Saving the Planet With Pestilent Statistics
by Karen Charman

Dennis T. Avery, author of the tract "Saving the Planet with Pesticides and Plastic," proudly describes himself as a missionary. His mission: to protect and promote "high-yield farming to save wildlife."

Besides writing a nationally syndicated weekly column for the financial newswire Bridge News, Avery is also the director of the Hudson Institute's Center for Global Food Issues. He travels the country and the world preaching his gospel of biotechnology, pesticides, irradiation, factory farming and free trade. According to Avery, it is the greenies and "organic frenzies" who threaten the world with famine and loss of habitat for their sacred wildlife. Why? Because farming without synthetic pesticides, petrochemical fertilizers and biotechnology would require too much land.

Avery sees no problem with agricultural pollution, be it groundwater contamination, pesticide and fertilizer runoff, or even the mountains of stinking manure produced by the huge cattle, chicken and hog operations that plague increasing numbers of rural communities. He denies that there is any link between pesticides and cancer or other illnesses. In fact, he says, organic food is what will kill you.

Last fall Avery began claiming that "people who eat organic and 'natural' foods are eight times as likely as the rest of the population to be attacked by a deadly new strain of *E. coli* bacteria (0157:H7)." This happens, he says, because organic food is grown in animal manure, a known carrier of this nasty microbe. He says his data comes from Dr. Paul Mead, an epidemiologist at the U.S. Centers for Disease Control (CDC), the federal agency that tracks outbreaks of foodborne illness.

Avery continues delivering this message with op-eds that bear titles such as "The Silent Killer in Organic Foods" and "Wallace Institute Got it Wrong: CDC Data Does Indicate Higher Risk From Organic and Natural Foods." These editorials are disseminated by Bridge News to between 300 and 400 newspapers throughout the country and approximately 500,000 other subscribers here and abroad including government departments, central banks and businesses.

I heard Avery's sermon live in June 1999 at the National Agricultural Biotechnology Council meeting in Lincoln, Nebraska. After his talk I asked him why he quoted the CDC as the source of his information when they deny having data attributing *E. coli* 0157:H7 outbreaks to organic food. He accused CDC of engaging in a "cover-up" due to pressure from environmentalists.

Back home I noticed more than a couple of similar stories popping up in various venues. One particularly sloppy story, titled "Organic Food Creates Higher Risk for Food Poisoning," was posted on August 25, 1999 on USDA's National Food Safety Database by US Newswire, a service that electronically disseminates news releases. Though this story doesn't quote Avery, it quotes the CDC's Foodborne and Diarrheal Diseases Branch chief, Dr. Robert Tauxe, saying, "Organic food means a food was grown in animal manure."

Tauxe denies ever making that statement and says he believes the rumor originated with Dennis Avery. After fielding numerous media queries on the subject, CDC took the unusual step on January 14, 1999 of issuing a press release stating, "The Centers for Disease Control and Prevention has not conducted any study that compares or quantitates the specific risk for infection with *E. coli* 0157:H7 and eating either conventionally grown or organic/natural foods." In addition, Tauxe says he called Avery to tell him to stop claiming that the CDC was the source of this allegation. Avery responded by telling Tauxe, "That's your interpretation, and I have mine."

Avery's newest version of what happened with the CDC is that Dr. Paul Mead, an epidemiologist who works in Tauxe's division, gave him the information. Absolute bunk, says Mead. "What happened is that he called me up and announced that eight percent of the outbreaks of foodborne illness were from organic food. I took some exception to that and said I didn't know him and what his purpose was, but our data don't support that." Mead was chagrined to hear that a year after this conversation took place, Avery is still sourcing this phantom data back to him.

Contrary to Avery's claim, *E. coli* 0157:H7 contamination from manure is *less* likely to occur on organic farms than in the factory farming system that Avery supports. Fred Kirschenmann is an organic farmer and board chairman of the private organic certification company Farm Verified Organic. He points out that a single cow produces approximately 10 times as much fecal matter as a human being. This means that a feedlot of, say, 5,000 head of cattle would produce the same amount of manure as 50,000 people. Yet modern conventional agriculture does not regulate the use of raw manure in food crops, Kirschenmann says, and farmers are spreading increasing amounts of it on their fields because it is too expensive to truck away and they don't have anywhere else to put it.

Kirschenmann serves on the National Organic Standards Board which was charged by Congress to advise the USDA in formulating its legal standards defining organic food. "In organic systems, most animals have to have access to pasture, so they can't be concentrated in huge feedlots," he says, adding that Avery's charge that organic food is grown in manure is misleading, at best. "Organic farmers use manure, but virtually every

certification organization I know of doesn't allow raw manure. Raw manure must either be composted or applied long enough in advance that the bacteria is no longer active," he said, adding that this requirement is being written into USDA's proposed rules.

Dr. Robert Elder, a research microbiologist at the USDA's Meat Animal Research Center in Clay Center, Nebraska, specializes in measuring *E. coli* 0157:H7 in cattle. He says this deadly bacteria could be prevented from contaminating meat carcasses before they are ground into hamburger. "If you took meticulous time with every single carcass to vigorously clean it, scrub it, and wash it down, you could probably eliminate it," he said. But, Elder added, considering that the bigger plants are processing 3,000 to 4,000 animals a day--about 300 an hour--adequate cleaning is impossible. And that is a huge problem for the public. Elder's soon-to-be published research shows that in the summertime, when *E. coli* 0157:H7 levels peak, 80 to 100 percent of the feedlot cattle he tested carried the deadly 0157:H7 strain.

Despite a public debunking of Avery's statements in the *New York Times* last February, his bogus claims continue to spread and appear to be gaining momentum. U.S. newspapers like the *Las Vegas Review-Journal, Investor's Business Daily,* and the *Journal of Commerce* have run stories about killer organic food. The story has also made its way to Canada and Europe, under headlines such as, "Organic just means it's dirtier, more expensive," "Organic food--'It's eight times more likely to kill you'" and "Organic food link to *E. coli* deaths."

Even *E. coli* expert Rob Elder said he wouldn't eat organic food or feed it to his family because it was more pathogenic. When I asked where he got that information, he sent me a copy of an Avery piece, "Organic food? No thanks!" that appeared in the *Wall Street Journal* last December. Upon further questioning, Elder said a colleague had given it to him and said that Avery worked for the CDC, so he thought it was a credible source.

I asked Sally Heinemann, the editorial director of Bridge News, if its syndicated columnists had to meet any particular criteria and whether Bridge checked the accuracy of Avery's columns. Instead of answering, she began shouting, "Who are you? Who do you represent? What do you really want to know? Go find it on the web!" before slamming the phone down.

Avery says he can pretty much say what he likes, because he works for himself as an economic forecaster to farming organizations and doesn't have to worry about anybody firing him. Referring to his past employment with the US State Department and USDA, he adds: "I have full federal retirement, and I already own the prettiest small farm in America." He

considers the $35,000 a year he gets from the Hudson Institute to be very little, and says he only needs money "to carry on the mission."

Avery acknowledges that Hudson is corporate-funded. Looking over the roster of companies that have supported its work--agrichemical heavyweights like Monsanto, Du Pont, DowElanco, Sandoz and Ciba-Geigy and agribusiness giants ConAgra, Cargill, Procter & Gamble, among many others--Avery likely has no reason to fear the axe. His mission is their mission.

The Trashman Speweth

Since April Fool's Day of 1996, self-proclaimed public health expert Steven J. Milloy has been turning out a daily stream of anti-environmental, anti-public health commentary through his "Junk Science Home Page" on the internet (www.junkscience.com).

Adolescent sarcasm is Milloy's forte. If his targets aren't "psychologically challenged" or "bogus," they are fear-mongering "environmental extremists," "blowhards," "turkeys," "nut cases," or members of the "food police." Though he claims to trumpet "sound science," he has savagely attacked the world's most prestigious scientific journals including *Science, Nature,* the *Lancet,* and the *New England Journal of Medicine.* His chutzpah recently reached new lows with the posting (removed after complaints) of an "Obituary of the Day" that gloated over the death of former NIH environmental scientist David Rall, who was killed in a car crash.

"'Junk science' is faulty scientific data and analysis used to further a special agenda," Milloy's website proclaims. The practitioners of junk science, he says, include environmentalists, public health and food safety regulators, anti-nuclear activists, animal rights activists, the EPA, Al Gore, people with illnesses, and anyone who dares to question the excesses of our corporate-driven industrial society.

In addition to disputing the scientific basis for these concerns, Milloy frequently accuses the questioners of tainted motives. The media, he says, uses junk science to advance particular social and political agendas. Trial lawyers use it to "bamboozle juries into awarding huge verdicts." Social activists use it to achieve social and political change. Government bureaucrats use it to fatten their budgets. Businesses use junk science to trash competitors' products or promote their own. Politicians use it to "curry favor with special interest groups or to be 'politically correct.'" Individual scientists seek fame and fortune. People who are sick, "real or imagined," draw on junk science "to blame others for causing their illness."

Conversely, "sound science" in Milloy's book seems to be any science that makes it impossible to point the finger of blame--a definition that perfectly suits many of the corporations for which he has worked. For years, Milloy was registered as a lobbyist for the EOP Group, a Washington, DC firm whose clients include the American Crop Protection Association (pesticides), the Chlorine Chemistry Council, Edison Electric Institute (fossil and nuclear energy), Fort Howard Corp. (a paper manufacturer) and the National Mining Association. The clients for whom Milloy was personally registered included Monsanto and the International Food Additives Council. Both Milloy and the EOP Group claim that he no longer works there, but he was still registered as an EOP lobbyist as recently as the summer of 1999.

In 1997 and 1998, Milloy was also executive director of The Advancement of Sound Science Coalition (TASSC), a pro-industry coalition created in 1993 to promote "sound science" in policy decision-making. TASSC, which is not currently active, claims more than 400 corporate members representing chemical, agricultural, manufacturing, oil, dairy, timber, paper and mining interests. Supporters include 3M, Amoco, Chevron, Dow Chemical, Exxon, General Motors, the Lawrence Livermore National Laboratory, Lorillard Tobacco, the Louisiana Chemical Association, the National Pest Control Association, Occidental Petroleum, Philip Morris, Procter & Gamble, Santa Fe Pacific Gold Corp., and W.R. Grace & Co. Milloy also ran the Environmental Policy Analysis Network (EPAN), a right-wing, Washington-based think tank affiliated with the libertarian, anti-regulatory and anti-environmental movements. His website notes his authorship of a paper titled "Choices in Risk Assessment: The Role of Science Policy in the Environmental Risk Management Process," which argues that many environmental risks are minuscule and can't be proven.

Milloy is currently an "adjunct scholar" with the Cato Institute, a libertarian think tank based in Washington, DC that has received funding from the American Farm Bureau Federation, several large oil companies, big tobacco, pharmaceutical giants, and agricultural chemical and biotechnology manufacturers. The Cato Institute has published two books by Milloy, *Science Without Sense* and *Silencing Science,* the latter with co-author Michael Gough, a former fellow Cato adjunct scholar.

One of Milloy's newer projects is the "Consumer Distorts" website (www.consumerdistorts.com), which alleges a "renewed emphasis on 'junk science' at *Consumer Reports*." Milloy describes the magazine's publisher, Consumers Union, as a "lobbying group that advocates extreme environmental positions" and accuses it of publishing "'sensational' reports that advance its political agenda." He takes particular exception to the magazine's reporting on food biotech, plastics and pesticides and says its

reporting is really anti-consumer, because it "needlessly alarms consumers about the safety of consumer goods" which "reduces consumer choice by scaring consumers away from products."

Aside from his daily website postings, Milloy writes opinion pieces that are picked up by dozens of newspapers and trade publications across the country, including the *New York Post,* the *Washington Times, New Australian, San Francisco Examiner, Detroit Free Press, Cincinnati Enquirer* and *Chemical and Engineering News.* In a piece picked up in October by *Business Investor's Daily,* Milloy dismisses reports on controversial aspects of food biotechnology as "little myths [that] take on epic status when reporters don't provide background."

The *Chicago Sun-Times* has also run "special reports" by Milloy that are designed to mimic news stories rather than editorials. In "Modified Crops Cause Concern," he downplays the biotech uproar in Europe, suggesting that the European public will come around to accept America's genetically modified harvest because testing is too expensive and the system is not set up to test or segregate GM and non-GM crops. In another story, titled "Study Eases Gene-altered Corn Fears," he dismisses concerns raised by the deadly effect of bioengineered Bt corn on Monarch butterflies.

Perhaps the most disturbing thing about Milloy's writing for the *Chicago Sun-Times* is the newspaper's failure to provide its readers with any information about his background as an industry flack with far-right views. It describes him simply as "a Washington-based business writer specializing in science" who "holds advanced degrees in health sciences from Johns Hopkins University and a law degree from Georgetown University." (In reality, Milloy's "advanced degrees in health sciences" consist of a bachelor's degree in natural sciences and a master's degree in biostatistics.)

