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Portland Press Herald Maine Sunday Telegram

MAINE GARDENER

The lawn ranger

YOU can right the injustices of harmful weed killers and excess fertilizing - mask and horse optional.

TOM ATWELL

April 19, 2009

The four-step fertilizer and pesticide method of treating lawns just isn't for everyone anymore. Lawns have to get greener, on both sides of the fence.

Regular readers of this column know that I am not a big fan of lawns. The grass at our house serves mostly as a path to perennial and shrub gardens.

And while many homeowners want a lawn where their children can play, our children are adults, and when the grandchildren visit we have a town-maintained ball field we can use less than 100 yards away.

But I won't go into my routine rant about planting vegetables or flower gardens where your lawn used to be. This column is for people who want to grow lawns successfully without using potentially harmful weed and insect killers, or excess fertilizer.

Three of the lectures at the Portland Flower Show last month were about growing lawns in a more environmentally friendly way. Gary Fish of the Maine Board of Pesticide Control took the middle approach, advocating a lot less in pesticides and pelletized lawn fertilizer than most lawn-maintenance companies and homeowners use.

Paul Tukey, author of "The Organic Lawn Care Manual," took an organic approach during his lecture and then showed a film, Brett Plymale's "Hudson: A Chemical Reaction," about efforts to ban lawn chemicals in Canada.

The Maine Yardscaping Partnership, of which the Board of Pesticide Control is a member, has just put out a pamphlet on how to have a lawn with a low environmental impact. Fish's talk was based largely on this pamphlet, and the pamphlet was based largely on research at Cornell University in New York and the University of Connecticut.

The most interesting piece of information in the pamphlet is that lawns that are more then 10 years old almost never need to be fertilized. Get a soil test to make sure, but that is probably what the test will show.

"Lawns 10 years old and older store necessary nutrients and may never need fertilizer," the pamphlet says. "Grass clippings are free fertilizer – if these are returned to the lawn with a mulching mower, chances are, additional fertilizer will not be needed."

Second, if you do use fertilizer, use nitrogen only. Phosphorous and potassium are almost never needed. Fish recommended a fertilizer that has a 19-0-0 rating.

On the lawns that do need fertilizer, apply it in August or September. "This approach provides fertilizer when the grass can best use it, not when it is likely to wash off into waterways."

Fish said that when you dig out weeds from your garden or otherwise notice bare spots, you should loosen the soil and plant endophyte-enhanced perennial ryegrass in the bare spots. Endophyte-enhanced grasses are disease- and insect-resistant, and you are going to have to ask for them specifically.

Allen, Sterling & Lothrop has some, and calls it "Trifecta Perennial Ryegrass," but you might have to ask the staff to get you some from out back. It wasn't on the shelves when I visited, but a store employee said it was available.

The instructions are quite specific. You are to put the seed down at an average rate of seven seeds per square inch, and add nitrogen at one-third of the recommended application rate.

While the ryegrass is recommended for filling in bare spots because it sprouts quickly and keeps out weeds, the recommended lawn seeds can also include fescues. The idea is to avoid Kentucky bluegrass, which requires more light, fertilizer and water than the fescues and ryegrass.

Tukey and Fish both recommended white clover in the lawn. Clover used to be a common ingredient in lawn mixes, but when weed-and-feed lawn fertilizers were developed, they killed clover – so clover was no longer included in lawn mixes.

But clover (they recommend Dutch white) fixes nitrogen, so it essentially provides free fertilizer. In addition to clover, one approach suggests that people use black medic, which is similar to clover, and chamomile, an herb used in tea, in their lawns. This offers a wider range of plant material, and if one runs into trouble, the others will keep growing.

Other low-maintenance-lawn tips are to keep the mower height at 3 inches or more, core aerate an older lawn to reduce thatch and improve soil structure, water deeply and frequently (if at all), and keep mower blades sharp.

Tukey's plan for organic lawns uses many of the methods advocated by the Yardscaping group. But he stresses that people fill their soil with compost before the lawn is planted and use compost tea on them – much as his grandmother did when he was growing up in Maine – after they are established.

Chemical fertilizers feed the plants, but compost feeds the soil, which will then feed the plants, Tukey says.

Tukey's opposition to pesticides and fertilizer comes from the time when he ran a lawn-care company and got sick from exposure to those chemicals. He wrote the "Organic Lawn Care Manual" in 2007 and founded SafeLawns at the same time.

More information on better lawns can be found at www.yardscaping.org and www.safelawns.com.

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POLL

Activists, farmers debate bills targeting pesticide spraying

By Kevin Miller
BDN Staff

BANGOR DAILY NEWS FILE PHOTO
In this file photo, a sign warns people that this field near Centerville has been recently sprayed.

AUGUSTA, Maine — Lawmakers heard arguments Thursday from organic farmers and environmental groups that want new rules to help residents protect themselves from exposure to potentially toxic pesticides.

But other representatives from Maine's agriculture community warned that those proposals on aerial application of pesticides and mandatory notification procedures could overburden farmers.

In many ways, the debate before the Legislature's Agriculture, Conservation and Forestry Committee was identical to the dialogue with the state's Board of Pesticides Control for more than two years now.

A group of concerned residents, organic farmers and environmental organizations wants tougher laws on how close pesticide applicators may get to homes, schools and roads when using planes or helicopters to apply the chemicals. The pesticides board recently completed work on new rules regulating pesticide "drift" and applications near sensitive areas, but speakers said Thursday that the proposals do not go far enough.

Speakers also criticized the board for backing down from a proposal that would have required farmers to take the first step in letting neighbors know about their notification rights before pesticides were sprayed in their area.

"We all get a black mark when a farmer sprays and a neighbor didn't know about it," said JoAnn Myers, who grows organic produce and livestock at Beau Chemin Preservation Farm in Waldoboro. But Cary Nash, owner of Nash Farms Wild Blueberries in Appleton, said he and other farmers already spend a good deal of time calling neighbors who want advance notice.

Nash said requiring him to pre-emptively contact all neighbors within a quarter-mile of each of the plots of land he manages, as proposed in one bill, would be too much.

"I can't even guess how many hundreds of phone calls I would have to make within a season," he said. The committee members essentially have two sets of bills before them. The first set would approve the draft rules adopted by the pesticides board dealing with aerial spraying within 1,000 feet of "sensitive areas likely to be occupied," such as homes and schools, as well as strengthening the rules against pesticide drift. The board's draft rules also create a registry of people who want to be notified of nearby spraying.

