatives that leach out of the poles into soil and ground water. Many utility companies retreat their aging stock of wood poles to increase their lifespan. Retreating wood poles provides a fresh source of penta to contaminate our environment and our bodies.

Most alarming is the majority of utility companies that give away or sell their used treated wood poles to the public. The unsuspecting handy-person that cuts the treated poles to size brings the highly toxic penta and its deadly contaminants into even more intimate contact with the public.

EPA has determined that penta and its contaminants do leach out of treated wood utility poles. EPA has noted that dioxins in treated wood appear to be the largest quantified flow of dioxins into the environment. EPA calculated cancer risks for children as a result of their exposure to penta. The agency found that children face a risk of cancer that is as high as 220 times greater than levels deemed acceptable from exposure to soil contaminated with penta treated wood poles; the same penta treated wood poles that are planted in countless neighborhoods across the country.

EPA recognizes that the unfortunate people that are exposed to penta on the job face an astronomically high risk of cancer. The most shocking example is the risk faced by people retreating wood poles with liquid penta; according to the EPA, they have a 100 percent chance of getting cancer.

What has emerged since the survey was launched in Summer 1999 is the wood treatment and utility industries' unwillingness to have a public debate on key issues that affect public health and environmental safety. The American Wood Preservers Institute's efforts to stop the free flow of information to the public on basic utility industry practices, as evidenced by its president's memo telling utilities not to cooperate with the survey, raises serious concerns about what the industry has to hide. The new EPA assessments of extraordinarily high risk associated with penta-treated utility poles seem to shed light on why they want public debate stopped. Pentachlorophenol and its contaminants have poisoned and contaminated long enough. The industry knows this.

What will it take to reduce and eliminate this human health and environmental threat? It will take an active public to push for the adoption of alternatives and a more aggres-

sive regulatory climate to provide improved protection of public health and the environment. It will take EPA breaking with its history and it will take a cultural shift on the part of the utility industry.

## Taking Action

### What people and community groups can do:

In order to begin a dialogue with local and regional utility companies, Beyond Pesticides/NCAMP developed the survey discussed in this report. The survey questions utility companies on their utility pole practices.

- ▶ Contact your local utility and arrange for a meeting with the chief executive officer.
- ▶ Ask that the survey be completed. If you cannot get a meeting, mail the survey.
- ▶ Present the findings of *Pole Pollution* and *Poison Poles*.
- ▶ Make a formal request that the utility consider and adopt a policy to stop purchasing treated wood poles and begin purchasing the alternatives.
- ▶ Ask for a response by a specific date.
- ▶ Begin a community drive for the changes you are requesting if the utility is unresponsive.
- ▶ Circulate a petition to community and civic organizations, through religious institutions, school groups and local environmental and social groups to generate support for changes.
- ▶ Enlist local leaders, such as politicians, clergy, educators, and others.
- ▶ Identify wood preservative problems in your community or nearby communities.
- ▶ Notify the local media (newspaper, television, and radio) about the campaign, the survey and your concerns.
- ▶ Hold a public forum and invite the community and engage the utilities in debate on the subject.

### Contact EPA

Tell EPA to remove pentachlorophenol from the market because it is no longer needed. Write Carol Browner, Administrator, EPA, 401 M Street, SW, Washington, DC 20460.

### Contact Beyond Pesticides/NCAMP for More Information

701 E Street, SE  
Washington, DC 20003  
202-543-5450 (phone) 202-543-4791 (fax)  
info@beyondpesticides.org

To view a complete copy of *Pole Pollution* visit Beyond Pesticides/NCAMP on line at [www.beyondpesticides.org](http://www.beyondpesticides.org).