In fact, many of the news stories that quote Milloy have tended to inflate or distort his credentials. He has been described in various places as a "risk expert," an "economist," "president of the Environmental Policy Analysis Network," "publisher of the junk science home page," a "consultant," a "noted junk science expert," a "statistician," and "adjunct scholar at the Cato Institute." But whatever he is called, corporate polluters know that they can depend on the Junkman to help confuse public debate, thereby preventing scrutiny of their activities and helping protect their bottom lines.

Genetically Modified Outcome
Drifting Pollen May Settle Debate Over Transgenic Food

Karen Charman is an investigative journalist specializing in agriculture, health and the environment.

Just as Americans are becoming aware that much of the food on supermarket shelves is spliced with genes from foreign species, debate about whether our food should be manipulated in this manner is on its way to becoming a moot point.

The reason, as crudely put to me by a U.S. Department of Agriculture staffer more than five years ago, is this: "plants have sex."

Corn wantonly tosses its gene-laden pollen to the wind in search of nearby mates. Soybeans and canola are somewhat more sexually bashful -- they depend on insects to spread their pollen. All this is nature's way of distributing genes and ensuring reproduction. We humans are powerless to limit such a primal and eternal process.

Humankind has, however, learned to change the genetic makeup of crops in ways that nature never would. Genetically modified ("GM" or "transgenic") strains of just four crops already account for nearly a third of the farm acreage under cultivation in this country. A multitude of other transgenic varieties not yet commercialized are also being grown in field trials in the open environment. The problem is that the natural process of plant sex is taking over, spreading manipulated genes everywhere, beyond test plots, beyond the fields of farmers who have chosen to plant them. If we decide for whatever reason that GM crops are undesirable or discover that certain, or perhaps all, transgenic foods are dangerous, we will be stuck with them.

Consumers have a choice, right? If they don't like GM foods, they can buy food that meets strict organic food standards, which do not permit genetic engineering. But Janet Jacobson, a North Dakota organic farmer and president of the Northern Plains Sustainable Agriculture Society, says that after just six years of commercial production of gene-spliced crops, organic food's non-GM safe haven is rapidly disappearing.

"Organic producers can no longer produce organic corn. I don't know any organic farmers that can grow canola, because there's so much GM canola around," she laments. "There are also organic farmers who have had soybeans rejected because they were contaminated with GMOs."

Besides drifting pollen, some of the genetic contamination has resulted from GM seeds getting mixed into the conventional seed stocks that farmers use to plant their next year's crops.

Many biotech food opponents have suspected for some time that genetic pollution is a deliberate strategy of the biotech industry and its minions in state and federal government.

In January 2001, Don Westfall, a food industry consultant formerly with Promar International, an American company that advises large food corporations on industry trends and marketing strategies, told the *Toronto Star* exactly that: "The hope of the industry is that over time the market is so flooded that there's nothing you can do about it. You just sort of surrender."

Westfall's remarks were made in the context of an interview about genetic contamination of the food supply in light of the StarLink debacle. In the fall of 2000, StarLink, a transgenic variety of corn that was not approved for human consumption, was discovered in Taco Bell taco shells and eventually hundreds of other foods that contain corn. More than 300 products were recalled from supermarket shelves, export markets were lost, and hundreds of farmers got stuck with their contaminated crop, leading to a quagmire of litigation that will take years to settle and may well cost a billion dollars before it's over.
In April 2002, Dale Adolphe, former head of the Canola Council of Canada and current executive director of the Canadian Seed Growers Association, told Canadian canola growers at their annual meeting that despite growing public opposition and new regulations intended to control GM crops, their increasing acreage may eventually end the debate.

The Western Producer, a Canadian agricultural paper, quoted Adolphe: "It's a hell of a thing to say that the way we win is don't give the consumer a choice, but that might be it."

If these views don't represent industry strategy, they might as well, considering that new biotech varieties continue their silent march out into the open environment with, in most cases, virtually no prior environmental assessment or monitoring once they are released.

Why should we care?

Biotech promoters like to say that opponents and critics rely on raw, scientifically unsubstantiated emotion to whip the public into a frenzy of fear. (Actually, some of the most emotional outbursts I've personally witnessed came from biotech supporters, whether it be Iowa Governor Tom Vilsack railing against the use of the precautionary principle, or the Hudson Institute's Dennis Avery thundering to a largely pro-biotech crowd that GM food is on its way out because the activists -- "organic frenzies" -- have won.)

However, a growing chorus of scientists is starting to question the wisdom and safety of this technology.

Biotech supporters claim that GM food is no different than food derived from conventional breeding techniques and that the technology of genetic engineering simply enables scientists to improve crops more quickly and with greater precision. Credible scientists question both claims.

Biotechnologists have no control over where the genes they are inserting end up in the modified species' genome, leading one geneticist to dub the technology "genetic randomeering." The location is important, because where the gene ends up -- actually it's a package of several genes, because several different genes are needed to make the technology work -- will determine whether toxic byproducts or allergens are created, or whether the nutritional value of the modified food is altered. The placement of foreign genes can also disrupt the normal functioning of the modified organism.

David Schubert, a cell biologist at The Salk Institute for Biological Studies in San Diego, says there is no way to predict these outcomes in advance. He points to one particularly tragic incident to illustrate what can go wrong with genetic engineering. In the late 1980s, Showa Denko, a Japanese chemical company, began producing the amino acid L-tryptophan with genetically engineered bacteria. Unfortunately the modified bacteria also produced a novel amino acid that turned out to be highly toxic, killing 37 people, permanently disabling 1,500 and making more than 5,000 sick.

Now GM plants that produce pharmaceutical and industrial compounds are spicing up the mix. According to the USDA's Animal Plant Health Inspection Service (APHIS), the government agency with chief responsibility for regulating field trials of bioengineered crops, 30 sites totaling some 100 acres are now testing such crops in the open environment. But it is impossible to find out where or what is being tested, because the identity of the compounds is considered "confidential business information."

Todd Leake, a conventional wheat farmer from the Red River Valley in North Dakota who opposes GM crops, says corn and soybeans that produce veterinary vaccines or contain antibiotics have already been field tested. If they proceed to commercial production, he believes contamination will be impossible to prevent. "So your kids will be eating, say, gastroenteritis vaccine with their cornflakes and cattle antibiotics in their bread," he said. Leake might have added that also applies to the rest of us.

Transgenic agriculture turns food into intellectual property, giving profit-driven business corporations the ability to manipulate the entire genetic heritage of civilization's cultivated crops to their advantage. Do we really want to give any corporation such power over us?

That's a question members of a democracy might like to debate while there is still a chance to influence the outcome of such an unprecedented experiment. But as

long as the secret research trials continue and biotech acreage expands, our ability to make a choice -- whether it is based on informed debate or not -- diminishes by the day.

Pesticide Wars
When Agriculture and Public Health Collide

Karen Charman is an investigative journalist specializing in agriculture, health and the environment.

Editor's Note: *This is the second article in a series on pesticide poisoning in Florida. To view the first, on Omar Shafey, an epidemiologist who lost his job after blowing the whistle on the poisonings..*

Kathy Rink was home going about her business one Saturday in mid-June 1997 when she got caught up in Florida's most recent war against a despised agricultural pest. Her life has not been the same since.
That sweltering afternoon, a woman in jeans, a long-sleeved flannel shirt, work boots, gloves, a mask, and safety glasses appeared in the backyard of Rink's Sarasota home. Rink, a petite blonde with bright blue eyes and an earnest demeanor, says the woman was there to spray the fruit trees with malathion (an organophosphate insecticide and nerve toxin) as part of the battle to wipe out the Mediterranean fruit fly. Numerous medflies had been found in and around Tampa and were threatening Florida's $21 billion horticulture industry.

Rink had seen the television announcements about the medfly campaign and went outside to ask the woman what she was spraying. She says the woman described it as "a little bit of molasses syrup mixed with a tiny, tiny bit of pesticide." Despite the fact that Rink was out there in shorts, the woman didn't stop. She sprayed Rink directly on the leg.

Rink says she went inside and started feeling dizzy almost immediately. She vaguely remembers sitting down and calling a friend but has no memory of the rest of the day, or even the exact date. Later that evening, her youngest son Adam, then 12, went out and climbed an orange tree in the backyard. Though neither Rink nor her son had any preexisting health complaints before that first exposure, both have had serious medical problems since.

Immediately after the spraying, Adam became very weak, wouldn't eat, and slept 12-18 hours a day for weeks. Rink says he also threw up every time sprayers returned that summer. After several visits and disturbing blood test results, his pediatrician didn't know what to make of his condition. So she set up an urgent appointment for them with a children's oncologist in Saint Petersburg.

The oncologist gave Adam another blood test and reviewed the results right then. Instead of sending them home, Rink says the doctor told them he needed to take bone marrow. "When I asked why, he said 'leukemia.' He told me to hang in there." Leukemia was ruled out, but the source of Adam's illness was never fully identified. Eventually he was diagnosed with elliptocytosis, a mild, hereditary form of anemia which could have made him more susceptible to the pesticide exposure. His health has improved, but he gets sick much more easily than before, and she worries about the long-term consequences.

Aside from memory loss, Rink herself developed numbness and tingling in her hands and feet, sensitivity to common household chemicals, and migraine headaches -- some serious enough to land her in the emergency room.

The night I met her at an environmental scientist's home in Sarasota in July 2001, mosquito control trucks fogged the neighborhood with synthetic pyrethroids, a class of pesticides that disrupt the endocrine system and promote the growth of breast cancer cells in laboratory studies. Rink was concerned since she, like many people who have been previously poisoned by pesticides, report adverse health reactions to subsequent exposures. The next day she reported another debilitating cluster migraine. "Before I was sprayed, I didn't even know what a migraine was," she laments. "Now I have to take migraine medication just to function."

The Rinks were not the only people to get sick in the cross-fire of Florida's crusade against the medfly. One of the most tragic cases is Barbara McFarland, a former security guard at a Tampa car dealership.

McFarland, then 66, was making her rounds checking the cars, as she did each night, when she saw a very low flying plane approach and fly directly over, dousing her with "a whole face full" of the spray. McFarland finished her rounds but not before the plane came back and drenched her again. She started vomiting immediately and went home. A little later, she says she could barely breathe.

The next day McFarland tried to get to her doctor but had to return home because she was too weak to walk the length of the parking lot into his office. The following day she went back to the doctor with her husband and ended up in the hospital for seven days, where she was given inhalers and oxygen, which she still needs. Other than occasional asthma, McFarland didn't have any preexisting health complaints, but now she says the doctors tell her she will never get better.

The physical and financial dependence on others since the spraying

incident has been particularly hard for McFarland. "I worked ten hours a night and took care of all my own housekeeping, and now I can't even sweep my floors," she sighs. "I do some cooking, but there are days I can't even do that."

Big Citrus

In 1997, the first year of what turned out to be a two-year outbreak, the Florida Department of Health was inundated with complaints from people reporting that the spraying had made them sick. The following year, department epidemiologist, Dr. Omar Shafey, confirmed 123 cases of pesticide poisoning from the medfly eradication program in 1998. Confirming poisonings is a tricky, time-consuming task, and most doctors aren't trained to do it. So it is likely that many more poisonings occurred that were not counted. More than a million people, mainly in the urban and suburban neighborhoods from Tampa to Sarasota, had been repeatedly sprayed.

Shafey later recommended that the department prohibit the Florida Department of Agriculture and Consumer Services from spraying urban areas for medfly. But he was informed that such a recommendation was not within the realm of "political reality" in the state's fight against the medfly. He was subsequently sacked after intimidation from his bosses failed to get him to change his recommendation.

Citrus is, by far, the state's largest primary industry product. In 2000, Florida growers sold $1.67 billion worth of oranges, grapefruit, and other citrus fruits, generating 24 percent of the state's agricultural cash sales. Besides producing nearly all of the nation's orange juice, Florida also supplies most of the eastern U.S. with vegetables in the winter. According to a 1997 study, more than 130,000 Floridians are employed in the state's fruit and vegetable sector, which grows over 100 economically significant crops. Though agriculture is good for Florida's economy, the state's warm climate and multitude of crops also makes it a delectable haven for the medfly. This tiny fly is one of the most detested pests in agriculture, because females can lay their eggs in more than 250 different crops -- turning some of them to mush.

If medflies are discovered in an agricultural area, an immediate quarantine results, preventing growers from selling their fresh produce. University of Florida citrus economist Tom Spreen says a horticultural state like Florida simply can't afford to let the medfly become established. "It's not a matter of losing the European market or this market or that market," he says. "You are basically going to lose every market you sell into."

The discovery of one mated female medfly in any given area is enough to

trigger a "medfly emergency," which most often means teams of people, spray trucks and aircraft dousing the specified area with malathion. The detection of 70 medflies in and around Tampa within a week of May 28, 1997, when the first medfly was found, put Florida agriculture officials on the highest alert. Spraying began June 5, 1997.