The second set of bills would go a step further. One bill, LD 182, would prohibit aerial spraying within 300 feet of buildings likely to be occupied and within 25 feet of public roads. The bill's sponsor, Rep. James Schatz, D-Blue Hill, has since asked the committee to kill the bill because of the board's proposal.

Another bill, LD 1293, would create the same notification registry but also would require farmers to notify neighbors directly if they plan to apply pesticides that season using either aircraft or large, fanlike dispersal mechanisms.

Maureen Drouin, executive director of the Maine Conservation Voters Education Fund, said the notification bill is one of the top priorities of the 26 organizations in the Maine Environmental Priorities Coalition.

“The least a landowner can do is let his neighbors know of his spraying plans,” Drouin said. “This bill sets up a much-needed, clear and comprehensive notification system.”

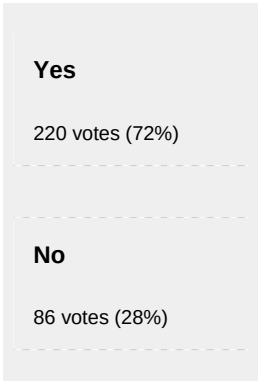
The Maine Organic Farmers and Gardeners Association also supports the expanded notification system. Henry Jennings, the pesticide board’s director, acknowledged that many people are unaware of their notification rights. But he said the board members were convinced after public hearings last year that requiring farmers to notify neighbors would be an unreasonable burden, especially on operations with numerous, scattered fields.

Jon Olson, executive secretary of the Maine Farm Bureau, went further to predict the notification requirements could become a “truly unbearable burden” for small farmers.

But Nancy Oden, a Down East resident who has campaigned against pesticide use in blueberry barrens for several decades, said the existing rules are not followed. She also accused the pesticides board of being too close to the agriculture industry to do its job.

“Notification doesn’t work,” Oden said. “Regulation doesn’t work in Washington County … We have anarchy there. People spray wherever they want.” The committee will conduct a work session on the bills in the coming weeks.

Poll Results: Should farmers be required to notify neighbors before spraying pesticides?



BANGOR DAILY NEWS—March 31, 2009

GUEST COLUMN

Protect kids from effects of pesticides

Heather Spalding

OP ART BY WILLIAM BROWN

Were Ben Franklin alive today, he might declare, “in this world nothing can be said to be certain, except death, taxes, and pesticides contamination in our bodies.” The Centers for Disease Control and Prevention tell us that the majority of people in the U.S. have detectable concentrations of multiple pesticide residues in their bodies, while the U.S. Geological Survey reports that 90 percent of all fish, 100 percent of all streams, 33 percent of major aquifers, and 50 percent of shallow wells contain one or more pesticides at detectable levels. The ubiquitous spread of pesticide residues is cause for alarm and public education, and yet access to information about pesticide use in Maine is complicated and challenging. Fortunately, the Legislature has an opportunity to establish a simple, comprehensive system to ensure notification of residents most at risk from pesticides drift.

For 2½ years, Maine’s Board of Pesticides Control has grappled with its pesticide drift rules, convening stakeholder committees, holding public hearings and meeting monthly to consider options for strengthening protections for Maine residents. The board has worked hard to make small but important steps forward and has submitted to the Legislature amendments to Chapters 10, 22 and 28, which clarify pesticide rule definitions, pesticide drift standards and pesticide application notification procedures respectively. Amendments to Chapter 28 also call for establishment of a Maine Aerial Pesticide Application Notification Registry applying to all aerial spray applications including agricultural spraying, with free enrollment for all people in Maine.

While Board bills LD 494 (on Chapter 22) and LD 495 (on Chapter 10) have significant new protections, LD 972 (on Chapter 28) comes up short by relieving landowners of the ethical responsibility to initiate notification of neighbors and by limiting the scope of the registry to aerial applications only. In order to close these gaps, Rep. Seth Berry has submitted An Act To Require Citizen Notification of Pesticide Applications Using Aerial Spray or Air-Carrier Application Equipment. This bill would require landowners to “Say before they spray,” provide neighbors with general information well in advance of the first spray of the season and inform them of Maine’s registry of residents who want to obtain more detailed information about pesticide spraying using aerial spray technologies or ground-based air carrier equipment. Aerial and air carrier technologies account for the vast majority of pesticide drift.

Some conventional growers who rely on aerial spraying of pesticides assert that the proposed amendments to existing BPC regulations are unreasonable, costly and administratively impractical. However, one could say the same about society’s addiction to toxic pesticides. In addition to the environmental health concerns of pesticides use, there are bottom-line concerns for the organic community.

Pesticides can contaminate organically grown produce, making it unfit to market as organic and leading to economic losses for the grower. An organic grower may lose certification of a crop contaminated by pesticides drift and potentially have to take the acreage out of organic production for three years. The Maine Organic Farmers and Gardeners Association estimates that at least a quarter of its certified organic farms have to be careful about potential drift from neighboring conventional operations. Some MOFGA-certified growers report losing thousands of dollars in organic sales annually because they want to ensure the integrity of the organic

produce they cultivate and market. There is no cost to the conventional neighbors even though they are setting the threat of pesticides drift in motion.

The state of Maine also pays. A recent University of Maine School of Economics report indicates that the state pays $380 million annually to cover the cost of just four environmentally-related childhood diseases. (The full report is available online at: http://www.umaine.edu/soe/publications/SOE579.pdf.) Three of the disease categories — asthma, cancer, and neurolobehavioral disorders — are widely linked to pesticide exposure. Maine's childhood asthma rates are among the highest in the country. Maine's childhood cancer rate is higher than the national average. And the number of Maine kids receiving state support for neurobehavioral impairments is on the rise. One in five children in Maine's public schools now receives special education support from the state. Maine needs to do everything it can to protect children from the harmful effects of pesticides. Notification is a logical first step.

The Legislature's Committee on Agriculture, Conservation and Forestry has an opportunity to establish model legislation for ensuring the public's right to know about pesticide use around them. It should support the BPC's proposed amendments as well as Rep. Berry's bill on notification.

Heather Spalding is the associate director of the Maine Organic Farmers and Gardeners Association (MOFGA), and a MOFGA representative to The Alliance For A Clean And Healthy Maine.

BANGOR DAILY NEWS—4/6/09

GUEST COLUMN

Work toward labels for genetically engineered food

By Diana George Chapin

The Maine Board of Pesticides Control recently approved for growing in Maine Bt sweet corn, a genetically engineered, or GE, food product developed by Syngenta. This summer when locally grown sweet corn hits the market consumers won't be able to tell if the corn they're purchasing is a genetically engineered or traditional variety.