## Notes

- <sup>1</sup> U.S. Environmental Protection Agency, National Center for Environmental Assessment website, URL: <http://www.epa.gov/nceawww1/dioxin.htm>; Mukerjee, D, Health Impact of Polychlorinated Dibenzop-dioxins: A Critical Review, *J. Air & Waste Manage. Assoc.* 48: 157-165, (1998); Etoxnet PIP Hexachlorobenzene, URL: <http://ace.orst.edu/cgi-bin/mfs/01/pips/hexachlo.htm>; World Wildlife Fund, 1996. Known and Suspected Hormone Disruptors List, URL: <http://www.wwfcanada.org/hormone-disruptors/science/edclist.html>.
- <sup>2</sup> Morgan, D.P. 1989. Recognition and Management of Pesticide Poisonings. Washington, DC: US Environmental Protection Agency. p. 73. Cited in: Fisher, 1991; Ecobichon, Donald J. 1991. Toxic Effects of Pesticides. In Casarett and Doull's Toxicology. The Basic Science of Poisons. Third Edition. Curtis D. Klaassen, Mary O. Amdur, and John Doull editors. Macmillan Publishing Company, NY. Cited by: Cooperative Extension Agency, 1993. Pentachlorophenol.
- <sup>3</sup> Cooperative Extension Agency, 1993. Pentachlorophenol, ExToxNet Pesticide Information Profile, revised 6/96, URL: <http://ace.orst.edu/cgi-bin/mfs/01/pips/pentachl.htm>.
- <sup>4</sup> Kerkvliet, et al., Humoral Immunotoxicity of Polychlorinated Diphenyl Ethers, Phenoxyphenols, Dioxins, and Furans Present as Contaminants of Technical Grade Pentachlorophenol (1985), *Toxicology*, 36: 307-24 (see extensive articles cited).
- <sup>5</sup> Cooperative Extension Agency, 1993. Pentachlorophenol.
- <sup>6</sup> Toxicology and Carcinogenesis Studies of Two Pentachlorophenol Technical-Grade Mixtures (CAS No. 87-86-5) in B6C3F1 Mice (Feed Studies), TR-349, URL: <http://ntp-server.niehs.nih.gov/htdocs/LT-studies/TR-349.html>; Environmental Health Criteria 71, Pentachlorophenol, World Health Organization, Geneva, 1987, pp. 11-12. Richard Alexander, 1996. A Developing Toxic Tort: Lumber Mills, Log Cabins, Leukemia, Lymphomas and Soft Tissue Sarcomas: The Case Against Pentachlorophenol. URL: <http://seamless.com/alexanderlaw/txt/article/penta.html>; Dioxin in pentachlorophenol health advisory; Williams, P.L. 1982. Pentachlorophenol, an assessment of the occupational hazard. *Am. Ind. Hyg. Assn. J.* 43: 799-810; U.S. Environmental Protection Agency. 1990. Identification and listing of hazardous waste; Wood preserving. *Federal Register* 55 (235) 50450-50490. Cited by Fisher, 1991; EPA 1996. Pentachlorophenol, Integrated Risk Information System, last revised 1/1/96.
- <sup>7</sup> U.S. Environmental Protection Agency, 1987. Pentachlorophenol health advisory; Williams, 1982; Agriculture Canada. 1987. Pentachlorophenol discussion document. Ottawa, Ontario: Pesticides Directorate; U.S. Environmental Protection Agency, 1990. Identification and listing of hazardous waster. Cited by: Fisher, 1991.
- <sup>8</sup> ATSDR, 1992. Toxicology Profile for Pentachlorophenol. Agency for Toxic Substance and Disease Registry. Draft. Cited by: Cooperative Extension Agency, 1993. Pentachlorophenol.
- <sup>9</sup> Hill, R. Jr. et al., 1989. Residues of Chlorinated Phenols and Phenoxy Acid Herbicides in the Urine of Arkansas Children, *Arch. Environ. Contam. Toxicol.* 18: 469-474.
- <sup>10</sup> Murphy R.S., Kutz F.W., Strassman S.C., 1983. Selected pesticide residues or metabolites in blood and urine specimens from a general population survey. *Environ. Health Perspect.* 48: 81-86.
- <sup>11</sup> Gebefügi I., and Korte F., 1983. Pentachlorophenol Contamination of Human Milk Samples. *Chemosphere Vol.* 12, No. 7/8: 1055-1060.
- <sup>12</sup> From – Pesticide Action Network, “1995 Demise of the Dirty Dozen,” and United Nations, “Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved By Governments,” Fifth Issue, 1994.
- <sup>13</sup> Currently, there are 78,292,000 children between the ages of 0-19. At a risk factor of  $2.2 \times 10^{-4}$  (or 2.2 in 10,000), the number of children contracting cancer totals 17,224.24. Since the annual number of live births is 3,880,894 (1997) and 10,633 children are born every day, applying the risk factor of 2.2 in 10,000 results in over 2 child cancer victims a day just from this use. These statistics are based on tabulations from the U.S. Census Bureau, National Estimates Annual Population Estimates by Age Group and Sex, Selected Years from 1990 to 1999, URL: <http://blue.census.gov/population/estimates/nation/intfile2-1.txt>; and the National Center for Health Statistics, Centers for Disease Control and Prevention, URL: [www.cdc.gov/nchs/fastats/births.htm](http://www.cdc.gov/nchs/fastats/births.htm).
- <sup>14</sup> U.S. Environmental Protection Agency, 1999. Science Chapter for the Reregistration Eligibility Decision Document (RED) for Pentachlorophenol (PC Code: 063001, Registration Case Number 2505), citing Electric Power Research Institute, 1997, Report on the Fate of Wood Preservatives in Soils Adjacent to In-Service Utility Poles in the United States. Prepared by META environmental, Inc., Atlantic Environmental Services, Inc. Utah State University and Science & Technology Managements, Inc., EPRI TR 104968.
- <sup>15</sup> Hill, R. Jr. et al., 1989. Residues of Chlorinated Phenols and Phenoxy Acid Herbicides in the Urine of Arkansas Children, *Arch. Environ. Contam. Toxicol.* 18: 469-474.
- <sup>16</sup> Agency for Toxic Substance and Disease Registry, 1999. Site Containment Query, URL: [http://atsdr1.atsdr.cdc.gov:8080/gsql/sitecontam.script?in\\_cas=pentachlorophenol&in\\_cas2=&in\\_cas3=](http://atsdr1.atsdr.cdc.gov:8080/gsql/sitecontam.script?in_cas=pentachlorophenol&in_cas2=&in_cas3=)
- <sup>17</sup> American Wood Preservers Institute (AWPI). The 1995 Wood Preserving Industry Protection Statistical Report, September 1996, p. 7.
- <sup>18</sup> Ramminger, Scott. President, American Wood Preservers Institute. Memorandum to All Electric Utility Executives, August 13, 1999.
- <sup>19</sup> Based on information compiled from utility and industry sources, the number of distribution poles was estimated using a weighted average of 28.5 poles/pole mile in cases where the number of poles was not provided.
- <sup>20</sup> U.S. Environmental Protection Agency, 1999. Science Chapter for the Reregistration Eligibility Decision Document (RED) for Pentachlorophenol (PC Code: 063001, Registration Case Number 2505), p. 34, citing Whitar, D.M. et al. 1994. Evaluation of leachate quality from pentachlorophenol, creosote and ACA wood products. Environment Canada DOE FRAP 1993-36.
- <sup>21</sup> *Ibid*, p. 39.
- <sup>22</sup> U.S. Environmental Protection Agency, National Center for Environmental Assessment, Office of Research and Development, 1998. Report on the Meeting to Peer Review “The Inventory of Sources of Dioxin in the United States” Final Report. EPA Contract No. 68-D5-0028.
- <sup>23</sup> U.S. Environmental Protection Agency, 1981. Creosote, Inorganic Arsenicals, Pentachlorophenol: Position Document No. 2/3, p. 3.
- <sup>24</sup> Carson, Rachel. *Silent Spring*, Houghton Mifflin Company (1962), p. 58.