Rick Martinez, a Tampa organic farmer who also travels the globe certifying organic farmers, points out that the medfly is endemic throughout much of the world, including countries like Brazil that have thriving agricultural export trades. (In fact, Brazil is Florida's biggest citrus competitor.) Still, Spreen's assertion that the establishment of the medfly would automatically wipe out markets is the conventional wisdom in agriculture circles.

During the medfly war, agriculture officials repeatedly claimed in television and full page newspaper ads that malathion was safe and the spraying was no cause for concern. This resulted in unnecessary exposures because proper precautions to avoid the spray were not taken.

Stories such as McFarland's and the Rinks' tend to fall on deaf ears in the agriculture community. Walt Boland, a grower representative with Florida Citrus Mutual, the Sunshine state's main citrus industry trade association, doesn't believe that anybody could get sick from the spraying, and that anybody claiming that they are sick is just "selfish" and "trying to get attention" in order to stop the spraying.

"Every chemical like malathion that's been used has been tested any and every way it could be by the EPA and the USDA for the harmful effects it might have," he says. When I asked him how he knew that, he replied that public health and agriculture officials said it was "very, very safe" at public meetings. "That's what the public meetings were about -- to try to convince the general public that [the spraying] was safe and necessary," he said, adding that "safe and necessary are two essential words."

In fact, EPA and USDA don't routinely test pesticides. They simply depend on data provided by the manufacturers. Many scientists, including an expert panel at the National Academy of Sciences, dispute the level of protection that people, particularly children, get from this regulatory scheme. Since the late 1980s, Congress has twice mandated a re-evaluation of pesticide safety, but EPA -- under intense pressure from farmers and pesticide manufacturers -- is years behind in completing it.

Boland did admit that spraying in urban areas could be avoided if the growers themselves fumigated their fruit before it moved out of quarantined areas. But that would cost "several hundred dollars per semi load," and because of the thin margins that many growers operate on, the citrus industry had no interest in absorbing that cost. State and federal taxpayers

pick up the tab on medfly eradication programs.

CRAM and SCRAM!

The day the spraying began in 1997, Citizens for Responsible Alternatives to Malathion (CRAM) was formed. "We just knew the spraying was wrong," says Thalia Potter, one of the original organizers.

Over the next several months, Potter and her group learned more than they ever thought possible about malathion, its health and environmental effects, and the length to which government bureaucracies will go in defending the use of pesticides.

Although Tampa was sprayed repeatedly for three and a half months in 1997, the area was spared aerial applications in 1998, when the epicenter of the medfly outbreak moved south to Manatee and Sarasota counties. Sarasota contains a large group of chemically sensitive people, many of whom are veterans in ongoing battles to keep their homes, workplaces and children's schools free from pesticide contamination. Like their counterparts in Tampa, concerned citizens in Sarasota and Manatee County organized immediately to stop the spraying and push for safer alternatives to deal with the medfly infestation.

Sarasota/Manatee Citizens Rally Against Malathion (SCRAM), like CRAM the year before, diligently monitored the spraying and documented scores of violations, says former SCRAM president, Cheryl Gross, an environmental scientist with the Sarasota County Health Department. Spray trucks and helicopters showed up without warning during times when a lot of people, including children, were outside. Instructions on the chemical's own label say malathion must be stored at temperatures below 77 degrees Fahrenheit to avoid breaking down into potentially deadly byproducts, such as malaoxon. But tanks of malathion sat in full sun on airport tarmacs in 95 degree Fahrenheit weather for months, and the chemical was not tested before it was sprayed. EPA regulations prohibit spraying malathion over certain bodies of water, but that was routinely ignored. *The Tampa Tribune* reported that malaoxon, a potent neurotoxin that by some estimates is 68 times more toxic than malathion, was found in Tampa's treated drinking water.

A Win-Win Situation

Both SCRAM and CRAM say they were not unsympathetic to the agriculture sector's concerns about medfly. "It wasn't that we just said 'stop, not in our backyard.' We said you can do this, but you can do it safely," said Gross, the former SCRAM president.

Both groups pushed the Florida agriculture department and USDA, the joint operators of the eradication effort, to use a non-toxic biological control program that involves releasing sterile male medflies to breed the medfly population out of existence. Sterile medflies have an excellent track record in California, which has had intermittent battles with medfly since 1975. The two groups also demanded more monitoring for medflies around Florida; better efforts to detect the pest in ports where they most likely enter the state; safer alternatives for ground spraying, if that was necessary; and much greater efforts to pick up fallen, rotting fruit, since so many of the outbreaks centered around abandoned orchards.

SCRAM and CRAM exerted intense pressure on officials, by organizing public meetings and by bombarding the media and public health officials with research about the risks of and alternatives to pesticides. As a result, a sterile medfly program was introduced covering the Miami, Tampa and Sarasota areas. It seems to be working: no medfly outbreak has since been declared.

Nevertheless, when I visited the MacDill Airforce Base in Tampa, where the sterile medfly program was based, manager Joe Stewart said the $2.8 million a year program might be axed because of budget pressures. Ironically, the 1997-98 emergency spraying cost about $35 million. After the September 11 attacks on the World Trade Center and the Pentagon, MacDill Airforce Base became one of the main command centers for the Bush Administrations's current war, and the sterile medfly release program was asked to leave. The program is currently in the process of relocating to Sarasota and is expected to begin operating in February 2002.

Though the success of the sterile medfly release program should keep it running, its future could be jeopardized if the economy continues to weaken, says Richard Gaskalla, director of the Division of Plant Industry in the Florida agriculture department. Without the preventative sterile medfly releases, a repeat of the emergency eradication spraying is virtually certain. The only question would be when.

Published: Jan 29 2002
Pesticide Wars: The Solution
Non-toxic Alternatives Exist -- If Public Demands Them

Karen Charman is an investigative journalist specializing in agriculture, health and the environment.

Public officials have warned that the recent emergence of West Nile Virus (WNV) in this country is a harbinger of noxious pests and infectious diseases to come.

This caveat sometimes carries another warning: that people better get used to accommodating such outbreaks and the pesticides routinely used to combat them.

Mosquitos transmit West Nile, and when human cases were first discovered in New York City in August 1999, the first response was an aggressive aerial spraying campaign of the insecticide malathion over the Big Apple, surrounding communities, and their 10 million-plus residents. West Nile reappeared the last two summers and spread via migrating infected birds from Canada to Florida. New York City resumed spraying, and most other communities that found the virus followed suit.

Gauging the health and environmental consequences of aerial spraying is difficult, because pesticide use is already so pervasive, says Michael Hansen, Ph.D., a scientist with Consumer's Union. Though agriculture accounts for about 75 percent of all pesticides used in the United States, they are also commonly applied on lawns and golf courses, in homes, gardens, parks, schools, hospitals, and other public and commercial buildings. But we don't know the cumulative effects of more than 50 years of pesticide use, exactly what we are being exposed to, or even how much is being released into the environment. Comprehensive data simply is not collected, Hansen says. It's a case of don't look, don't see.

Pesticide-related health complaints tend to be similar, and thousands have been filed by citizens subjected to aerial spraying of insecticides in California, Florida and now New York. But they are considered anecdotal, because they are not monitored systematically.

Jay Feldman, executive director of the Washington-based pesticides watchdog group, Beyond Pesticides/National Coalition Against the Misuse of Pesticides is only aware of one attempt by U.S. public health officials to track health complaints associated with aerial spraying. Following a spraying campaign against the Mediterranean fruit fly in 1998 over residential areas in Florida, state epidemiologist Dr. Omar Shafey found 123 cases of acute pesticide-related illness. Shafey was fired after he refused to alter a report on his findings. The Florida Department of Health released the final report in January 2000 and concluded that the spraying was not a public health threat.

Biologically-based Integrated Pest Management now offers much more effective and less toxic methods of pest and disease control, says pest management expert, Chuck Benbrook. In the 1996 Consumers Union report, Pest Management at the Crossroads, Benbrook writes that two to five pesticide applications are now needed to do what one application accomplished in the early 1970s. More than 500 insect species have developed resistance to insecticides, while the chemicals have decimated populations of natural enemies that would otherwise have helped keep the target pests in check.

Though the lion’s share of research funding is going to biotechnology and more chemical approaches to pest management, Benbrook says the scientific literature and field research make it abundantly clear that IPM techniques, such as the use of a pest’s natural enemies or agents that regulate an insect’s growth, work best. We’re in kind of a golden era of safer biopesticide alternatives that are working well, are affordable, and don’t involve genetic engineering, he said. These techniques also essentially eliminate the risks of chemical pest control to humans and non-target organisms, he adds.

Biopesticides require more skill and attention to the biology of the target pest than broad-spectrum chemicals, and the infrastructure -- trained IPM personnel and equipment -- is not yet in place to handle as large an outbreak as the West Nile Virus. However, Benbrook says that would change if demand increased. And that will only happen if the public insists.

Published: Jan 29 2002

Collateral Damage In The Pesticide Wars
The Troubling Story of Dr. Omar Shafey

Karen Charman is an investigative journalist specializing in agriculture, health and the environment.

Chances are, you know someone who has contracted an unexplained disease: a young, healthy woman who gets breast or ovarian cancer, or an otherwise energetic person who suddenly develops chronic fatigue syndrome, chemical sensitivity, multiple allergies, or fibromyalgia.
Most people assume public health officials are working diligently to solve these mysterious afflictions. But the troubling story of Dr. Omar Shafey demonstrates how government agencies sometimes conspire to protect the interests of influential industries rather than the public they are entrusted to serve.

In February 1998, the Florida Department of Health (FDOH) hired Dr. Shafey to track pesticide-related heath problems. Although pesticide usage in Florida is comparatively high, cases of pesticide poisoning have been woefully underreported there for years.

In Shafey, Florida got both credentials and enthusiasm. An epidemiologist, he has a PhD from Berkeley in Medical Anthropology. After being hired, he traveled the Sunshine state investigating complaints. He uncovered previously unrecognized pesticide exposure routes. He worked to educate physicians on how to diagnose health problems caused by pesticides -- something barely covered in medical school. He wrote recommendations for protecting the public health based on the data he compiled.
Initially Shafey's hard work paid off. He was honored with appreciation

awards by state and county health departments for "professional, caring and compassionate" service. And he earned the respect of diverse communities: colleagues, academics, farm workers, and ordinary citizens. Yet two years after Shafey began his job, he was fired and forcibly removed from his office in Tallahassee after allegedly overcharging his department $12.50 on a travel reimbursement claim.

Shafey claims he was harassed and ultimately sacked for resisting pressure from his supervisors to present results more pleasing to powerful agriculture interests. He is suing the Florida health department and two of his former bosses for wrongful dismissal under whistleblower statutes as well as for infringement of his First Amendment rights.

Department policy prevents commenting on pending litigation, says spokesperson Bill Parizek, so Florida health department staff could not answer questions about Shafey or his lawsuit.

Shafey's star began its meteoric descent after he refused to alter his recommendation against spraying urban areas with malathion to control an agricultural pest. Malathion is a widely used organophosphate insecticide, a nerve agent (like many pesticides) of the same chemical family as sarin gas. After analyzing medical reports and interviewing patients, Shafey concluded the spraying was making people sick.

Florida deployed malathion against an outbreak of Mediterranean fruit fly, or medfly, long considered horticultural enemy number one. The females lay their eggs in about 250 different crops. The medfly is an invasive species, neither established nor tolerated in the U.S. or Japan. An outbreak results in quarantines that prevent growers from selling fresh produce in either country.

A medfly outbreak hit Florida in 1997-1998, during which eradication efforts subjected more than a million people, mainly from Tampa to Sarasota, to malathion spraying. Call it collateral damage in the pesticide wars. Public outrage over the spraying led to the passage of a state law in early 1998 mandating the health department to set up a citizen complaint and referral hotline. The law also requires the department to verify complaints, educate health care professionals and refer patients to doctors who know how to treat chemical poisonings. Shafey joined the department soon after the law took effect.

Stripped

One of Shafey's first investigations began after medflies were found in an abandoned orange grove in April 1998 in Umatilla, a rural town in central Florida's citrus country. A medfly emergency was declared in Lake and

Marion counties. After the area was sprayed, the county health department received 14 complaints.

Some of those complaints came from Charmaine Kaiser, now 36, her fiancé Dennis Robinson, 38, and the six children in their combined family. Kaiser says authorities were supposed to notify residents door-to-door before spraying so that people would stay inside, but that didn't happen. "The helicopters were right above, not very high up, and they sprayed our house. I ran out to get the kids who were playing outside, and we all got coated," she says.

Immediately after the spraying, Kaiser, who works for a local pediatrician, says her family and a lot of neighbors were very ill with long bouts of flu-like symptoms. "Two or three weeks later, I remember we were all vomiting," Robinson adds. "I was just lying on the couch, and every one of us had a bucket or something by us. It was horrible." Since the spraying, Robinson says he has been hospitalized twice a year for pneumonia, and Kaiser and her kids still suffer from respiratory complaints.