Bt sweet corn is a genetically modified organism, or GMO, and is fundamentally different from the sweet corn that traditionally has been grown in Maine. Through biotechnology, traits from the bacterium Bacillus thuringiensis, or Bt, are permanently inserted into corn's DNA. The Bt gene produces a protein within the corn plant that kills moth and butterfly caterpillars. Bt sweet corn seed is marketed as "insect protected" and, in this case is intended to kill the European corn borer. However, collateral damage to monarch butterfly caterpillars was documented in the May 1999 issue of Nature. A Cornell University laboratory study reported monarchs that ate Bt corn pollen died, while those that ate regular corn pollen survived.

The Maine Board of Pesticides Control has statutory authority to regulate the sale and application of chemical pesticides and is charged with safeguarding the public health through the safe, scientific and proper use of chemical pesticides. Bt sweet corn seed is regulated as a pesticide. When the technology was new, corporations developing the technology touted the tagline, "The pesticide's right in the seed," because by inserting the toxic Bt protein into the permanent genetic code of the corn, every cell of the seed and the resulting plant — including the ear of corn we consume — contains the protein.

The tagline was intuitively unsavory to the consuming public. The biotech companies quickly changed its marketing, emphasizing that farmers would benefit from use of this technology.

In fact, at its recent meeting one member of the pesticides board said he favored approval of Bt sweet corn because it would reduce the need for applying other pesticides aimed at controlling the borer. At one meeting this winter, he said, 30 to 40 growers, by a show of hands, said they would grow the GE corn if available.

Consumers have valid concerns about the possible health side effects of ingesting Bt corn. Several board members — noting virtually all of the sweet corn grown in Maine is consumed in Maine — expressed concern over having unlabeled Bt corn in the food system. The board's staff reported that analyses of the data regarding the undesirable effects of the product were incomplete and that some of the data provided by the Environmental Protection Agency were "lacking in some of the basic science." Another board member admitted, "A lot of this is over my head."

If the data are incomplete, not carefully scrutinized, and not fully understood, why approve the corn? Upon approving the crop, board members noted they could deny it renewal next year if problems with human health were found in the scientific literature. This seems counter to the board's mandate for precaution.

People know something is gravely wrong with a food system when life-giving seed — the source of our nourishment — is regulated alongside chemical pesticides. It's important to offer farmers the tools they need to produce crops and minimize exposure to pesticides. But in a society where less than 2 percent of the population produces food and 100 percent of the population consumes food, it is likewise important to protect human health from untested technologies and only fair to label food so 100 percent of the people know what they are eating.

Why isn't GE food labeled? If manufacturers of Bt sweet corn, Bt sugar beets, Bt cotton and Bt soybean are so confident about their technology why don't they brand it from seed to supermarket shelf? Could it be that if we knew what we are eating we wouldn't buy it? Could it be that if it were labeled the ill effects might be traceable over time?

People who oppose the genetic engineering of food have been branded as anti-progress, anti-science and anti-technology. Opposing GE is not a question of slowing down progress. There is no human progress where people living in the most free, most industrialized nation on the planet are denied the most basic human right to know what they are eating.

Eaters, raise your hands, be counted, and let's start working for GMO food labeling.

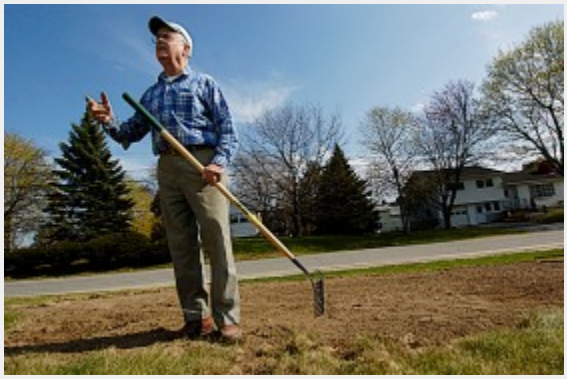
Diana George Chapin lives in Montville and has a master's degree in plant, soil and environmental science from the University of Maine.

4/25/09

GRUBWORM UPDATE

Expert: It’s too soon to treat for grubs

Dawn Gagnon
BDN Staff



BANGOR DAILY NEWS FILE PHOTO BY JOHN CLARKE RUSS
Clyde Folsom shows a bare patch on his lawn in 2008 in Bangor which he said is attributable to a grub worm infestation. Grub worms are typically the larvae of Japanese beetles.

BANGOR DAILY NEWS FILE PHOTO BY JOHN CLARKE RUSS
Grub worms, such as this one was found just under the surface of Clyde Folsom's lawn in Bangor in 2008.

BANGOR, Maine — Now that some warm, sunny weather finally has arrived, Mainers are expected to head outside for some much needed yardwork.

And after the rash of grub worms that wrecked lawns and fields throughout the region last year, many Mainers might be tempted to start applying pesticides or beneficial nematodes now.

Insect experts in Maine said that the grubs, or larvae of the European chafer, were to blame for the lion’s share of the damage done to yards and parks last year, accounting for more than 90 percent of the samples brought to them for identification.

During the early stage of their life cycle, before they become adults and fly away in late summer, the grubs chomp away at the tender roots of many types of grasses, leaving dead patches of lawn in their wake.

Though lawns are starting to green up, it is not the right time to start treating yards and parks to prevent a repeat, James Dill, a University of Maine Cooperative Extension pest management expert, said Friday.

Simply put, he said, taking action against grub worms too early is ineffective and a waste of homeowners’ time and money.

According to Dill, the best time for weekend warriors to attack their grub problems is after mid-June if they plan to go the chemical route and use pesticides.

The optimum time for applying beneficial nematodes, or microscopic worms that carry bacteria that excrete toxins harmful to grubs, is late July and early August, Dill said.

That’s because both options are designed to attack the grubs in their early stages, namely while they are still in the egg or early larval stages.

According to Dill, the only effective measure at this time is to hire a professional landscaper who is certified to use chemicals not available to the general public.

According to Dill and other pest experts, healthy turf can withstand some grub damage. Treatment is warranted only when 10 or more grubs are found within a square foot of dirt.

On a positive note, Dill said grub damage this year might not be as bad as it was last summer, in part because many people treated their turf and laid down new sod or reseeded.

He also said that some of the chafers that burrowed underground have been killed off by freezing temperatures, though the region did not see as hard a ground freeze as it sometimes does because of the thick layer of insulating snow.

Though it’s still early in the lawn and garden season here, Dill said his office already has examined grub samples brought in by a local landscaper.