# School Environment Protection Campaign

## Building the movement behind the School Environment Protection Act (SEPA)

**M**omentum behind the *School Environment Protection Act* (SEPA) continues to build. This federal bill, S.1716 and H.R. 3275, creates national standards to protect children and school staff from pesticides used at their schools. SEPA establishes a process that creates incentives for schools to use pest management practices that do not rely on toxic pesticides. Under the bill, if toxic pesticides are used in a school, parents, guardians, and staff will receive advance notice of use and information on product hazards. SEPA gives greater national prominence to the issue of students and teachers and the hazards of pesticides and provides an opportunity to educate on the availability of alternative practices that are not reliant on dangerous chemicals.

Since SEPA's (S.1716) introduction by Senators Robert Torricelli (NJ) and Patty Murray (OR) in the U.S. Senate, Senator Joseph Lieberman (CT) signed on with the release of his General Accounting Office (GAO) report, *Pesticides: Use, Effects, and Alternatives to Pesticides in Schools* (see following article). In the Senate, SEPA has been referred to the Senate Agriculture, Nutrition and Forestry Committee.

Since SEPA's (H.R.3275) introduction by Representative Rush Holt (NJ) in the U.S. House of Representatives, Representatives Barrett (WI), Capuano (MA), Conyers (MI), DeLauro (CT), Forbes (NY), Gutierrez (IL), Hoefel (PA), Kucinich (OH), Larson (CT), McCarthy (NY), Millender-McDonald (CA), Miller (CA), Moran (VA), Slaughter (NY), Udall (CO), and Wu (OR) have signed-on as co-sponsors of the bill. On the House side, SEPA has been referred to the House Agriculture Committee.

It is now time to ramp up Congressional support in a serious way. And one way to do this is for constituents to become involved by contacting their U.S. Senators and Representative. **Your Congressmembers need to hear from you. Otherwise, they will not know that there is a problem with pesticide use, a lack of disclosure in schools, and that alternative non-toxic approaches are effective.**

Please write, call, fax or e-mail your Congressmembers today. Request your Congressmembers co-sponsor this bill, let your Senators and Representative know how you feel about the necessity of protecting children and school staff from pesticide exposure while at school.