A few weeks after the spraying, more medflies were found in densely populated Manatee County, just south of Tampa on the west coast, and another emergency was declared. Shafey says throughout the duration of spraying there, the health department received dozens of complaints daily, eventually totaling 199.

By October 1998 Shafey had confirmed 123 cases of illness related to the spraying, a finding that was later published in the U.S. Centers for Disease Control and Prevention's Morbidity & Mortality Weekly Report.

The same month Shafey wrote the report that he and colleagues say led to reprisals against him: a draft on the health effects of the medfly eradication program recommending that the department prevent aerial spraying in non-agricultural areas. The final medfly report FDOH issued was stripped of both Shafey's recommendation and his name.

Pressured

Shafey says he was pressured for months by his supervisors to change his recommendation and conform to health department policy that was much less aggressive about documenting cases of pesticide poisoning than he was. In early December 1999, he says his boss, David Johnson, suggested Shafey consider money and politics as driving forces behind the way the department treated health issues involving pesticides, and that if Shafey could not "bend" to accommodate FDOH policy, he should leave. Johnson denied the conversation, both in e-mail to Shafey copied to his boss and later in court documents.

Shafey's boss suggested he consider money and politics as driving forces behind the way the department treated health issues.

Johnson wasn't the only one who stood in Shafey's way. For more than a year, department lawyers had denied him access to worker's compensation data that would have helped him protect workers against future poisonings. Eventually, the National Institute of Occupational Safety and Health (NIOSH) in Washington intervened on Shafey's behalf and sent a letter to Sharon Heber, the head of Shafey's division, urging her to help get the worker's comp data. Three days later, she asked the department's Inspector General to investigate a business trip that Shafey took the month before to see if he had submitted a fraudulent travel claim.

Shafey had gone to Immokalee to investigate a methyl bromide spill at an agricultural chemical supply house that injured about 40 people. Heber suspected Shafey had traveled out of the way at the state's expense for his own benefit. Though Shafey flew to Miami, which was farther from his destination than other places, the inspector-general's report acknowledged Shafey saved the state $47.11 because he had no hotel expenses.
The inspector-general did conclude Shafey defrauded the department $12.50 on his next trip to the American Public Health Association (APHA) annual conference in Chicago, where he presented his medfly data. The inspector-general said he should have claimed reimbursement for three-quarters of a day's per diem instead of a full day when he returned to Tallahassee, a charge Shafey disputes.

Over the next month, Shafey's responsibilities diminished, according to health department correspondence. A cornerstone of the pesticide surveillance program is to categorize to what extent medical complaints are likely linked to pesticide exposure. Despite protests from NIOSH, which funds Florida's pesticide poisoning tracking program, Johnson took the classification task away from Shafey.

Something Really Underhanded

On March 1, 2000 Shafey was presented with a detailed letter informing him that the department was considering firing him on March 13 for falsifying a travel claim and conduct unbecoming a public employee. The second charge stemmed from some emails Shafey sent to several colleagues at various state and federal agencies questioning whether the state's use of potassium chloride to execute prisoners by lethal injection was a misuse of pesticides, because the chemical was not registered for that use.

Although tensions had been rising between Shafey and his supervisors, he

was surprised and upset by the move to fire him. At the time, state employees who were not political appointees were protected from being sacked for policy differences with management, so Shafey thought his job was secure. Incidentally, that changed on July 1, 2001, when Florida Governor Jeb Bush's plan to remove career service protection for Florida state workers went into effect, throwing nearly 17,000 positions -- including the one Shafey occupied -- into "at will employment." Now any state worker who refused to bow to the kind of pressure Shafey was subjected to can be fired without cause.

After he received the termination letter, there was an incident during which Shafey says Johnson provoked him. Shafey closed his office door on Johnson and admits to calling him "a low life" and "a piece of shit." The next day Shafey was told he could no longer come into work pending an investigation of the "door slamming incident" the previous day. Shafey denies that he slammed the door but just closed it while Johnson was on the other side. "Anything I did at that point was blown all out of proportion," he says. "I think they were afraid I'd go postal, because they knew they were doing something really underhanded." He was instructed to go home and wait to be called in.

On his last day Shafey was told to come in immediately to meet with Heber (Shafey's division head) even though his lawyer could not be present under such short notice. Shafey went in and was told he was terminated immediately without any right to appeal because he used abusive language and created an "emergency condition." Then the sheriff was called to escort him out.

Burying the Controversy

The Farmworker Association of Florida viewed Shafey's ouster as a major setback to their efforts to address pesticide issues on behalf of the state's 400,000-plus farm workers. Tirso Moreno, the association's executive director, says Florida's pesticide safety regulations are too lax to protect workers, and the few laws on the books are not enforced, so pesticide poisonings are rampant.

Aside from dealing with acute symptoms associated with individual exposures, Moreno says his community seems to have unusually high rates of birth defects, skin problems, respiratory complaints, and autoimmune diseases, like lupus.

Dr. Mohammed Abou-Donia, a professor at Duke University, says it's likely that pesticide exposures are responsible for the health problems of Florida farm workers, but proving it is fraught with pitfalls. Since there is no way to measure all of the pesticides and other contaminants that people are

exposed to, it is impossible to link exposures of particular chemicals back to chronic health problems. "We're put to such high standards of toxicological proof, that you can't meet it," says Marion Moses, MD, director of the pesticide education center.

The Farmworker Association has been trying to get FDOH to help for years, but until Shafey showed up, he says nobody took their concerns seriously. "When we had workers who had a problem, we always called him," Moreno says. "We don't feel that way now. And since his firing, we haven't expected much from FDOH."

Public health colleagues have also expressed regret at Shafey's dismissal. University of Florida health professors Leslie Clarke and Joan Flocks wrote in a letter to former Health Secretary Robert Brooks, that Shafey brought "courage and objectivity" to the often controversial and heated public debate surrounding pesticide use, and they urged the department to reinstate him. The American Public Health Association publicized Shafey's ordeal in a Fall 2000 newsletter of its Occupational Health and Safety Section, and concluded that his tenacity in carrying out his public health duties led to reprisal against him. The International Society for Environmental Epidemiology, a professional organization representing more than 800 environmental scientists, endorsed Shafey's medfly spraying conclusions and said his termination "appears highly irregular."
Soon after his sacking, Shafey sued FDOH for wrongful dismissal seeking reinstatement and damages under whistleblower provisions. Such legal actions tend to take time, and Shafey's case is no exception. His first hitch was a report by Occupational Safety and Health Administration inspector Dennis Russell on whether Shafey's complaint was justified. Russell concluded in July 2000 that the department did not retaliate against Shafey, although he talked only to the Florida health department and never tried to interview Shafey. After repeated attempts, Russell could not be reached for comment.

Florida has pursued a concrete wall defense. Using a newly popular tactic, the state has invoked -- and the court has accepted -- a "sovereign immunity" defense, which basically says that states are immune from legal action by individuals. Though the doctrine was articulated more than a century ago, recent U.S. Supreme Court rulings have given states new power to use it, explains Michael Kohn, a lawyer representing the National Whistleblower Center. He calls it "a critical assault" on public health and environmental defense.

Meanwhile, before the sovereign immunity decision Shafey amended his complaint to name Sharon Heber and David Johnson individually. Shafey has also filed another action claiming Heber, Johnson, former Secretary Brooks, and Governor Jeb Bush violated his constitutional rights to free

speech and due process of the law.

On November 1, 2001 the court ruled that Shafey's case can proceed. Meanwhile, Shafey's attorney William Moore of Henrichsen Siegel Moore laments the uphill trudge: "We've been waging this battle for one and a half years now, and we haven't been able to have any discovery yet in the case. I think it speaks volumes about the merits of Dr. Shafey's case and the fact that the state has done so much to try to avoid sitting down and talking about this situation."

Harassment of public interest-minded health officials, scientists and technical experts is widespread and rising, says Mary DeVany, chair of the Industrial Hygiene Association's Social Concerns Committee. "There's a lot of pressure being put on people to modify, soften their tone, or hedge their reports to say something is possible instead of 'here's the evidence that it happened,'" she says. "We're talking about an increased acceptance of unethical behavior -- about supervisors and managers putting pressure on their technical professionals to perform unethical acts."

De Vany characterizes this phenomenon as "the good corporate soldier syndrome." But the increasing allegiance to corporate interests among public health officials does little to help Florida farm workers or the Charmaine Kaisers, Dennis Robinsons, and other victims among us.

Published: Jan 07 2002

Force Feeding Genetically Engineered Foods
by Karen Charman

The current campaign by agribusiness to win public approval for genetically modified foods gives new meaning to the phrase, "the carrot and the stick."

The carrot in this campaign consists of promises that biotechnology means better food, a cleaner environment, and prosperity for struggling farmers. The stick consists of lawsuits and threats of lawsuits against biotech's critics--now made easier with the "agricultural product disparagement laws" that industry has lobbied into law in more than a dozen states. Threats of lawsuits have been used repeatedly against writers who have exposed the activities of the personnel engaged in flacking for biotech foods. In "The Professor Who Can Read Your Mind," (linked below) Karen Charman describes one such threat that she encountered in the course of researching her stories for this issue.

The food industry wants to "educate" you about "ethical and scientific issues" associated with genetically modified foods, but its notion of education is based on

a propaganda model in which you, as student, are meant to sit still and listen while it, the teacher, tells you what to think. That is why secrecy and control of information is a major part of its educational campaign.

Secrecy is what motivates Professor Tom Hoban's legal threat and his refusal to disclose the identity of his clients, just as it motivates the Burson-Marsteller PR firm's refusal (linked below) even to confirm that it has been hired by the Monsanto company to flack for biotech foods.

The biotech food industry likes to pretend that education is necessary because the public is ignorant, irrational and easily moved by "Luddite technophobia," "hysteria" and "environmental scare tactics." And it is true that the public is ignorant--especially about the scale and scope of the changes which industry has already begun to introduce without public consultation or consent. But ignorance is not irrationality, and it is precisely the fear of an informed public that now has industry and its minions running scared.

The biotech industry has chosen a slam dunk strategy to gain public acceptance for its products: Slip unlabeled genetically engineered food into the food supply and hope too many people don't notice or object. Deal with those who do notice and object with an army of "experts" that stand ready to refute any criticisms or critics of the technology. If a lot of people start to object, by that time it should be too late because much of the food supply will already be genetically engineered. If plans run awry for some reason, mount a full public relations offensive and pass the ball to the World Trade Organization whose rules favor free trade. A victory there isn't such a long shot, and if it works, slam dunk!

Up until fairly recently, the strategy was going pretty much according to plan. The first large-scale commercial plantings of transgenic crops went into the ground in 1996, and by 1998 they covered nearly 69 million acres in eight countries, not including China. Last year, 74 percent of the world's transgenic crops were grown in the United States. This year more than half of the US corn crop and between one-third to half of the soybeans planted were genetically engineered varieties. Gene-altered products on the market include canola, potatoes, tomatoes, sweet peppers, peanuts, sunflower, milk and chymosin, an enzyme commonly used in hard cheese. Since corn and soy, in particular, are so widely disseminated in processed foods as sweeteners, oils, texturizers, extenders, etc., consumers have been eating increasing amounts of genetically engineered food for the last four years--mostly without their knowledge or consent--because the food has not been labeled as such.

Europe gags

European activists in groups like Greenpeace and Friends of the Earth objected to genetically engineered foods sneaking into the food supply and brought the issue to the attention of the European media and public. With the mad cow

debacle and other public health and food safety crises fresh in their minds, European consumers have told American biotech companies to take their transgenic food and shove it--at least until they feel that they have received adequate answers to their questions about the safety of consuming genetically engineered food and releasing genetically modified organisms (GMOs) into the environment.

European supermarkets and food companies, like Nestlé, Cadbury and Unilever, are scrambling to assure their customers that their products are GMO-free. They are looking for non-GMO sources, mainly outside the US, which has caused major food ingredient suppliers such as Archer Daniels Midland to begin separating their GMO and non-GMO product. To ensure it has some GMO-free product, ADM--"supermarket to the world"--is even contracting farmers to grow non-GMO crops near its processing plants in Decatur, Illinois.

In addition to Europe, the issue is getting extensive play in Australia and New Zealand, and Japanese consumers are in an uproar as well. The European Union, Japan, South Korea, New Zealand and Australia have all passed some sort of mandatory labeling law for GMOs. "The firestorm in Europe landed in different parts of the world, and all of a sudden we have global distrust of the technology," one biotech industry analyst said.

Eyeing the wreckage in other countries, the biotech industry is terrified of a consumer backlash here. More and more stories questioning various aspects of the technology and reporting on the international consumer revolt are appearing in influential publications such as the *New York Times,* the *Los Angeles Times,* the *Wall Street Journal, Time, Newsweek* and *Consumer Reports.*

In July, the PR trade publication *PR Week* ran a story titled "Field of Bad Dreams," which reported that industry got "a wake-up call" following the release of a laboratory study showing that Monarch butterflies were killed by eating pollen from corn genetically modified to produce its own insecticide. Discoveries like that could end consumer complacency "in an instant," one source in the story commented.