“All those grubs that were in the ground are now adult [chafers]. They’ve done about 90 percent of their eating and they’re probably fat and happy down there,” he said.

The New York Times

March 22, 2009

Eating Food That's Better for You, Organic or Not

By MARK BITTMAN

In the six-and-one-half years since the federal government began certifying food as "organic," Americans have taken to the idea with considerable enthusiasm. Sales have at least doubled, and three-quarters of the nation's grocery stores now carry at least some organic food. A Harris poll in October 2007 found that about 30 percent of Americans buy organic food at least on occasion, and most think it is safer, better for the environment and healthier.

"People believe it must be better for you if it's organic," says Phil Howard, an assistant professor of community, food and agriculture at Michigan State University.

So I discovered on a recent book tour around the United States and Canada.

No matter how carefully I avoided using the word "organic" when I spoke to groups of food enthusiasts about how to eat better, someone in the audience would inevitably ask, "What if I can't afford to buy organic food?" It seems to have become the magic cure-all, synonymous with eating well, healthfully, sanely, even ethically.

But eating "organic" offers no guarantee of any of that. And the truth is that most Americans eat so badly — we get 7 percent of our calories from soft drinks, more than we do from vegetables; the top food group by caloric intake is "sweets"; and one-third of nation's adults are now obese — that the organic question is a secondary one. It's not unimportant, but it's not the primary issue in the way Americans eat.

To eat well, says Michael Pollan, the author of "In Defense of Food," means avoiding "edible food-like substances" and sticking to real ingredients, increasingly from the plant kingdom. (Americans each consume an average of nearly two pounds a day of animal products.) There's plenty of evidence that both a person's health — as well as the environment's — will improve with a simple shift in eating habits away from animal products and highly processed foods to plant products and what might be called "real food." (With all due respect to people in the "food movement," the food need not be "slow," either.)

From these changes, Americans would reduce the amount of land, water and chemicals used to produce the food we eat, as well as the incidence of lifestyle diseases linked to unhealthy diets, and greenhouse gases from industrial meat production. All without legislation.

And the food would not necessarily have to be organic, which, under the United States Department of Agriculture's definition, means it is generally free of synthetic substances; contains no antibiotics and hormones; has not been irradiated or fertilized with sewage sludge; was raised without the use of most conventional pesticides; and contains no genetically modified ingredients.

Those requirements, which must be met in order for food to be labeled "U.S.D.A. Organic," are fine, of course. But they still fall short of the lofty dreams of early organic farmers and consumers who gave the word "organic" its allure — of returning natural nutrients and substance to the soil in the same proportion used by the growing process (there is no requirement that this be done); of raising animals humanely in accordance with nature (animals must be given access to the outdoors, but for how long and under what conditions is not spelled out); and of producing the most nutritious food possible (the evidence is mixed on whether organic food is more nutritious) in the most ecologically conscious way.

The government's organic program, says Joan Shaffer, a spokeswoman for the Agriculture Department, "is a marketing program that sets standards for what can be certified as organic. Neither the enabling legislation nor the regulations address food safety or nutrition."

People don't understand that, nor do they realize "organic" doesn't mean "local." "It doesn't matter if it's from the farm down the road or from Chile," Ms. Shaffer said. "As long as it meets the standards it's organic."

Hence, the organic status of salmon flown in from Chile, or of frozen vegetables grown in China and sold in the United States — no matter the size of the carbon footprint left behind by getting from there to here.

Today, most farmers who practice truly sustainable farming, or what you might call "organic in spirit," operate on small scale, some so small they can't afford the requirements to be certified organic by the government. Others say that certification isn't meaningful enough to bother. These farmers argue that, "When you buy organic you don't just buy a product, you buy a way of life that is committed to not exploiting the planet," says Ed Maltby, executive director of the Northeast Organic Dairy Producers Alliance.

But the organic food business is now big business, and getting bigger. Professor Howard estimates that major corporations now are responsible for at least 25 percent of all organic manufacturing and marketing (40 percent if you count only processed organic foods). Much of the nation's organic food is as much a part of industrial food production as midwinter grapes, and becoming more so. In 2006, sales of organic foods and beverages totaled about $16.7 billion, according to the most recent figures from Organic Trade Association.

Still, those sales amounted to slightly less than 3 percent of overall food and beverage sales. For all the hoo-ha, organic food is not making much of an impact on the way Americans eat, though, as Mark Kastel, co-founder of The Cornucopia Institute, puts it: "There are generic benefits from doing organics. It protects the land from the ravages of conventional agriculture," and safeguards farm workers from being exposed to pesticides.

But the questions remain over how we eat in general. It may feel better to eat an organic Oreo than a conventional Oreo, but, says Marion Nestle, a professor at New York University's department of nutrition, food studies and public health, "Organic junk food is still junk food."

Last week, Michelle Obama began digging up a patch of the South Lawn of the White House to plant an organic vegetable garden to provide food for the first family and, more important, to educate children about healthy, locally grown fruits and vegetables at a time when obesity and diabetes have become national

concerns.

But Mrs. Obama also emphasized that there were many changes Americans can make if they don't have the time or space for an organic garden.

"You can begin in your own cupboard," she said, "by eliminating processed food, trying to cook a meal a little more often, trying to incorporate more fruits and vegetables."

Popularizing such choices may not be as marketable as creating a logo that says "organic." But when Americans have had their fill of "value-added" and overprocessed food, perhaps they can begin producing and consuming more food that treats animals and the land as if they mattered. Some of that food will be organic, and hooray for that. Meanwhile, they should remember that the word itself is not synonymous with "safe," "healthy," "fair" or even necessarily "good."

Mark Bittman writes the Minimalist column for the Dining section of The Times and is the author, most recently, of "Food Matters: A Guide to Conscious Eating."

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TheLedger.com

Printed on page B7

Organic Pesticides Are Not Harmless

Published: Thursday, March 12, 2009 at 11:10 p.m.

Garlic, pepper, vinegar and oil sound like salad seasonings,
but they - and other common, natural substances - are among organic pesticides environmentally concerned gardeners have turned to.

Folks should realize, however, that "organic'' doesn't mean harmless.

Pyrethrins, for example, are derived from chrysanthemum blossoms, but you wouldn't want to pour them on your breakfast cereal. And nicotine-based pesticides, rarely applied nowadays, are extremely toxic and dangerous to use.

So what pesticides should conscientious gardeners keep handy?