### School Environment Protect Act (SEPA) Supporters Update:

Following is a list of organizations that have signed-on in support of SEPA since the last publication of the list in *Pesticides and You*. For a complete listing, see [www.beyondpesticides.org](http://www.beyondpesticides.org).

Boston Women's Health Book Collective (MA)  
The Breast Cancer Fund  
Buckeye Environmental Network (OH)  
Cancer Resource Center, University of California at San Francisco Comprehensive Cancer Center  
Center for Environmental Health (CA)  
Citizens' Action Committee for Change (NY)  
Citizens' Environmental Coalition (NY)  
Encouraging Alternatives to Chemical Hazards (NC)  
Environmental Center of San Luis Obispo (CA)  
Environmental Defense  
EnviroSafe, Inc. (MI)  
Generation Green (IL)  
Iowa Public Interest Research Group  
Indiana Public Interest Research Group  
Institute for Children's Environmental Health (WA)  
Minnesota Herbicide Coalition  
Montana Environmental Information Center  
Parents and Teachers Association of Howard County (MD)  
Pesticide Action Network Asia-Pacific  
Stoddard & Associates, Inc. (MI)  
Texas Parents and Teachers Association  
University of California, Los Angeles, Environmental Science and Engineering Program  
West Harlem Environmental Action, Inc. (NY)  
Wildwood Natural Foods (CA)

If your organization would like to sign-on, please contact Kagan Owens, program director at Beyond Pesticides/NCAMP, [kowens@beyondpesticides.org](mailto:kowens@beyondpesticides.org).

### SAMPLE LETTER

The Honorable (full name)  
United States Senate (or United States House of Representatives)  
Washington, DC 20510 or (Washington, DC 20515)

Dear Senator/Representative (last name):

I am concerned about the use of pesticides in schools. There are no national protections or standards regarding school pesticide use that protect children while they attend school. To correct this situation and ensure national leadership in protecting children from a daily dose of toxic chemicals in their classrooms, playgrounds and ballfields, I am writing to ask for your support of S. 1716 (or H.R. 3275), the *School Environment Protection Act* (SEPA) and request that you sign on as a co-sponsor of the bill.

I am especially concerned about this issue because young children spend so much time in schools that are treated with pesticides during their developmental years. Children are especially sensitive to pesticide exposures as they take in more pesticides relative to their body weight than adults and have developing organ systems that are more vulnerable and less able to detoxify toxic chemicals. Even at low levels, exposure to pesticides can cause serious adverse health effects. Numerous studies document that children exposed to pesticides suffer elevated rates of childhood leukemia, soft tissue sarcoma and brain cancer. Studies also link pesticides to childhood asthma, respiratory problems, and in inability to concentrate.

S. 1716 (or H.R. 3275) is intended to set in place a process that creates incentives for schools to use pest management practices that do not rely on toxic pesticides. The tools and experience to control school pests without using toxic chemicals are available nationwide and have proven to be effective and economical. Under the bill, if toxic pesticides are used in a school, parents, guardians, and staff will receive advance notice of use and information on product hazards. The notification provisions are crucial to parent involvement.

The majority of school children in the U.S. remain unprotected. The time is right for national protection. S. 1716 (or H.R. 3275) will provide a safer and healthier environment for our children to learn. Thank you for your help in moving the *School Environment Protection Act* ahead.

Sincerely,

# Fed Not Protecting Children From School Pesticides

## U.S. General Accounting Office (GAO) Says EPA Has inadequate Data

The General Accounting Office (GAO) released its report, *Pesticides: Use, Effects, and Alternatives to Pesticides in Schools (GAO/RCED-00-17)*, which finds that EPA is not doing enough to protect children from pesticides, and that there is little information on the amounts of pesticides being sprayed in schools and how many children are exposed to them.

### Senator Lieberman Releases GAO Report on How Pesticides Effect Children in Schools

Senator Joseph Lieberman (DC-T), as a ranking member of the Senate Governmental Affairs Committee, asked the GAO to conduct a national review, and to report back on the extent to which pesticides are used in and around the nation's 110,000 public schools and the magnitude of the risk of exposure to our children. The GAO report found that the data on the amount of pesticides used in the nation's public schools is not available and not collected by the federal government. The report states that, "Because the EPA believes this information would be useful to help determine the risks posed by pesticides, the agency's considering conducting a survey (pending adequate funding) on the use of pesticides in schools and other public settings in the near future".