To prevent a US consumer backlash, *PR Week* advised ag PR pros to lay the foundation for public acceptance of biotech foods. This would entail setting up "early warning systems" to handle awkward studies and activist groups questioning their products; training seed company officials to deal with the popular press; getting seed companies to publicize their research; and roping in "third party spokespersons" to trumpet pro-biotech statements and opinions from government regulators. Farmers make especially good spokespersons, *PR Week* advised, because they "garner positive response from American consumers." It warned that food companies "need to be very precise about what the meaning of safe is in regard to these products," reminding its readers that "agri-chemical makers have been doing that for years, telling farmers their fertilizer and

pesticide products are safe *only if used as directed"* (emphasis added).

PR firms with food industry clients have quietly begun laying the groundwork. Fleishman Hillard, rated number two in ag PR, predicted that about $2.5 million of the $10 million it earns for agricultural PR in the coming year will be for "crisis preparedness" related to genetic engineering issues. Before a crisis hits, PR professionals want to emphasize "the value message,"--i.e. that genetically engineered crops offer the only way to feed a growing world population, especially at a time when land for agriculture is shrinking.

In early October, to coincide with a two-day Senate Agriculture Committee hearing on ag biotech, the food industry launched the Alliance for Better Foods, its first public pre-emptive strike against an anti-GMO consumer backlash. The alliance has its own website (www.betterfoods.org), which lists the Grocery Manufacturers of America (GMA), the American Farm Bureau Federation, and 24 other trade associations representing virtually every segment of the food industry (except the organic foods sector). The alliance is run by the Washington office of BSMG Worldwide, a full service PR firm whose clients include Monsanto, the Chemical Manufacturers Association, Procter & Gamble, Philip Morris, and numerous other large food, chemical and pharmaceutical corporations.

The GMA is the driving force behind the Alliance for Better Foods said GMA spokesperson Brian Sansoni. The alliance doesn't include biotech companies or their trade association, the Biotechnology Industry Association (BIO), he said, but was created to get the food industry "to speak from the same page" in support of the technology. "We didn't want the activists' misinformation and scare campaign to be the story--like what happened in Europe," he said.

Sansoni wouldn't say much else about what the alliance is up to, but The *Philadelphia Inquirer* recently reported that "it and BIO say the heart of their strategies will be behind-the-scenes efforts to educate journalists." The paper notes that BIO is inviting journalists to a symposium in Chicago in November and quotes pro-biotech pollster Tom Hoban's observation that these "educational" efforts are important because media stories will be crucial to shaping public opinion.

The Sounds of Sound Science

The anxiety level of the industry and its backers appears to be increasing substantially. At the abovementioned Senate Ag Committee hearing, many called on EPA, FDA, and USDA, the three federal agencies with regulatory jurisdiction over biotech, to step up their efforts to defend the technology. According to the trade publication *Food Chemical News,* Senate agriculture committee chairman Richard Lugar told the agencies they are obligated to correct false statements made in the media and publish "sound science" that backs the safety of their approvals for biotech foods. "Industry wants a stronger seal of approval. . . .

There's a difference between saying it's not unsafe and saying it's safe," the publication quotes him as saying.

This sentiment was repeated by Marc Curtis, president of the American Soybean Association, who complained that the Clinton Administration has not clearly signaled how it intends to handle biotech issues in the coming round of world trade talks that begin in Seattle at the end of November. Obviously rattled by what many in the industry have termed "terrorist attacks," Curtis also called on Congress to make vandalism against biotech field trials a harshly punished federal crime.

Biotech scientists from a variety of land grant universities stressed many versions of "the value message" in their testimony: on the promise of biotechnology to cure people of chronic diseases, prevent food allergies, lower the risk of heart attacks and even some cancers, deliver vaccines, prevent the inevitable plowing under of wilderness areas, replace polluting industrial petrochemicals, reduce chemical use in agriculture, and enrich economically depressed rural communities. Some lamented that all these dreams could vanish if biotechnology's critics prevail.

Roger Beachy, president of the newly established Donald Danforth Plant Center, a non-profit biotech research organization set up in St. Louis with funding from Monsanto, the Danforth Foundation and the state of Missouri, further chided biotech critics by suggesting that their alternative to biotech food, organic food, was not guaranteed to be safe. Repeating a falsehood that began with Dennis Avery from the right-wing Hudson Institute, he said organic food "makes good use of animal manure to fertilize crops" which may or may not be properly composted and therefore carries a high risk of E. coli contamination. (See accompanying story on Dennis Avery in this issue, linked below.) Beachy, like Senator Lugar, demanded more support from government agencies: "Where's FDA, NIH, [Agriculture] Secretary Glickman?" on this, he asked.

More than they bargained for

Many farmers--who responded in droves to industry's intense pro-biotech PR and sales pitches--don't appear to be waiting for the USDA, FDA, NIH or EPA to do something about the growing consumer revolt against genetically engineered food. The American Corn Growers Association, a progressive commodity group that represents thousands of corn growers in 28 states, is encouraging its members to plant non-GMO varieties. Even the pro-biotech National Corn Growers Association (NCGA), the "official" corn commodity group that represents larger growers, can't argue with a 96% drop in the European market in one year. Between the 1996/97 and 1997/98 seasons, European corn purchases fell from nearly 70 million bushels to less than 3 million. At the Senate Ag Committee hearings, NCGA board member Tim Hume called on biotech seed companies to make sure they offered their best hybrid varieties in conventional versions.

As the biotech food controversy grows, the food industry appears to be waking up to the consequences of ramming through market approvals on questionable products without full and honest public debate. The trade publication *Supermarket News* put it this way in its October 25 issue: "Consumers' faith in the government and retailers as watchdogs over food safety could be broken, undermining one of the pillars upon which the modern supermarket was built." A representative from Nestlé, the world's largest food company, is reported to have put it this way at an industry conference discussing the consumer problem earlier this year: "Don't expect *us* to take a bullet for *your* GMO products," Nestlé told Monsanto and other biotech seed producers.

The food industry, however, does not appear to be interested in a full and honest public debate over genetically engineered food. Instead, it seems to be closing ranks. PR industry shenanigans and the Alliance for Better Foods' efforts to "educate" journalists and policy makers are just the latest tricks in a covert campaign that has been underway for years to spoon-feed biotech food to the public.

The International Food Information Council (IFIC), an industry-funded group, was created in 1985 to "communicate science-based information on food safety and nutrition" to virtually any group it believes wields influence over consumers--including professionals, educators, government officials, and journalists. IFIC has been working on food biotech issues since 1992 and has a lot of pro-biotech and food industry propaganda on its website (www.ificinfo.org), including such gung-ho gems as the following:
"New Survey Finds Americans as Positive as Ever on Food Biotechnology"
"Food Biotechnology--Benefits for Developing Countries"
"New Research Shows Consumers Willing to Try Irradiated (Cold Pasteurized) Foods; Taste Very Important"
"Consumers, Health Experts Desire Benefits of Biotech Foods and Concur with Current FDA Labeling Policy" [Current FDA policy does not require labeling of genetically modified foods.]

IFIC also posts a wealth of information on how journalists and others should understand and translate the plethora of food- and health-related studies and reports that emanate from various sources. It has links to the BIO site, which posts similar material, and both sites list a variety of pro-biotech expert opinions.

The biotech industry has lined up an impressive roster of groups and individuals supporting its cause. The American Medical Association; the American Dietetic Association; the United Nation's Food and Agriculture Organization, the World Health Organization, the World Bank, James Watson, the co-discoverer of DNA; and a wide range of government officials--even former president Jimmy Carter--are all on record either plugging the technology or downplaying consumer concerns.

Right-wing policy factories are also stepping up their pro-biotech campaign. Earlier this year, the Competitive Enterprise Institute, which has received money from the oil industry, Philip Morris, and from pharmaceutical and chemical companies, hired Michael Gough, PhD as its "biotechnology advocate" to "help advance the great promise of biotechnology in food production, medicine development and environmental protection." For Gough to even use the phrase "environmental protection" is an interesting exercise in hypocrisy, since he has spent much of his career denying that environmental problems even exist. Gough co-authored *Silencing Science* with internet "junkman" Steven Milloy (see link below), and he frequently trashes health and environmental advocates on the op-ed pages of publications like the *Washington Post,* the *Detroit News,* the *Wall Street Journal,* the *Journal of Commerce,* and the *Chicago Tribune.* The "corporate science" defenders of food biotechnology also include Henry Miller from Stanford University's Hoover Institute and Michael Fumento (also affiliated with CEI and with Consumer Alert, a right-wing "alternative" to Consumers Union), and other pillars of the anti-environment establishment.

Both critics and defenders of the technology are coming to understand that the brewing public debate over transgenic food may have much bigger stakes than they originally anticipated. Genetically engineered food was introduced by stealth, but overseas the secret is well and truly out, and public awareness is starting to emerge now in the United States as well. The same vested interests that didn't trust the public enough to inform us up front that they were introducing genetically engineered food into the environment and our grocery stores are now asking us to trust them as reliable experts on the questions of whether this innovation is safe and good. Their fear--and our hope--is that the debate on biotech foods could be the issue that awakens the public to the realization that government food and environment regulators are not presently functioning to safeguard the public's best interests.

The Hudson Institute's Dennis Avery told the *Philadelphia Inquirer* that he thinks industry should go straight to the public with a massive advertising campaign. Stay tuned. Unlike much of what appears on television these days, this promises to be interesting.

"Biotechnology Will Feed the World" and Other Myths
by Karen Charman

Monsanto and other corporate proponents of genetic engineering are using a form of emotional blackmail to get people to accept this new technology. They claim biotechnology will be a savior and fix many of the very real and pressing problems that the Monsantos of the world created in the first place.

Monsanto's past record as a chemical manuufacturer does not inspire confidence in its environmental stewardship. Witness Times Beach, Missouri. The town was

so contaminated with dioxin that in 1982 the federal government ordered it to be evacuated. Monsanto has continually denied any connection with the catastrophe, yet laboratory documents were found showing that large concentrations of PCBs in town soil samples were manufactured by Monsanto.

The thing about the past, as opposed to the future, is that facts about it are harder to fabricate. Rather than recall the past polluting activities of today's biotech industry leaders, government and agribusiness interests prefer to talk about the technology's promise for the future, casting biotechnology as the answer to some of humanity's deepest and oldest aspirations. The fundamental contradiction in this message is that while on the one hand they want to present biotechnology as something new, powerful, and revolutionary, at the same time they want to reassure us that that what they are doing is cautious, prudent, safe and in keeping with age-old agricultural traditions.

Biotech Myth #1: Biotechnology is nothing new. The use of genetic engineering to improve food crops is merely a natural extension of plant breeding techniques that have been used since time immemorial. Promoters of agricultural biotechnology insist that genetic engineering is just a faster and more precise way to improve crops than traditional plant breeding methods, which can take several generations of breeding and therefore be a lot more time-consuming.

Fact: While it is true that conventional breeding methods have yielded a wide variety of plants and animals that did not exist previously, the genes that produce those traits have come from within their own or closely-related species. Modern genetic engineering can take genes from a species such as a fish or a virus and place them into an entirely different species, such as a tomato. This gives humans--actually, corporations--radical new powers, with unpredictable consequences.

Biotech Myth #2: Biotech foods are the most extensively researched and regulated food products ever.

Fact: Every industry likes to pretend that its products are the most extensively researched and regulated products in existence. The nuclear power industry has made this claim, as have the makers of vinyl chloride, dioxin, fen-phen, MSG and Olestra.

Back in 1992, the FDA decreed that genetically engineered foods were no different than conventional foods. Under FDA law, unless a food is "generally regarded as safe" (GRAS), a legal determination, it must be thoroughly tested. Because biotech foods have been determined "GRAS," they undergo no independent safety testing. Instead, government regulators rely on biotech companies to do their own safety tests and also determine themselves if the product in question is GRAS.

Testing biotech crops for their environmental safety is equally lax. It is up to the USDA to ensure that genetically modified crops are ecologically safe. The *New York Times* recently reported that the agency has not rejected a single application for a biotech crop and that many scientists say "the department has relied on unsupported claims and shoddy studies by the seed companies."

Biotech Myth #3: Genetically engineered crops will allow us to reduce, if not eliminate, environmentally toxic pesticides and fertilizers. Biotechnology is therefore good for the environment.

Fact: So far, the opposite has been true. The vast majority of genetically engineered crops currently on the market have been modified to either withstand herbicide (so that more can be sprayed) or produce their own insecticide.

This year, more than half of the US soybean crop was genetically engineered to survive spraying with Monsanto's best-selling weedkiller, Roundup. An analysis of 8,200 university research trials revealed that farmers planting Roundup Ready soybeans are using two to five times as much of the herbicide as farmers growing conventional varieties. Chuck Benbrook, who reported the results of the studies, said nobody is testing the crops for increased residues of Roundup. The EPA, moreover, has raised the allowable residue limits for Roundup on forage crops.