Well, a bottle of neem-based concentrate would be a good idea. Neem oil, derived from the seeds of India's neem tree, acts as a broad-spectrum bio-inhibitor that repels pests and also interferes with their feeding, growth and reproduction. In addition, neem oil controls fungi such as black spot, rust, powdery mildew and Anthracnose.

Also popular are insecticidal soaps, either plain or blended with other organics, for pests such as aphids, whiteflies and mites.

In fact, many organic pesticide products contain more than one active ingredient. You'll find blends such as pyrethrum and canola oil, rotenone and pyrethrum, garlic and vegetable oils and hot pepper and eucalyptus oil.

One particularly effective product is Organocide, an insecticide and fungicide featuring both sesame oil and fish oil.

An amazingly effective caterpillar-specific pesticide is Thuricide, or any other product containing Bacillus thuringiensis (BT). It quickly destroys foliage-eating caterpillars (worms) and is completely safe to use, though it obviously kills butterfly larvae too and should be carefully applied.

Bacillus subtilis, a related microorganism, is as effective on a broad range of fungi as BT is on caterpillars. It's found in Serenade Disease Control, a product available ready-to-use or as a concentrate.

Among non-selective organic herbicides are WeedZap, with cinnamon and clove oils, and BurnOut II, with oil, vinegar and citric acid.

For turf, Renaissance Weed & Feed utilizes corn gluten as a pre-emergent herbicide.

Should gardeners run out and purchase these and other organic pest controls? Only if you're currently using environment-damaging products or have been searching for pesticides you can use without bruising your conscience. But if you've been getting along fine without spraying, why start now?

A source of organic pesticides is Worm's Way. Visit their store at 4402 North 56 Street in Tampa, or visit www.wormsway.com.

Happy gardening!

[Charles Reynolds, a Winter Haven resident, has an associate's degree in horticulture and is a member of the Garden Writers' Association of America.]

This story appeared in print on page B7

Beyond Pesticides Daily News Blog

March 12, 2009

Data Supports Eating Organic for a Safer Diet and Environment

(*Beyond Pesticides*, March 12, 2009) An updated database on pesticide residues on chemically-produced food released by the Environmental Working Group (EWG) supports one of the important benefits of eating organically produced and processed food –a safer diet. At the same time, consumers choosing organic food support production practices that: (i) ensure cleaner air and water; (ii) improve soil health and sustainability; (iii) reduce escalating global warming; (iv) protect bees and other pollinators; and, (v) create safer workplaces for those who grow and harvest food.

When organic foods are not easily accessible due to cost or availability, Beyond Pesticides recommends that consumers buy organically produced commodities for those foods they eat most often (e.g. children's juice) and for those foods that contain the greatest amount of pesticides. EWG's recently released 5th edition Shopper's Guide to Pesticides is a tool to help individuals avoid produce containing the highest amount of pesticides. However, research indicates that regulators know much less than they should and do not collect residue data on most of pesticides' toxic breakdown products (metabolites), inert ingredients, and contaminants. Additionally, pesticides that are untested by EPA for certain health effects of concern (e.g. endocrine disruption, behavioral impacts) may be dismissed as "cleaner," but turn out to be among the most hazardous to fetuses and children when the agency, in the case of endocrine disruption, gets around to adopting and enforcing its long-overdue testing protocol, or decides that its evaluation of behavioral and low-dose sub-lethal effects must be improved.

Many experts believe that because of the complexities and cost associated with a truthfully complete assessment of health and environmental impacts associated with chemical-intensive agriculture (tied to the resulting food, air, water and land residues), and in light of the proven commercial viability of organic systems, most of the toxic pesticides on the market today and the chemical-intensive farming practices that they support are outdated and not sustainable, forcing unnecessary hazards (present and still to be evaluated) on people and the environment. They argue that toxic pesticide use must become the exception rather than the rule, ending the false regulatory assumption that hazardous chemicals are necessary for cost-effective food production, so that people do not have to sacrifice their health and the environment in order to eat.

Based on EWG's data from nearly 87,000 tests for pesticide residues in produce conducted between 2000 and 2007 and collected by the U.S. Department of Agriculture (Pesticide Data Program) and the U.S. Food and Drug Administration, the Shopper's Guide lists the "Dirty Dozen" and "Clean 15" fruits and vegetables to determine which conventionally-grown produce items have the have the highest pesticide load and which have the lightest. If consumers get their USDA-recommended five daily servings of fruits and vegetables from the 15 most contaminated, they could consume an average of ten pesticides a day. Those who eat the 15 least contaminated conventionally-grown fruits and vegetables ingest less than two pesticides daily. EWG uses the data to conclude that consumers can reduce their pesticide exposure by 80 percent by avoiding the most contaminated fruits and vegetables and eating only the cleanest.

According to EWG's "Dirty Dozen," conventionally grown produce to avoid include peaches, apples, bell peppers, celery, nectarines, strawberries, cherries, kale, lettuce, imported grapes, carrots, and pears.

Because residues are found throughout conventionally grown products, a diet based on organic foods is essential. A study published in 2008 finds that children who eat a conventional diet of food produced with chemical-intensive practices carry residues of organophosphate pesticides that are reduced or eliminated when they switch to an organic diet. Another study finds that converting the nation's eight million acres of produce farms to organic would reduce pesticide dietary risks significantly.

There are numerous health benefits to eating organic, besides a reduction in pesticide exposure. According to research from the University of California, a ten-year study comparing organic tomatoes with standard produce finds that they have almost double the quantity of disease-fighting antioxidants called flavonoids. A study out of the University of Texas finds organically grown fruits and vegetables have higher levels of antioxidants as well as vitamins and minerals than their conventionally grown counterparts. A comprehensive review of 97 published studies comparing the nutritional quality of organic and conventional foods shows that organic plant-based foods (fruits, vegetables, grains) contain higher levels of eight of 11 nutrients studied, including significantly greater concentrations of the health-promoting polyphenols and antioxidants. The team of scientists from the University of Florida and Washington State University concludes that organically grown plant-based foods are 25 percent more nutrient dense, on average, and hence deliver more essential nutrients per serving or calorie consumed. A study by Newcastle University, published in the *Journal of Science of Food and Agriculture*, finds that organic farmers who let their cows graze as nature intended are producing better quality milk.

Driving pesticide risks downward is important because recent science has established strong links between exposure to pesticides at critical stages of prenatal development and throughout childhood, and heightened risk of pre-term, underweight babies, developmental abnormalities impacting the brain and nervous system, as well as diabetes and cancer. Research shows that organic farming eliminates a significant source of toxic chemical contamination in the environment from groundwater pollution and runoff to drift. Organic farming also protects the farmworkers and their families from chemicals that have been shown to cause a myriad of chronic health effects, such as cancer, endocrine disruption and a series of degenerative diseases like Parkinson's disease.