Although the *Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)* requires pest control companies to keep records for two years on the amount and site of pesticide applications, only eight states collect information on the use of pesticides within their states, and only two collect information on pesticides used in schools. Louisiana requires its school districts to specifically report the amount of pesticides used. New York requires commercial applicators to report information on the amount of pesticides they use and the locations where they are used. The GAO reports that neither state has yet to analyze the data collected. Six other states, Arizona, California, Connecticut, Massachusetts, New Hampshire, and New Mexico, require commercial applicators to report the amounts of pesticides they use, but the reported information does not identify where the pesticides were used.

### Limited Data Available on Pesticide Related illnesses, says GAO

The report cites EPA's analysis of the Poison Control Centers' Toxic Exposure Surveillance System, stating that of 2,300 documented pesticide exposures from 1993-1996. Of those 2,300 cases, we do not know the outcomes in 1,000 of them, or more than 40%. For the cases where follow-up did occur, 329 individual were seen at health care facilities, 15 were hospitalized, and 4 were treated in intensive care units. According to the report, these numbers are incomplete and unreliable due to the lack of hard data about pesticide use in the nation's 110,000 public schools.

The GAO also looked at the data required by section 6(a)(2) of FIFRA, which requires those responsible for registering a pes-

ticide with EPA to report adverse effects to the agency if they become aware of such effects through studies or incidents. EPA's analysis of the data showed that from 1992 through 1997, 80 incidents occurred involving pesticides at schools. The report states that an EPA pesticide program official told the GAO that these data may be incomplete because those responsible for registering the pesticides may not be aware of all incidents, not all incidents occurring in schools are clearly identified as such, and EPA relies heavily on voluntary reporting by those responsible for registering the pesticides. While the GAO found no general EPA school pesticide policy, it did locate an insecticide label that states, "school classrooms should only be treated when students are not present and that all treated surfaces should be dry before students are allowed to return."

At a press conference to release the report with Senator Lieberman and Beyond Pesticides/NCAMP's Jay Feldman in January, Senator Lieberman stated, "This information gap is troubling on a number of levels. We know that children are particularly vulnerable to the health risks associated with pesticides. So, we have every right to be concerned, and every incentive to take some action." Mr. Feldman said, "All data available to us today suggest that children face hazards from pesticide use at school that are unacceptable."

### Senator Lieberman Demands EPA Take Action on School Pesticide Issues

Senator Lieberman sent a letter to Carol Browner, Administrator, U.S. Environmental Protection Agency (EPA), urging the agency to begin collecting and reviewing data on school exposures and to develop a plan for a comprehensive survey on the use of pesticides in schools to better estimate the threat to students and educators. He also called on EPA to take immediate steps to minimize the risk of exposure, including providing guidance to pest control companies and school officials on the risks of different application methods and setting uniform specifications for notification of parents and educators prior to pesticide applications.

### Senator Lieberman Signs on to SEPA

Since the GAO report emphasized the use of IPM as an alternative to heavy pesticide use in schools, Senator Lieberman decided to sign-on as a co-sponsor of the *School Environment Protection Act (SEPA)*.

Beyond Pesticides/NCAMP applauds Senator Lieberman for having asked the GAO to undertake a review of children's exposure to pesticides in schools and for his decision to co-sponsor SEPA. We endorse the measures that Senator Lieberman is calling for — that swift administrative action be taken to alert parents and school staff to the use and potential dangers of pesticides in schools, and that EPA develop the data it needs to act expeditiously.

# Pesticides and Plastic Mulch Threaten the Health of Maryland and Virginia Eastern Shore Waters

by Greg Kidd, J.D.

“I felt like a canary in a coal mine.” These are the words of Mr. R.G. Parks of Parksley, Virginia, an aquaculturist by profession. Mr. Parks first became concerned about the health of the tributaries of the Chesapeake Bay and Atlantic Ocean back in 1993 when he noticed a massive die-off of the shellfish in his hatchery and nursery operation. It is well known that clams, oysters, and other bottom-feeding organisms serve as indicators of water quality. He noted that deaths appeared to be linked to periods of heavy rainfall. Investigating up-stream, Mr. Parks discovered that the increased mortality rate he was observing in his shellfish corresponded with an increase in the use of plastic mulch, known as “plasticulture,” used in conjunction with pesticide applications by tomato growers in his area. While this practice is often viewed as reducing pesticide use and drift by the chemical-agricultural industry, Mr. Parks’ story, and recent studies make it clear that plasticulture simply substitutes one environmental problem with another.