Producing a plant that can make its own insecticide so that farmers don't have to spray insecticides may sound like a good idea, but anything more than the most superficial consideration reveals otherwise. Bacillus thuringiensis (Bt) is a natural soil bacterium that destroys the digestive tracts of certain very pesky insects, like the Colorado Potato Beetle and the European Corn Borer. It is one of the safest insecticides known and has been used in spray form by organic farmers for years. Biotech companies have engineered crops--corn, cotton, canola, and potatoes--with a Bt gene so that Bt crops express the toxin in every cell of the plant. Such widespread use of the toxin will eventually make the bugs it targets resistant to it. That's just evolution, plain and simple. The loss of Bt, which is currently used sparingly by organic farmers, will deprive sustainable agriculture of one of its most effective tools.

Another point that biotech promoters never mention is that unlike other forms of pollution, genetic pollution produces live organisms that can grow, reproduce, mutate, and migrate. For that reason, genetic pollution may cause greater long-term harm than the petrochemical toxins now plaguing the planet, as Jeremy Rifkin observes in his book, *The Biotech Century.*

Already there have been instances of genes escaping much farther than anyone predicted. Harvard geneticist Richard Lewontin was quoted in a *New York Times Magazine* article last year saying, "There's no way of knowing what the downstream effects will be or how [genetic engineering] might affect the

environment. We have such a miserably poor understanding of how the organism develops from its DNA that I would be surprised if we *don't* get one rude shock after another" (emphasis his).

Biotech Myth #4: Biotechnology will increase crop yields, help farmers and rebuild rural economies.

Fact: So far, the opposite has been true. Aside from throwing corn and soybean growers into a tailspin because of the international consumer revolt against genetic engineering, 8,200 university research trials comparing the performance of different varieties of soybeans show that yields of genetically engineered herbicide resistant soybeans are lower than comparable conventional varieties. Since more than half of the soybeans planted this year were Roundup Ready varieties, the 5-10 percent yield drag is a significant drop--some 80 to 100 million bushels.

The contracts governing the use of transgenic seeds are not exactly farmer-friendly, either. Genetic engineering turns the seeds themselves into "intellectual property," so the farmers using the seeds don't legally own them. Monsanto likes to use the analogy of leasing a car--at the end of the lease, the car is returned. This new ownership arrangement makes it illegal to engage in the time-honored practice of saving seeds, a practice which is especially common in the Third World. In the United States and Canada, Monsanto pressed this concept to the point of hiring private investigators to swipe plants from farmers who didn't buy their seeds to see if they are planting Monsanto's transgenic varieties. Monsanto has also encouraged its farmers to snitch on neighbors they suspected of planting transgenics without paying for them. There's even a case in Canada of an elderly farmer who is being sued by Monsanto for intellectual property theft. He swears he never planted Monsanto's transgenic seed, yet it showed up in his field, quite possibly through genetic drift--i.e., contamination of his crops by wind-blown, genetically-engineered pollen. While this type of harassment continues, genetic engineering can be considered a "benefit" to rural communities only insofar as farmers enjoy living in a police state.

Biotech Myth #5: Biotechnology is the only hope we have to feed a growing world population.

Fact: Starvation and malnutrition are very real problems, but they are caused by unequal distribution of wealth, not by food scarcity. According to the United Nations World Food Program, there is currently more than enough food produced to feed everyone on the planet an adequate and healthy diet. The reason that approximately 800 million people go hungry each year is that they don't have access to food by either being able to afford it or grow their own. Biotechnology, by turning living crops into "intellectual property," increases corporate control over food resources and production. Rather than alleviate world hunger, biotechnology is likely to exacerbate it by increasing everybody's dependence on

the corporate sector for seeds and the materials

The Professor Who Can Read Your Mind
by Karen Charman

Tom Hoban is a man with a mission: to convince people to embrace genetically engineered food. I had the opportunity to experience this firsthand at the Biotechnology Industry Organization (BIO) annual conference in New York City in June 1998 while we were lining up for lunch. Seeing the press pass dangling around my neck, he made a beeline for me and proceeded to attempt to educate me about the wonders of food biotechnology.

That might not seem strange--plenty of people push biotech--but Hoban is not a public relations flack or salesman at a company peddling biotech food. He is a professor in the sociology department at North Carolina State University (NCSU). Hoban specializes in consumer behavior and the psychology of conflict, a position that gives him a veneer (but only a thin veneer) of objectivity.

Industry promoters widely regard Hoban as the pre-eminent expert in consumer attitudes on gene-altered food, and he is listed in several industry source guides for journalists. Over the last ten years, he has conducted a number of government- and industry-funded surveys, which he says consistently show "two-thirds to three-quarters of U.S. consumers are positive about food biotechnology." Considering the controversy swirling around biotech food overseas and the likelihood that it will erupt on these shores, such a finding must be comforting to industry. His data, however, is questionable.

Hoban says he helped design the questions in a much-touted consumer survey conducted for the International Food Information Council (IFIC) but carried out by the Republican political and polling firm, the Wirthlin Group. The survey was first done in March 1997 and then repeated in February 1999, ostensibly so that a trend could be established. Besides trumpeting strong support for genetically engineered food, the nine-question survey indicates that consumer awareness of biotech food is low. It also claims there is little support for labeling biotech foods.

The problem with the survey, however, is that the questions it asked are loaded with language designed to bias the answers. Examples include:
"How likely would you be to buy a variety of produce, like tomatoes or potatoes, if it had been modified by biotechnology to taste better or fresher?"
"How likely would you be to buy a variety of produce . . . if it had been modified by biotechnology to be protected from insect damage and required fewer pesticide applications?"

"Biotechnology has also been used to enhance plants that yield foods like cooking oils. . . . Would this have a positive effect, a negative effect, or no effect on your purchase decision?"

"Some critics . . . say that any food produced through biotechnology should be labeled even if the food has the same safety and nutritional content as other foods. However, others, including the FDA, believe such a labeling requirement has no scientific basis, and would be costly and confusing to consumers. Are you more likely to agree with the labeling position of the FDA or with its critics?" James Beniger, a communications professor at the University of Southern California and past president of the American Association for Public Opinion Research, reviewed the IFIC survey and said it is so biased with leading questions favoring positive responses that any results are meaningless. UCLA communications professor Michael Suman agreed, adding that the questions "only talk about the food tasting better, being fresher, protecting food from insect damage, reducing saturated fat and providing benefits. It's like saying 'Here's biotechnology, it does these great things for you, do you like it?'" The results might be different, Suman offers, if it contained questions biased in the other direction such as: "Some people contend that some foods produced from biotechnology cause higher rates of cancer. If that is so, what effect would that have on your buying decision?"

Ignorance is bliss

Hoban's rap, either while presenting a paper at a biotech industry conference or in a one-on-one interview, is equally questionable. It goes something like this (my paraphrase): "The public is much more positive about food biotechnology than the activists would have you believe. Most people don't know much about biotechnology, but that's because it is not important to them. Americans--unlike Europeans who have been through traumatizing food scares--have great trust in the public agencies that regulate our food supply. Since the FDA says genetically modified food is safe, that is good enough for most. The FDA position on labeling is sensible because a label for biotech food would only confuse consumers and hike the cost. Activist types are suspicious of biotechnology, but they are probably technophobic and only represent a minority view. Biotechnology is no different than what crop breeders have been doing all along--it's just more sophisticated and more precise, so what's the big deal? People support biotechnology in food because it will benefit them. People's views on food are based on whether they think it will bring them a tangible benefit--fresher, better taste, convenience, higher nutrition, and price. Environmental and food safety concerns only surface if there is irresponsible and sensational media attention that stirs up fear. Besides, biotechnology is good for farmers, and Americans--unlike Europeans--like to support their farmers."

At industry gatherings, Hoban emphasizes--and pokes fun at--the scientific illiteracy of the general public. At the BIO meeting, after telling his audience that consumers decide what food to buy based on taste, value, and convenience, *not* on how the seed was produced, he quipped: "Lots of American consumers probably don't know seeds are involved in agriculture--they don't even know *farms* are involved in agriculture."

"Everybody's going to be using biotech foods pretty soon, so there won't be a lot of alternatives."
--Professor-cum-Pollster Tom Hoban

In a recent telephone interview, he said that when he asks people about concerns critics have been raising about the technology, most respondents only express a vague sense that biotech may result in some unwanted and unanticipated consequences somewhere down the line. But again, ignorance shapes their response. "People tend to think the positive is going to outweigh the negative when we describe it for them. In general, they don't know enough about it to get into all the details--that a plant is going to somehow have its genes transferred to another plant," he said. "When you present that to people in a focus group, they will scratch their head and not really know what you are talking about."

Comfort Food

Hoban sees such public ignorance as a great opportunity for industry to "proactively educate" consumers to gain trust in biotechnology. At the BIO meeting, he complimented biotech companies and industry groups like IFIC and BIO for "paving the way for biotechnology in the U.S." and making the public "comfortable" to the point that he predicted genetically engineered food "will not be an issue for the vast majority of consumers."

Hoban miscalculated the extent to which genetically engineered food has become an issue in Europe. At the June 1998 BIO meeting, he said activist groups like Greenpeace had gotten all the media attention but they didn't really represent the average European consumer. Today he concedes the biotech industry made some mistakes in being too aggressive about pushing the technology and not labeling the products so that European consumers could make their own choices. However, he blames most of Europe's reaction on an out-of-control media that "terrorized" European citizens with daily headlines of Frankenfood, combined with the aftershocks of betrayal over mad cow disease in England and dioxin contamination in Belgium.

European controversy or not, Hoban doesn't seem to be too worried about the future prospects of the industry. He says non-GMO products are becoming difficult to find, and "everybody's going to be using biotech foods pretty soon, so there won't be a lot of alternatives."

Expert for Hire--Attorney Included

A short biography of Hoban precedes an interview with him that appeared in the May 1996 issue of *PBI Bulletin,* a publication of the Canadian National Research Council. It describes him as an Associate Professor and Extension Sociology Specialist at NCSU whose "main responsibilities involve working with

government agencies, industry and others to improve the assessment and transfer of new technologies." Much of his work "focuses on how people accept new products and respond to change," including "ethical and educational implications of biotechnology." Besides a PhD in rural sociology, Hoban has master's degrees in agricultural journalism and water resource management, plus a BS in biology.

Hoban advertises his social research consultant services on his own web page (http://sasw.chass.ncsu.edu/~tom/). The page says he has "unique and interdisciplinary perspectives" and "provides a practical focus for managing change." It also says, "Dr. Hoban provides timely advice and expert assistance in a number of areas including: consumer response to new products; public perceptions of food biotechnology; management of innovation and change; public opinion about technology and the environment; and issue and crisis management." Specific skills listed include: "survey and focus group research; team building and partnering; strategic planning; policy analysis; needs assessment; and technology forecasting."

Hoban was out of the country when I called to ask who his clients are, so I called NCSU to request the "External Professional Activities For Pay" forms that the university requires its faculty to file when they take on outside work. The university replied that the forms were "confidential personnel information" and refused to provide them. When I called Hoban later to request the information, he refused and was furious that I had contacted the university. He added that he had checked out *PR Watch,* found it to be very biased, and threatened that his attorney would look closely at anything we wrote.

Monsanto and Burson-Marsteller Hire a Consumer Organizer

Executives at the Burson-Marsteller PR firm are saying as little as possible about their pro-biotech PR campaign for the Monsanto company. Jerry Morrison, a longtime consumer and labor organizer who now runs a firm called the Strategic Consulting Group, says he didn't even know Monsanto was the end client when B-M hired him in early November to pitch local groups about the merits of genetically modified foods.

Morrison has especially close ties with Citizen Action of Illinois, the state's leading consumer organization. In 1998, he ran the successful U.S. congressional campaign of Jan Schakowsky, a member of the Citizen Action board of directors who is well-known as a Chicago consumer advocate. Morrison's business partner, Bob Creamer, is Schakowsky's husband and was Citizen Action's executive director prior to resigning last year under a cloud related to his handling of the organization's finances.

Morrison was hired in conjunction with public hearings that the Food and Drug Administration has scheduled as part of its "Biotechnology in the Year 2000 and

Beyond" program. In Chicago, a hearing was held on Nov. 18, with some environmentalists complaining that they received very little advance time to register. The FDA initially booked a room with seating of only 100, and some people say when they called they were told the roster was already full. After the number of people wanting to speak surpassed 500, FDA moved the hearing to a larger venue.

Morrison readily admitted that B-M has hired him to meet with farmers, unions, consumer and "faith-based" groups to counter what he describes as "environmentalist public hysteria" about biotech foods.

"I've been a union organizer, a community organizer," Morrison said. "I'm not going to have my credentials questioned by these folks. On most issues I work with environmental groups. I disagree with them on this issue. Burson-Marsteller has approached me to work with them on a number of other issues in the past and I declined because I disagreed with them, but I agree with them on this issue."