Disputing the myth that organic methods are less productive, a three-year study of worldwide organic versus conventional farm yields finds organic farming to produce as much as, and even exceed, the crop and animal yields of conventional farming.

Organic farming conserves natural resources by recycling natural materials and it encourages an abundance of species living in balanced, harmonious ecosystems. Organic farmers are required by the National Organic Standards to minimize soil erosion; implement crop rotations; provide for the humane, general welfare and health of farm animals and prevent contamination of crops, soil, or water by plant and animal nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances. Even though the popularity of organic produce has grown tremendously in recent years, farmers in the U.S .are not nearly keeping pace with consumer demand for organic products, estimated to be growing by 20 percent a year.

Data from The Rodale Institute's Farming Systems Trial (FST), perhaps the longest running agronomic experiment (began in 1981), shows that organic farming is one of the most powerful tools in the fight against global climate change. Carbon sequestration in organic no tillage (no till) farming systems is two to four times greater than in chemical-intensive no till systems. At the same time, the Rodale data shows reduced energy needs on the organic farm (37 percent less than conventional) with consistently high yields.

Beyond Pesticides Daily News Blog

European Union Backs Austrian and Hungarian Bans on GM Crops

(*Beyond Pesticides*, March 17, 2009) Earlier this month, European Union environment ministers overwhelmingly rejected a European Commission proposal to force Austria and Hungary to lift their bans on the controversial cultivation of varieties of genetically modified (GM) corn. Over 20 member states voted against the Commission proposal. Hungary can maintain its ban on Monsanto's GM maize MON810, and Austria on MON810 and Bayer's T25.

"This is a victory for the environment, farmers and consumers, and a major embarrassment for the Commission. For the fourth time, EU governments have rejected a Commission proposal to lift national bans on GM crops. What part of 'no' does the Commission not understand?" said Marco Contiero, Greenpeace EU GMO policy director.

Austrian and Hungarian scientific authorities have recently supplied new evidence supporting their national bans showing that MON810 maize - the only GMO currently cultivated in the EU - is likely to have harmful environmental effects.

Helen Holder, European GMO campaign coordinator at Friends of the Earth Europe said, "The European Commission has once again failed to force countries to lift their national GMO bans. Today's vote is a clear message that European countries will not be bullied into taking unsound decisions regarding their environment, their farming and their citizens' health. The Commission must now abandon its unpopular proposals once and for all and get down to the real work of improving GMO risk assessments in the EU, as Ministers have requested."

Under EU GMO laws, countries are allowed to ban individual GM crops for environmental and health reasons. There are a number of reasons why these bans should not be lifted:

*The effects of Monsanto's genetically modified maize MON 810, which is engineered to produce a toxin to kill insects, are uncertain and controversial.

* European Environment Ministers concluded last December that GMO risk assessment in the EU is not fulfilling legal requirements, that long term impacts are not been assessed, and that crops such as those being voted on today should also be assessed under EU pesticide laws because of the toxin they release. The European Commission's proposal to lift the bans completely disregarded this recent agreement.

* MON810 is currently being re-assessed at EU level as required under EU law. No national bans should be lifted under a full, independent and good quality review.

Beyond Pesticides believes the incorporation into food crops of genes from a natural bacterium (Bt) or the development of a herbicide resistant crop is short sighted and dangerous. Over 70% of all genetically modified organisms (GMOs) are altered to be herbicide-resistant. In the U.S., we continue to push for labeling as a means of identifying products that contain genetically engineered ingredients, seek to educate on the public health and environmental consequences of this technology, and generate support for sound ecological-based management systems. This technology should be subject to complete regulatory review, which is currently not the case.

New pesticide law takes effect April 22 — Earth Day

News

Mar 15, 2009

The Ontario government is mandating a greener approach to keeping lawns and gardens green.

Starting Wednesday, April 22 — Earth Day — the province's new pesticide law takes effect and will include a comprehensive list of harmful and toxic substances banned for use on gardens and lawns.

According to the Ontario Ministry of Environment, the ban allows for the use of certain lower-risk pesticides for controlling weeds and pests in lawns and gardens.

The ban prohibits the sale and use of pesticides for cosmetic purposes on lawns, gardens, parks and schoolyards, and includes many herbicides, fungicides and insecticides.

More than 250 products will be banned for sale and more than 80 pesticide ingredients will be banned for cosmetic uses.

The announcement will pull more than 250 toxic pesticides off store shelves by the end of April.

Sweeping regulations

There are exceptions for public health or safety reasons such as fighting West Nile virus, killing stinging insects like wasps or controlling poison ivy and other similar plants. Other exceptions include agriculture and forestry, stated the ministry's website.

Paul Fiorentino, owner of Jerseyvillebased Creative Organics, which does work in Burlington, is happy with the changes. He said it's a "good thing" because residents will be introduced to products that "work better" than synthetic pesticides.

He said some organic products bind to the soil — allowing valuable nutrients to remain in the soil and not leach out — and provide long-lasting protection for grass and plants.

"It affects my business in a positive way," Fiorentino said.

The sweeping regulations released recently by the environment ministry have been given the 'green' thumbs up by the Registered Nurses' Association of Ontario (RNAO), as part of a coalition of health and environmental groups that pushed for fast implementation of the pesticide law.

"The premier and the minister of the environment are to be congratulated for heeding the call of health and environmental organizations. Pesticides are poisonous, and children right across the province will be better protected thanks to this announcement," RNAO president Wendy Fucile said in a news release.

There are areas for improvement in the legislation. For instance, golf courses are exempt from the ban and sale restrictions on certain products will not take effect for two years, according to the Suzuki foundation.

For more information about the pesticide law or to keep lawns and gardens healthy, visit www.ene.gov.on.ca/en .

— With files from Jason Misner, Burlington Post staff

EPA: United States Environmental Protection Agency

News Releases - Pesticides and Toxic Chemicals

EPA To Begin Testing Pesticides for Endocrine Disruption

Release date: 04/15/2009

Contact Information: Suzanne Ackerman, (202) 564-4355 / 7819 / ackerman.suzanne@epa.gov

(Washington, D.C. – April 15, 2009) EPA has issued the first list of pesticides to be screened for possibly disrupting the endocrine system. Endocrine disruptors are chemicals that interact with and possibly disrupt the hormones produced or secreted by the human or animal endocrine system, which regulates growth, metabolism and reproduction.