Mr. Parks contacted a number of scientists in the early stages of his investigation, including Andrea Dietrich, Ph.D., a professor in the Department of Civil and Environmental Engineering at Virginia Tech. She and her colleagues began collecting water samples from Eastern Shore watersheds. These samples contained alarmingly high concentrations of a variety of pesticides and explained the shellfish mortality. Mr. Parks managed, through legal action, to compel his neighbors using plasticulture to lease land elsewhere, so his immediate problem has been solved. But this has not stopped him from crusading for the health of the bay, the ocean, and their tributaries by becoming a self taught expert on the subject of plasticulture and sharing his knowledge with environmentalists and policy makers.

The practice of plasticulture has been growing in popularity with tomato and pepper farmers along the East Coast. According to the U.S. Department of Agriculture (USDA) the acreage under plasticulture has grown dramatically over the past several years, and it continues to grow. The USDA’s website confirms that in Maryland “nearly all fresh market growers [of tomatoes] use black polyethylene mulch for weed control, with herbicide sprayed between rows” ([http://pestdata.ncsu.edu/cropprofiles/Detail.CFM?FactSheets\\_\\_RecordID=57](http://pestdata.ncsu.edu/cropprofiles/Detail.CFM?FactSheets__RecordID=57)). Closer to Mr. Parks’ home, the area under plasticulture on Virginia’s

Eastern Shore rose from about 500 acres in 1990 to over 6,000 by 1996. (Brumbaugh, 1996). Why has there been this growth in the use of plastic mulch and what are the environmental issues associated with this practice?

## Why use plasticulture?

Regardless of the environmental costs, chemical intensive farming has led consumers to demand blemish free tomatoes. Chemical companies and government programs have taught farmers that meeting this kind of consumer demand requires careful control of soil moisture and multiple applications of pesticides. Using sheets of plastic as mulch that cover 50% to 70% of the soil allows farmers to use drip irrigation systems under the plastic to precisely control soil moisture and nutrients, which can be injected directly into irrigation lines. This eliminates any dependence on rainwater. Because rain is not required, plasticulture fields are pitched to encourage the fastest runoff of rain. The bare soil between the plastic covered rows is often compacted to facilitate the runoff of water, inhibit weed growth and allow large trucks to enter the field. (Brumbaugh, 1996).



Runoff, loaded with pesticides, runs directly into Garagathy Creek. Photo courtesy of R.G. Parks

## What are the environmental issues?

The excess runoff associated with plasticulture coupled with the direct application of pesticides can harm the environment as pesticides are transported into environmentally sensitive areas such as wetlands and tidal creeks. In particular the copper-based crop protectants, used to control bacterial and fungal diseases, have a devastating effect on shellfish. Extremely low copper concentrations have been found to cause deformation and death to larval shellfish. (Cheadle, et al., 1999). As Mr. Parks’ clams and oysters go, so go the wild populations of shellfish in waters in and around the bay. Other pesticides normally applied to plasticulture fields include endosulfan (an organochlorine), anzinphosmethyl (an organophosphate), fenvalerate (a synthetic pyrethroid),





Plastic Mulch covers 58% of this field, shown before planting. Photo courtesy of R.G. Parks

chlorothalonil (a deadly nitrile compound, see *Beyond Pesticides/NCAMP's Technical Report*, Vol. 14, no. 8&9, 1999) and methyl bromide used as a fumigant before planting.

## What do the studies show?

During rain events, runoff from the plasticulture fields contains from 20-238 ppb (parts per billion) dissolved copper. Background levels of <1-3 ppb dissolved copper were measured in water samples from Gargathy Creek and Parker's Creek during periods of no rain. The concentrations rose as high as 20 ppb dissolved copper during runoff producing rain events. The LC-50 for dissolved copper (that is, the lethal concentration resulting in 50% mortality) for adult hard clams is 16.4 ppb - well below the measured levels. (Brady, et al. 1999).

These findings were derived from water samples taken during the spring of 1998 through the fall of 1999 from Gargathy Creek, Parker's Creek, and Raccoon Creek on the Eastern Shore of Virginia. (Brady, et al. 1999). Both the Gargathy Creek and Parker's Creek watersheds support plasticulture and drain into the Atlantic Ocean. Raccoon Creek is located in a wildlife refuge and also drains into the Atlantic; it was used as a control.

In another study conducted on Gargathy Creek in 1996, total copper concentrations as high as 700 ppb were observed following rain events and were as high as 1,400 ppb in field runoff. (Brumbaugh, 1996). The values found in both of these studies far exceed the Virginia Department of Environmental Quality saltwater standard of 2.9 ppb dissolved copper.

In the same 1996 study, concentrations of endosulfan in the creek were 0.97 ppb following runoff producing rain events. These endosulfan concentrations far exceed Virginia's water quality standard of 0.034 ppb (acute toxicity) and 0.0087 ppb (chronic toxicity) for endosulfan.