In fact, Morrison's liberal credentials appear to be precisely the reason he was hired. *PR Watch* interviewed several activists who disagree with Morrison's position but declined to be quoted on the record. "I'm a friend of Jerry's," explained one, who said he is "pissed off" at his decision to work for Burson-Marsteller. Morrison's connections, he said, make it easier to stifle organized consumer opposition to biotech foods. "It may not mean that Citizen Action goes out and says they're fine," he said. "It may just mean that they're silent, and that can be worse." (Note: Citizen Action has informed us that it supports mandatory labeling for genetically-modified foods.)

Both Morrison and Burson-Marsteller have been cagey about the details of their work. Morrison told *O'Dwyer's PR Services* that he coordinates his work with B-M's Chicago office, but refused to give the name of the person he reports to. John LaSage, B-M's Midwest Region Chairman, said he wasn't aware that Morrison had been hired. Peter Himler, B-M's executive vice president for media relations, even refused on Nov. 11 to confirm that Monsanto was a client. However, the *New York Times* reported on Nov. 12 that Monsanto "recently retained Burston-Marsteller ... at an annual cost of millions of dollars."

Direct Impact, a subsidiary of B-M specializing in "grassroots PR," has also been involved in trying to get pro-industry testimony at the FDA hearings.

Extra!, November/December 2000

West Nile Attack Media foment fear of virus and obscure pesticide concerns
By **Karen Charman**

With the emergence of the West Nile Virus in New York and several other Eastern states, media coverage of pesticide issues has sunk to a dangerous new low. The outbreak, the first in the Western Hemisphere, began in New York City last year and has triggered a massive spraying campaign that has significantly increased pesticide exposures to more than 15 million people in the New York metropolitan area, surrounding counties and communities between Boston and Maryland.

Most media reports have painted a picture of a galloping mosquito-borne killer virus that can only be stopped by blanketing areas with pesticides where infected mosquitoes and birds turn up. Birds have so far spread the virus from Canada to Maryland, and public officials expect it to migrate further. Nearly all reports prominently mention that West Nile Virus killed seven New Yorkers last year and made between 55 and 67 others sick. In one story, the **New York Times** (8/19/00) detailed the plight of two unfortunate West Nile victims, one of whom said she would "prefer to die" than go through her ordeal again.

Patti Wood, director of Grassroots Environmental Education, an organization that distributes information about pesticides to schools and community groups, says such "incessant pounding" of the killer virus theme in the media has terrified people and gotten many to insist on pesticide spraying in their communities. Geri Barish, president of 1 in 9, a breast cancer survivor group, adds that while she does not want anybody to contract West Nile, the spraying itself is extremely dangerous. Yet, she says, information about the risks of widespread spraying and less harmful alternatives for dealing with the mosquitoes are downplayed or absent from most news reports.

In a story about the psychological impact of the outbreak, the **Boston Globe** (8/20/00) put the risk of West Nile infection in perspective: "Based on current information on casualties, the odds of an American dying of this summer's most dreaded virus are roughly 1 in a million, the statistical cutoff point for saying something has almost no risk at all." Earlier this year, the **New York Times** (3/21/00) reported a New York City Health Department survey of blood samples taken from people who lived in northern Queens, the epicenter of last year's outbreak, showed that 19 out of 677 tested positive for the virus. But none had become seriously ill, and all either reported no symptoms or mild illness, such as a low-grade fever. By comparison, more than 2,000 New Yorkers died from the flu last year.

Nevertheless, news reports continue to focus on the numbers of dead birds and infected mosquitoes, where they were found, spraying details--and public officials' comments on these topics. When critics' concerns about the spraying are included in a story, they are often dismissed a sentence or two later by another source.

One exception was a New York **Daily News** report (9/9/00) of a woman who was sprayed directly on the street and ended up in the emergency room after experiencing blurry vision, nausea, itching, coughing, choking and a swollen tongue. In the story, a New York City Health Department spokesperson says this incident was one of 200 complaints from people who called the city's pesticide hotline stating the spraying has made them sick. The reporter also noted that this case "raises questions about the account of city officials who as recently as yesterday insisted they were unaware of any incident in which New Yorkers suffered health problems as a result of exposure to the insecticide[s]."

Safe as chrysanthemums

Public health officials, academics and others who have studied infectious diseases have begun to warn the public to expect more disease and pest outbreaks. They attribute this to a variety of causes: global warming; increased development in unspoiled, exotic places like tropical rainforests; growing travel and trade with areas that have pests and diseases not found here; and the evolution of drug-resistant strains of bacteria. As Andrew Spielman, an expert in mosquito-borne diseases from the Harvard School of Public Health told **National Public Radio** (7/25/00) the day after Central Park was closed following the discovery of mosquitoes infected with West Nile: "We will simply have to learn to take these things in stride," because of the "certainty of other infections emerging in a similar manner over time."

Media reports, however, have encouraged the public to "take in stride" an increase in pesticide use by promoting a number of myths about pesticides and their consequences. Among them: Pesticide spraying must be safe, otherwise it would not be allowed; if pesticides were a serious health threat, the medical community would come out against them; pesticides are the only practical way to combat outbreaks of disease-carrying insects, so we have no choice but to use them.

Media reports on the West Nile outbreak convey the idea that pesticide spraying is safe in several ways. Numerous stories rely on comments from public officials either supporting or directing the spraying program without seeking opposing viewpoints. A **Daily News** story (8/16/00), for example, stated that New York City Health Commissioner Neal Cohen "has insisted the spraying is safe and added that federal health officials 'encouraged' the additional spraying on Staten Island." The only other comment about the spraying came from a waitress at a diner in Brooklyn who indicated that though she didn't like it, spraying was "a necessary evil."

Several reports described the pesticides being used in the West Nile outbreak in reassuring language or downplayed the risks of exposure. The **New York Times** (8/13/00) referred to Anvil, the insecticide most widely used this year, as "a relatively nontoxic chemical." **NBC's Today Show** (7/29/00) described Anvil:

"Like the chrysanthemum flower, it's a natural pesticide...that looks like it was much safer than the Malathion that was used last year." The audience was further comforted by the statement that "they're using it wisely, using it in the evenings."

After quoting New York City Mayor Rudolph Giuliani ("you have to virtually... drink this stuff in order to have side effects"), the **Daily News** (8/21/00) did note "experts say that no pesticide can ever be deemed harmless." But, it added, the "minuscule quantities of pesticides like Anvil used to kill mosquitoes...should not hurt people." The story went on to say that since it was approved three years ago, "Anvil has evolved into the pesticide of choice," and that its active ingredient, sumithrin, "has been around for more than 20 years and is in scores of household products, from pet flea collars to bug spray."

Information gap

In truth, very little is actually known about the long-term human health or environmental effects of most pesticides currently in widespread use. And Anvil, a synthetic pyrethroid, is a perfect example.

The Environmental Protection Agency is responsible for approving pesticides that are sold. An EPA pesticide fact sheet dated November 1987 on sumithrin contains no information on the acute or chronic toxic effects when it is swallowed, absorbed through the skin or sprayed in the eye. Nor is there any information on whether sumithrin causes birth defects, genetic damage, is poisonous to birds or how it behaves in soil or water. The data sheet does say the chemical is "moderately toxic via the inhalation route" and that it can result in increased liver weights.

Nevertheless, the summary science statement concludes that "there are no indicated concerns for human exposure at this time." And the EPA continues to maintain that "pyrethroids do not pose unreasonable risks" to human health, wildlife or the environment, though they are toxic to fish.

Some of the missing information may be available after 2002, when a major data review of synthetic pyrethroids is scheduled to be completed; obtaining data on the safety of a pesticide after it has been approved for use "is not atypical," an EPA staffer told **Extra!**, "You could say that by allowing it to continue to be on the market, we have made some sort of determination of safety," he added. However, numerous independent studies of synthetic pyrethroids do not give these chemicals a clean bill of health. Synthetic pyrethroids, a class of more than 1000 broad-spectrum insecticides, are the most commonly used chemicals for indoor pest control. A study by researchers at the Mt. Sinai School of Medicine published in the journal **Environmental Health Perspectives** (3/99) found that synthetic pyrethroids are endocrine disrupters--interfering with sex hormones--and some, including sumithrin, promoted the growth of breast cancer cells.

A review of scientific studies on synthetic pyrethroids in the **Journal of Pesticide Reform** (Fall/90) revealed that these chemicals are also toxic to the nervous system in mammals, cause mild to severe eye and skin irritation, and that chronic exposure can damage adrenal and pituitary glands, the spleen and testes. Studies have also shown various synthetic pyrethroids can harm immune and reproductive systems.

Many media reports, however, contain statements from doctors or other scientists that the spraying is safe--or at least much less of a risk than the West Nile Virus. The August 21 **Daily News** story cited above quoted a doctor with the National Pesticide Telecommunications Network, an EPA-sponsored pesticide hotline, saying "the danger of West Nile is much more" than any potential side effects of Anvil. The **New York Post** (8/14/00) quoted a neurological researcher who said the amount of pesticide being sprayed "is not enough to affect us." These reassuring statements hide a rather startling fact: Though pesticides have been widely used for more than 50 years, very few medical professionals are trained to diagnose either acute or chronic health problems from pesticide exposure. Dr. Philip Landrigan, chairman of the Department of Community and Preventative Medicine at the Mt. Sinai Medical School in New York City, says the average U.S. medical student gets only about six hours of training in environmental medicine in four years of medical school, and almost none of that focuses on pesticide toxicity.

Kristine Smith, a spokesperson for the New York State Department of Health, agreed, saying that all cases of pesticide poisoning reported to the state are reviewed by its own experts to determine if the illnesses are truly pesticide-related, because most of the doctors reporting them "wouldn't have the expertise to make that opinion."

Less toxic, more effective

While some stories carried comments from residents questioning whether the spraying was actually doing its intended job, only columnist Juan Gonzalez in the **Daily News** (7/25/00) pointed out that pesticide spraying is a hopelessly inefficient method of combating a mosquito-borne disease, especially in an urban area like New York City. In order to work, the insecticide must hit the mosquito directly, says Dr. David Pimentel, an insect ecologist at Cornell University. But since spray trucks are only fogging the street side of buildings, he doubts that more than one-tenth of 1 percent of the poison is actually hitting its target. "And you have to put out a lot of material to get that one-tenth of a percent onto the mosquito," he told **Extra!**.

None of the dozens of stories reviewed for this piece mentioned there are much safer and more effective alternatives for dealing with adult mosquitoes. Prevention works best and is the least toxic way to control mosquitoes. Preventive measures include draining stagnant water where the pests breed, and

applying less dangerous larvacides to lakes, ponds, drainage ditches and other areas to stop mosquito eggs from hatching.

If communities don't have prevention programs in place, a range of new technology is now available to deal with adult mosquitoes. There are traps that attract mosquitoes by emitting carbon dioxide--the same thing that attracts them to us. Or, if officials are wedded to the chemical approach, a new generation of affordable, biologically based substances are now available. "These biopesticides essentially eliminate the risks to humans and non-target organisms," says Chuck Benbrook, a pest management and pesticide policy expert who authored the 1996 Consumers Union book, *Pest Management at the Crossroads*.

However, these biopesticides require greater human skill and attention to the biology of the target pests than broad-spectrum synthetic pesticides. Benbrook says public officials involved in the outbreak missed a great opportunity to kickstart the development of the necessary infrastructure: "When a big public institution like the government of the city of New York fails to aggressively push for the innovative, modern, safer alternative, it is holding back that transition, because that's sending a signal to the [chemical] companies that if nobody's going to push them, they're going to keep selling this dirty old chemistry that has attendant risks, because it's the cheapest alternative."

The Pew Environmental Health Commission at the Johns Hopkins School of Public Health points out that chronic illness is now the No. 1 cause of death in the United States. The commission raises serious questions about the role of pesticides in the epidemic of chronic diseases, so dirty old chemistry may not be the cheapest alternative for the public. "Every time the American public has been given straight information to make a decision about pesticides, they always vote for the safer alternative," Benbrook says.

But the public can only make informed choices if they have the information. So far the media have failed to provide it.

Karen Charman is a New York-based investigative journalist who writes frequently about environment and health issues.

Down on the Farm: Modern Day Sharecroppers
By Karen Charman, TomPaine.com
January 25, 2002

When Tom Greene agreed to grow chickens for ConAgra, Inc. 11 years ago, he thought it would be the fulfillment of a longtime fantasy to make his living working his own land. He and his wife, Ruth, had just bought the 90-acre farm they had dreamed about as a young couple 20 years before.

But these days, their four long, corrugated tin chicken houses are operated by somebody else. In January 1999, Greene, a former military public affairs officer, helplessly watched as his chicken farm went under the auctioneer's hammer because of a dispute with ConAgra.

Greene explains that he, along with 38 other farmers in Enterprise, Alabama objected when ConAgra demanded that they take out loans to invest in costly new equipment. They also balked at signing a contract that would forfeit their right to sue the company in the case of a disagreement.