“Endocrine disruptors can cause lifelong health problems -- especially for children,” said EPA Administrator Lisa P. Jackson. “Gathering this information will help us work with communities and industry to protect Americans from harmful exposure.”

EPA will issue test orders to the manufacturers of 67 pesticide chemicals this summer to determine whether their chemicals may disrupt the endocrine systems (estrogen, androgen and thyroid). Testing, conducted through the Endocrine Disruptor Screening Program (EDSP), will eventually be expanded to cover all pesticide chemicals.

The list was developed on the basis of exposure potential and should not be construed as a list of known or likely endocrine disruptors. The listed pesticide chemicals were selected because there is high potential for human exposure through food and water, residential activity, or agricultural pesticide application.

Also being announced today are revised policies and procedures that EPA will follow to order testing, minimize duplicative testing, promote equitable cost-sharing, and protect manufacturers’ confidential business information.

More information on endocrine disruptors

EPA: United States Environmental Protection Agency

News Releases - Pesticides and Toxic Chemicals

U.S. and Canada to Increase Scrutiny of Flea and Tick Pet Products

Release date: 04/16/2009

Contact Information: (News media only) Dale Kemery, 202-564-7839/4355 / kemery.dale@epa.gov (Other inquiries: Doug Parsons, 202-564-0341 / parsons.douglas@epa.gov

(Washington, DC - April 16, 2009) The U.S. Environmental Protection Agency is intensifying its evaluation of spot-on pesticide products for flea and tick control for pets due to recent increases in the number of reported incidents. Adverse reactions reported range from mild effects such as skin irritation to more serious effects such as seizures and, in some cases, the death of pets.

Flea and tick products can be appropriate treatments for protecting your pets and your family's health because fleas and ticks can transmit disease. While many people use the products with no harm to their pets, EPA recommends that pet owners take precautions when using these products. People should carefully follow label directions and monitor their pets for any signs of an adverse reaction after application, particularly when using these products for the first time. Pet owners may also want to consult a veterinarian about the responsible and effective use of flea and tick products.

Incidents with flea and tick products can involve the use of spot-on treatments, sprays, collars and shampoos. However, the majority of the incidents reported to EPA are related to flea and tick treatments with EPA-registered spot-on products. Spot-on products are generally sold in tubes or vials and are applied to one or more localized areas on the body of the pet, such as in between the shoulders or in a stripe along the back. This advisory pertains only to EPA-registered spot-on flea and tick products; these products have an EPA registration number on the label.

Health Canada has identified similar concerns about the use of spot-on flea and tick products. Health Canada and EPA will meet shortly with spot-on product manufacturers to address the issue, including whether further restrictions are necessary to protect the health of pets.

EPA recommends that veterinarians use the National Pesticide Information Center's Veterinary Pesticide Adverse Effects Reporting portal to report incidents: http://npic.orst.edu/vet

More information on pet products and safety tips: http://www.epa.gov/pesticides/health/pets.htm

Sixth Circuit Court Ruling Impedes Agricultural Sprays

March 23, 2009

Recently, a federal appeals court overturned an EPA rule on spraying of pesticides on waterways and nearby fields. The previous ruling protected farmers and applicators as long as they applied pesticides in compliance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The court ruling, in the case of the National Cotton Council vs. the EPA, finds that agricultural pesticides are considered a "pollutant," and thereby subject to the Clean Water Act (CWA). This means that potentially thousands of farmers would need to obtain CWA permits to make important pesticide applications.

In a petition for a rehearing on the decision, Secretary of Ag Tom Vilsack has sent Lisa Jackson, EPA's administrator, an urgent letter on the far-reaching impact the court ruling could have on American agriculture.

In part, Vilsack's letter states:

"The Sixth Circuit's decision encumbers the American farmers' and the agencies' (USDA) ability to do business, while reaping little or no environmental benefit in exchange. Subjecting FIFRA-compliant pesticides to the additional regulatory regime of the CWA is duplicative and will not help protect the environment. FIFRA mandates that the EPA approve and issue a registration for a pesticide product only after the EPA has determined the product will not cause 'unreasonable adverse effects on the environment.' The pesticide registration and re-registration process under FIFRA considers the effects of pesticides on both human health and aquatic resources. If the EPA has concluded that a pesticide satisfies FIFRA and will not have an 'unreasonable adverse effect on the environment,' then it is reasonable to exclude the application of that pesticide from permitting requirements of the CWA.

"In short, I am concerned that the court's decision will compromise American farmers' and USDA agencies' ability to respond efficiently and effectively to emergency threats, while providing little or no additional environmental protection in return."

To read Secretary Vilsack's full letter to the EPA, click here.

For additional background information, click here.

Insect Fumigant Identified as Potent Greenhouse Gas

CAMBRIDGE, Massachusetts, March 11, 2009 (ENS) - Sulfuryl fluoride, a gas used for insect control, has the potential to contribute to future global warming at more than 4,800 times the potency of the better known greenhouse gas carbon dioxide, an international team of researchers said today.

The gas is used for soil fumigation, termite treatment and post-harvest insect control on fruits, nuts, and grains. But because sulfuryl fluoride production has not yet reached high levels there is still time to nip this potential contributor in the bud, the scientists said.

Researchers at the Massachusetts Institute of Technology, the Scripps Institution of Oceanography and other institutions are reporting the results of their study of the gas this month in the "Journal of Geophysical Research."

The scientists have measured sulfuryl fluoride levels in the atmosphere, and determined its emissions and lifetime to help gauge its potential future effects on climate.

Originally developed by the Dow Chemical Company, sulfuryl fluoride, SO2F2, is in widespread use as a structural fumigant insecticide to control drywood termites, particularly in warm weather portions of the southwestern and southeastern United States and in Hawaii.

More recently, sulfuryl fluoride has been introduced as a replacement for methyl bromide, a widely used fumigant that is being phased out under the Montreal Protocol because of its ozone-destroying chemistry. Methyl bromide has been used for insect control in grain storage facilities, and in intensive agriculture in arid lands where drip irrigation is combined with covering of the land with plastic sheets to control evaporation.