The bottom line is that plasticulture is fundamentally different from other cultural practices used on the Eastern Shore. The decreased permeability of the soil caused by both the plastic and the compaction of the soil encourages high vol-

umes of runoff. Because the runoff contains high concentrations of pesticides and sediment, it has a significant negative impact on the water quality of the Chesapeake Bay, its tributaries and ultimately the Atlantic Ocean.

## What about alternative practices?

Recent studies conducted by the USDA's Agricultural Research Service (ARS) show that the use of living plants as mulch, or "green mulch," can make a huge difference in protecting water quality. The ARS found that using hairy vetch, a legume, instead of plastic mulch provides a number of benefits; it cuts pesticide losses by as much as 90%, and it greatly reduces water runoff, which reduces sediment losses. In addition, legumes fix nitrogen, which augments the soil. (Pesticide Report, 1999).

The preliminary results of tests conducted at the University of Maryland's Chesapeake Biological Lab in Solomons, MD are promising. These studies indicate that aquatic organisms suffer significantly less adverse effects when exposed to runoff from fields mulched with hairy vetch compared to plots mulched with plastic. (Pesticide Report, 1999).

For more information explore the USDA/OPMP Crop Profile Database on the web at <http://pestdata.ncsu.edu/cropprofiles/>.

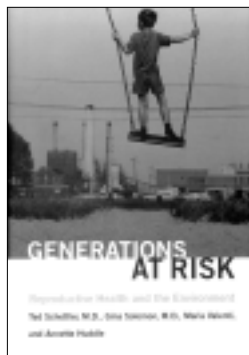


Pesticides are applied to plasticulture tomatoes on average 30 times per crop. Photo courtesy of R.G. Parks

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- Cheadle, R., Gallagher, D.L., Dietrich, A.M., Lauth, J. 1999. Marine Ecosystem Response to Copper-based Pesticide Runoff. To be published in the proceedings of the: 1999 American Society of Civil Engineering Conference presented by ASCE-CSCE "Responsible Military and Civilian Stewardship in Coastal Environments."
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## Generations at Risk: Reproductive Health and the Environment

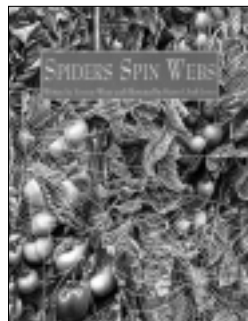


Ted Schettler, MD, Gina Solomon, MD, Maria Valenti, and Annette Hudde (Greater Boston Physicians for Social Responsibility, Boston, MA,

1999). People in the United States are potentially exposed to more than 75,000 synthetic chemicals daily, most of which are either untested or poorly tested for human health effects. According to *Generations at Risk*, more than half of the U.S. population has at least 6 pesticide residues in their urine, and more than 80% have residues of the pesticide chlorpyrifos. The dangers of pesticides and other household chemicals, including lead paint, cleaners, and detergents, are often dismissed due to what is thought of as a low level of exposure. However, the health risks associated with these chemicals can be cumulative due to repetitive or multiple exposures. *Generations at Risk* focuses on the toxic effects of chemical exposures to human reproduction and fetal development. The authors offer practical advice on how to assess reproductive threats in our homes, communities, and work places and suggest actions to take to decrease immediate risks from toxics in our environment. The book includes a scientific review of chemicals that may have toxic effects on human reproduction and development, data on human exposures via air, food, and water, critical analysis of the scientific methods and policies that influence public health decisions, and the strengths and weaknesses of the

government regulation of these chemicals. For a copy, contact the MIT Press at 1-800-356-0343 or online at [www.beyondpesticides.org](http://www.beyondpesticides.org) under merchandise. Copies are \$29.95 plus \$3.50 shipping.

## Spiders Spin Webs

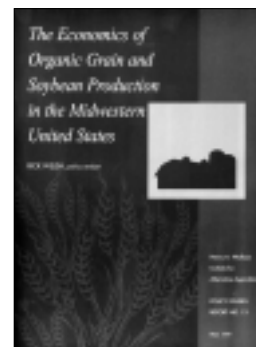


Written by Yvonne Winer with illustrations by Karen Lloyd-James (Charlesbridge Publishing, Watertown, MA, 1999). *Spiders spin webs / Like*

*weavers of old, as / Their spinneret patterns, / Like magic, unfold. / That's how spiders spin webs.* So begins *Spiders Spin Webs*, a cleverly written children's book by Yvonne Winer describing the complex nature of these unique arthropods and their creations. *Spiders Spin Webs* points out that a spider's web can be much more than just a net for catching dinner. Spiders use webs of many shapes, patterns, and sizes. Some are used for shelter, hiding, and at least one species uses its web to create air pockets underwater. Yvonne Winer's words set the stage for each kind of spider and their own unique spinning, while the award-winning watercolors by Karen Lloyd-James present brilliant images that are sure to intrigue both children and their parents alike. Following the 30 pages of verse and full-page illustrations, the book concludes with a Spider Identification Guide describing each of the 15 mentioned spiders, their habitat, origin, and where you would be most likely to find their webs. For a copy, send \$6.95 to Charlesbridge Publishing, 85 Main Street, Watertown, Massachusetts 02172, call 800-225-3214, or purchase online at [www.beyondpesticides.org](http://www.beyondpesticides.org).