Greene says he and his neighbors already had as much debt as they could manage. In order to get into the business, farmers must borrow a lot of money – about $125,000 per chicken house – to build facilities according to the poultry company's specifications. Since most chicken companies encourage growers to build four or more chicken houses, that represents an initial investment today of at least $500,000.

Like their heavily indebted counterparts throughout the industry, Greene and friends were not in a position to negotiate. That's because the chicken houses that they sunk their financial futures into have one purpose: to grow chickens. Without a steady supply of birds, farmers can't pay their mortgages. When Greene refused to change his mind, ConAgra terminated their business relationship, and he lost his farm.

Most chicken growers are reluctant to talk publicly for fear of reprisals, but many complain of predicaments like Greene's. They say the corporations that control the chicken industry hook new growers on the promise of making a good, steady income at home. Instead, growers find themselves trapped in debt-laden relationships that turn them into serfs at the mercy of the companies that make a fortune on their backs.

Nobody knows how many poultry growers have lost their contracts because only the companies have that information, says Mary Clouse, who runs the Contract Agriculture/Poultry Project at the Rural Advancement Foundation International (RAFI). Poultry companies say the number is very low.

Modern Day Sharecroppers

The way it works is that farmers provide the land, buildings, and their labor. The companies supply – and retain ownership of – the chickens, the feed, and any medicine the birds might need.

Growers are paid for growing the heaviest and healthiest birds on the least amount of feed in the six weeks they have the birds. The companies determine how well growers achieve those goals and pay them accordingly, using a

complicated formula that ranks each grower's performance against the others who had birds picked up for processing that week.

But chicken growers say their performance is out of their hands, because they have no control over the quality and quantity of the birds, feed, and medicine they receive. They also claim the companies manipulate the ranking system to further erode their pay, a widespread allegation that the companies deny. "There's no reason a company would discriminate or unnecessarily reward somebody for more than they deserve," says Bill Roenigk, vice president of the National Chicken Council, the industry's trade association in Washington, D.C. He adds that the ranking system is based on the same market-oriented, competitive model as the free market, because "those who work the hardest deserve to be paid the most."

However, several lawsuits have confirmed growers' claims that chicken companies, including ConAgra, have for years engaged in dirty tricks to cheat the farmers, such as delivering unhealthy birds, shortchanging growers on the quantity and quality of the feed, tinkering with the scales, and keeping the birds in hot parking lots for hours before they are weighed to make them drop weight. How much of a difference can that make to a grower? According to Mary Fortenberry, a poultry grower in Pinola, Mississippi, the top pay and bottom pay scales can vary around $1,500 per batch of chickens – up to $9,000 per flock on her six-house farm.

Between 1991 and 1995, poultry growers pocketed an average of $11,000 to $25,000 annually, according to a USDA survey. Data from Bill Heffernan, a rural sociologist at the University of Missouri who has studied contract poultry growers for more than 30 years, and Mary Clouse of RAFI, puts it at about $3,000 to $4,000 a year per chicken house – a meager return. Heffernan says these figures don't include labor or other costs growers have to pay.

Farmers generally do well when they first sign up. But as their houses and equipment age, they find themselves losing ground to growers with newer facilities. After about five years, companies commonly require new equipment that can cost $50,000 per house. That adds, say, another $200,000 in debt to a farm with four chicken houses. Some critics claim the debt is a way to further entrench their dependence.

Over time, the contracts have become increasingly tilted to favor the companies. Since the farmers don't own the chickens, they can't sell them on the competitive market; the contracting company is their only potential source of payment. The chicken contract is an MBA's dream: the suppliers' costs are more or less fixed, while farmers assume the risks – disease, weather, and nature – related to raising the birds. Some people refer to the farmers as animal babysitters. "They are merely company employees," Heffernan says, "but without benefits."

Many farmers used to do business on a handshake, but as corporate concentration increased, the business culture changed dramatically.
"It's like being a gerbil in a cage," says Rickey Gray, an assistant to Mississippi Agriculture Commissioner, Lester Spell, Jr. "The growers are going as fast as they can, but they're not getting anywhere. All in all, it's like a modern day sharecropping system."

A Problem of Consolidation

Over the last two decades, the poultry industry has gone from having a multitude of small, independent processors who competed for growers to one dominated by a handful of giant corporations, such as Tyson Foods, Gold Kist, Perdue Farms, Pilgrim's Pride and ConAgra. Heffernan, an expert on corporate concentration in agriculture, says the top four companies now control 55 percent of the market, with 30 percent belonging to Arkansas-based Tyson alone. A few dozen smaller companies share the rest.

Currently, companies operate on the Chesapeake Bay's Delmarva Peninsula and in pockets mainly throughout the South. Only one company typically operates in any 25-mile radius, Heffernan explains, further limiting the growers' options. Where there is more than one company in an area, he says, they observe an unwritten rule not to pick up growers who have worked for other companies. So once the farmers have signed with a particular company, they can consider themselves married to it.

Many farmers used to do business on a handshake, but as corporate concentration increased, the business culture changed dramatically. Without competition for the supply, Heffernan says individual growers have proved no match for the chicken companies who set the terms of the contract, almost always on a take-it-or-leave-it basis.

The poultry companies dispute these claims, saying that most complaints come from jealous growers who covet the additional pay of their harder-working neighbors. "The great bulk of the grumbling goes on from low-paid growers," says Michael McAlpin, president of the Mississippi Poultry Association, which represents the state's poultry companies.

Bad Faith

So if the farmers get such a raw deal, why don't they revolt? Though the companies vigorously deny it, there is plenty of evidence that they retaliate against growers who dare to organize for fairer rules.

Take the case of Larry McKnight, a former chicken grower from Forest, Mississippi. McKnight, who happened to be president of the Mississippi Contract Poultry Growers Association, lost his contract in 1996 during the middle of an

intense fight in the state legislature. The battle was over proposed legislation to give chicken growers basic rights like being present when their chickens were being weighed and letting their lawyer, accountant and spouse look over their contract. Poultry growers are normally forced to sign on the spot without any outside counsel.

"We had 150 to 200 growers showing up at the capitol every day lobbying for our bill," he says. "But when word got out that my contract had been terminated, the lobbying effort dwindled down to nothing, because they were absolutely scared they'd be next."

McKnight, 50, a soft-spoken, articulate man with a patient demeanor, grew chickens on two farms in central Mississippi for 17 years. He lost both and now works for the state.

Considering the force of the poultry companies' opposition, one might have thought the growers were trying to put them out of business. But according to the Mississippi agriculture department's Rickey Gray, the proposed legislation would merely have put into law what the companies had agreed to the year before. "The fact that the companies fought so hard indicated that they had no intention of following what they originally agreed to," says Gray. "It showed really bad faith and confirmed a lot of the concerns the growers had been making us aware of." Growers in Mississippi – as in all poultry growing states – remain without adequate protection from state laws against unfair practices by the companies. Poultry companies, however, have had a much easier time at the state capitol. In 1995 they got legislation passed that prohibits the Mississippi agriculture department from getting involved in contractual arrangements between growers and the companies. According to Gray, similar legislation exists in Georgia, Alabama, Maryland, West Virginia, and Louisiana.

Mississippi chicken growers are battling a political and economic Goliath. With annual revenues of $4.5 billion, poultry is the state's largest agricultural commodity and accounts for 25 percent of Mississippi's economy. It also directly or indirectly employs one-fourth of the state's workers.

RAFI's Mary Clouse recognizes the industry's tremendous clout: "Those legislators are in an awful bind," she says. "If lawmakers do anything to anger the companies, they always threaten to move out of the state to, say, Utah where it's 'friendlier' than Mississippi."

Little Help

Such race-to-the-bottom competition among states illustrates the need for effective federal regulation to protect farmers. As early as the 1930s, the U.S. Congress recognized that individual farmers could not match the power of large agricultural commodity buyers. It passed the Capper-Volstead Act to allow

farmers to organize to negotiate price and terms of trade without violating the nation's antitrust laws.

So far, the laws on the books haven't helped poultry growers. The Grain Inspection, Packers and Stockyards Administration of the U.S. Department of Agriculture – widely known as Packers and Stockyards – has provisions that prevent poultry growers from being discriminated against, but growers and farm watchdog groups say they are ineffective and not enforced. Larry McKnight, the Mississippian who lost his farm, learned this when he lodged a complaint with Packers and Stockyards against Lady Forest Farms.

The Memphis branch office of Packers and Stockyards found that Lady Forest had no justification for terminating McKnight's contract and recommended immediate reinstatement. But the branch office's findings were inexplicably reversed in Washington, D.C.

Later, McKnight confronted James Baker, who directed the Washington office, while Baker was in Mississippi speaking at a farmers' meeting. "He admitted [his department] had dropped the ball in my case but said it didn't want to get bogged down in the legal process," McKnight recounts. "That's a strange thing for a watchdog agency to say."

A Packers and Stockyards spokesperson said the agency could not respond to McKnight's allegations at this time. But even if Packers and Stockyards did want to follow up, the most it can legally do is recommend that a grower be reinstated. Any actual enforcement would have to be pursued by the Department of Justice, adding years to the process.

McKnight later sued Lady Forest for violations of his rights under the Packers and Stockyards Act and the Agricultural Fair Practices Act. Although the company claimed he was terminated for poor performance, McKnight proved them wrong.

His victory, however, was bittersweet. While he got the satisfaction of knowing the courts recognized his grievance, punitive damages are not allowed under either law, and all he was awarded was $50,000 plus his attorney's fees. McKnight says he is still paying debts incurred by the loss of his poultry contracts.

Beyond Birds

Contracts of one kind or another have been used in various sectors in agriculture for years. The poultry industry, however, was the first to perfect this type of production contract, which gives the companies complete control over the product the growers produce.

Steve Etka, of the Campaign for Contract Agriculture Reform, says these one-sided contracts, known legally as "contracts of adhesion," are attracting increasing interest from other quarters in agriculture. "There are a lot of agribusiness sectors seeing the poultry model and the ability of the companies to shift risk and costs from themselves onto the grower," he says. "From a straight bottom-line standpoint, it looks pretty attractive."

There is also growing concern in the Midwest that production contracts will sweep through the giant corn, wheat and soybean sectors.

Already, similar provisions are creeping into hog and cattle contracts, says RAFI's Mary Clouse. In North Carolina, tobacco contracts jumped from 20 percent of the state's production in 2000 to 80 percent last year, and this year she expects them to be 100 percent. The same thing is happening in Kentucky, and Clouse says peanut production appears to be next.

There is also growing concern in the Midwest that production contracts will sweep through the giant corn, wheat and soybean sectors. In those cases, Heffernan says companies like Cargill, ConAgra and Archer Daniels Midland will own the seed and provide the inputs of fertilizer and chemicals required to grow the crop.

Just as the chicken growers don't own the birds, Heffernan predicts soybean and grain farmers won't have clear title to the crop. That means they won't be able to engage in the time-honored practice of using the crop as collateral on a loan, he says. Equally ominous is that like chicken growers, grain farmers won't know anything about the genetic background or even the identity of the material – including the various fertilizers and pesticides – they are putting on their land. That will likely increase the difficulty citizens and communities have in dealing with the growing crisis of agricultural pollution, whether it is contamination from escaping genetically modified pollen, fertilizer runoff, pesticide spray drift, chemical tainting of groundwater, or the unfathomable quantities of bacteria-laden animal manure from cattle feedlots, hog operations and chicken farms that are fouling the land, air, and water throughout the nation.

In anticipation of the new wave in contract production, Iowa Attorney-General Tom Miller drafted legislation to protect producers – a farmer's bill of rights, of sorts – endorsed by attorneys general from 15 other states. Though the bill has been introduced into all corresponding state legislatures, none have passed it. A version of the producers' bill of rights was introduced into both the U.S. House and Senate during debate on the Farm Bill. But the legislative session ended before finalizing the bill in 2001. The fight is expected to begin anew after January 23, 2002 when the Senate reconvenes.

Unless there's a speedy U-turn away from the government and economic policies that have fostered the enormous clout agribusiness corporations now have, only

huge mega-farms operating under contract will survive predicts Fred Kirschenmann, director of the Leopold Center for Sustainable Agriculture at Iowa State University.

Concern used to be focused on the growing size and power of companies on the production side – seed and chemical suppliers, food processing and manufacturing companies. But Kirschenmann and others say greater concentration in the retail sector is now driving this, as the food manufacturers attempt to match the power of their own rapidly consolidating product buyers. "The business interests of these consolidated firms are clearly not going to be the environment, health, or rural communities," he says. "They are simply going to be getting the raw materials as cheaply and as efficiently as possible." To accomplish this, he sees a few very large industrial complexes that produce these materials dominating the American countryside.

As the wave of production contracts, which bring us ever closer to this vision, begins crashing through our food sector, Kirschenmann suggests we ask ourselves: "Is this what we want agriculture to look like in the future?"
Karen Charman is an investigative journalist specializing in agriculture, health and the environment.