## The Economics of Organic Grain and Soybean Production in the Midwestern United States

Rick Welsh (Henry A. Wallace Institute for Alternative Agriculture, May 1999). Is it really possible to make more money by doing the right thing?



According to a recent study conducted by the Henry A. Wallace Institute for Alternative Agriculture, it is more profitable for farmers to produce healthier, more ecologically sound organic grains and soybeans, than to produce the same crops using pesticide-intensive conventional methods. Policy analyst Rick Welsh reviews past and current research to conclude under which conditions growing organic crops are more profitable. Findings from the study conclude that on average farm prices for organic corn are 73% higher in 1997 than U.S. cash prices for conventionally grown corn, and organic soybeans are worth twice as much as conventionally grown soybeans. These results come as welcome news considering the state of agriculture in the U.S. today. This study not only offers farmers a possible alternative to current farming systems that are not working, but also helps producers, policy makers, agribusiness decision makers, and consumers in assessing the potential of organic production. For a copy, call 301-441-8777 or send \$15 to the Wallace Institute, 9200 Edmonston Road, #117, Greenbelt, MD 20770. This study is also available online at [www.hawiaa.org](http://www.hawiaa.org).

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- Tell the world that FREEDOM FROM PESTICIDES IS EVERY BODY'S RIGHT in teal, purple, and yellow. On 100% natural organic cotton. \$15 each; two for \$25.

### Bumper Sticker

- "Is Your Lawn Toxic Green?" White letters on green background.
- FREEDOM FROM PESTICIDES IS EVERY BODY'S RIGHT. White letters on blue. Stickers \$2.00 each (\$1.00 each when ordering 100+)

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- A Failure to Protect*. Landmark study of federal government pesticide use and pest management practices. \$23.00. *Summary and Overview* \$5.00.
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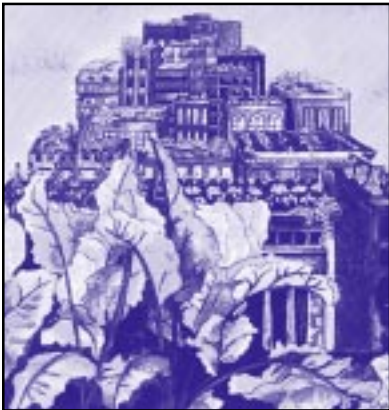
# Beyond Pesticides: Solving A Public Health Crisis

The Eighteenth National Pesticide Forum and Urban Garden Tour

The Lighthouse Conference Center  
New York City  
April 7-9, 2000



Beyond Pesticides/NCAMP has joined forces with over twenty grassroots organizations to bring people together for one of the most important national grassroots pesticide meetings of the year. The Forum will begin on Friday afternoon with "The City Farms of the Bronx," an inspirational tour of three community gardens in the Bronx led by the Green Guerrillas, a non-profit organization dedicated to the community garden movement in New York City. The Forum, which will feature speakers such as Barry Commoner, Lois Gibbs, and Paul Connett, will focus on preventive pest management strategies and new ways of thinking about managing areas that are routinely treated with pesticides, such as homes, schools, offices, gardens, parks, golf courses, and farms. The conference provides a forum for planning positive action. It is spurred by an increasing inability of decision makers to identify causes of the high rates of cancer, childhood asthma and other respiratory problems, neurological diseases, blood disorders, and endocrine and immune system dysfunction —effects that are tied to pesticides through laboratory or epidemiological studies. Positive action seeks to put in place strategies that embrace the precautionary principle of avoiding use of hazardous chemicals. We hope to see you in April! Please contact John Kepner, Forum Coordinator, at 202-543-5450 or [jkepner@beyondpesticides.org](mailto:jkepner@beyondpesticides.org) for more information. Register by March 27, 2000 to avoid a late fee. See [www.beyondpesticides.org](http://www.beyondpesticides.org).



Courtesy of City Farmer, Canada's Office of Urban Agriculture [www.cityfarmer.org](http://www.cityfarmer.org)

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