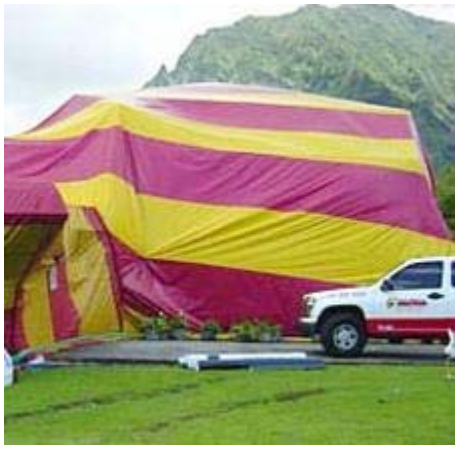
Soil fumigation before planting **(Photo courtesy Society of Nematologists and APSnet)**

The U.S. Department of Agriculture is assessing fumigation with sulfuryl fluoride as a quarantine treatment for exotic wood boring insects in merchantable logs and timber, the agency said in a December 2008 report.

"Such fumigants are very important for controlling pests in the agricultural and building sectors," says Ron Prinn, director of MIT's Center for Global Change Science and a co-author of the new paper. But with methyl bromide being phased out, "industry had to find alternatives, so sulfuryl fluoride has evolved to fill the role," he says.

Until the new study, nobody knew accurately how long sulfuryl fluoride would last in the atmosphere after it leaked out of buildings or grain silos.

"Our analysis has shown that the lifetime is about 36 years, or eight times greater than previously thought, with the ocean being its dominant sink," Prinn says. So it would become "a greenhouse gas of some importance if the quantity of its use grows as people expect."



Houses tented for termite treatment with sulfuryl fluoride are a common sight in Honolulu. **(Photo courtesy Aloha Termite @ Pest Control)**

For now, the gas is only present in the atmosphere in very small quantities of about 1.5 parts per trillion, though it is increasing by about five percent per year.

Its newly reported 36-year lifetime, along with studies of its infrared absorbing properties by researchers at the National Oceanic and Atmospheric Administration, "indicate that, ton for ton, it is about 4,800 times more potent a heat-trapping gas than carbon dioxide," says Prinn.

Fortunately, though, "we've caught it very early in the game," says Prinn, the TEPCO Professor of Atmospheric Science in MIT's Department of Earth, Atmospheric and Planetary Sciences.

The sulfuryl fluoride detection was made through a NASA-sponsored global research program called the Advanced Global Atmospheric Gases Experiment, or AGAGE.

"In AGAGE, we don't just monitor the big greenhouse gases that everybody's heard of," said Prinn. "This program is also designed to sniff out potential greenhouse and ozone-depleting gases before the industry gets very big."

He describes the team's approach as "a new frontier for environmental science." They are trying eliminate potential dangers to the global climate as early as possible, rather than waiting until the industries that produce damaging gases are mature with lots of capital and jobs at stake.

The lead author of the research paper is Jens Muhle of Scripps, and besides Prinn, the co-authors include Jin Huang, a research scientist at MIT's Center for Global Change Science, Ray Weiss of Scripps, who co-directs AGAGE with Prinn, and eight others from Scripps, the University of Bristol in the United Kingdom and the Centre for Australian Weather and Climate Research.

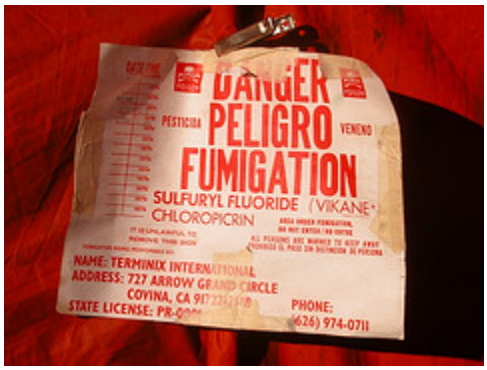
"Unfortunately, it turns out that sulfuryl fluoride is a greenhouse gas with a longer lifetime than previously assumed," says Muhle. "This has to be taken into account before large amounts are emitted into the atmosphere."

Sulfuryl fluoride is currently marketed by three manufacturers under four different brand names.

Vikane, marketed by Dow, has been commercially available since the early 1960s, with Zythor, marketed by competitor EnSystex II of North Carolina, being more recently introduced as its use is approved by individual states.

Dow has begun marketing sulfuryl fluoride as a post-harvest fumigant for dry fruits, nuts, and grains under the trade name ProFume.

Most recently Drexel Chemical Company has registered Master Fume for the structural market, competing against Vikane and Zythor.



Sulfuryl fluoride fumigation notice **(Photo by Landruc)**

Prinn says that "fumigation is a big industry, and it's absolutely needed to preserve our buildings and food supply."

But identifying the greenhouse risks from this particular compound, before many factories have been built to produce it in very large amounts, would give the industry a chance to find other substitutes at a time when that is still a relatively easy change to implement, he says.

"Given human inventiveness," said Prinn, "there are surely other alternatives out there."

The Kyoto Protocol establishes legally binding commitments for the reduction of four greenhouse gases - carbon dioxide, methane, nitrous oxide, sulphur hexafluoride - and two groups of gases - hydrofluorocarbons and perfluorocarbons.

The Washington Post

Going to the Mattress

By Dana Milbank
Wednesday, April 15, 2009; A02

The enemy is stealthy and bloodthirsty. It attacks innocent victims without warning, while they sleep.

Fortunately, the federal government is on the case. In a hotel ballroom in Crystal City yesterday, the Environmental Protection Agency convened the first-ever National Bed Bug Summit -- a veritable Yalta Conference for the species *Cimex lectularius*. With help from the Centers for Disease Control and Prevention, the Department of Housing and Urban Development, and even the Pentagon, the EPA assembled scientists, state and local officials, and a colony of exterminators to buzz about such topics as "Bed Bug Perspectives," "Bed Bug Basics" and "Government Responses to Bed Bugs."

"These insects can have a life-altering impact," warned panelist Richard Cooper of Cooper Pest Solutions.

"They are showing up in some of the finest hotels," contributed Saul Hernandez, an aide to the congressman who introduced H.R. 6068, "The Don't Let the Bed Bugs Bite Act of 2008."

All this for an insect the size of an apple seed that has a painless bite and is not known to spread disease?

University of Kentucky entomologist Mike Potter called the bedbug nothing less than "the most difficult, challenging pest problem of our generation." Tossing out phrases such as "doomsday scenario" and "perfect storm," he ventured: "In my opinion, we are not going to get out of this thing" -- the bedbug thing -- until we "allow the pest-control industry to go to war."

The layman might think that in an age of bin Laden and Ahmadinejad, not to mention pandemic flu and poisonous peanut butter, the threat posed by the tiny insect might be rather manageable. But that is not the prevailing view at this week's National Bed Bug Summit.

"A year ago I thought bedbugs were a thing from a couple of centuries ago and maybe in a children's bedtime rhyme," testified Joan Quigley, a New Jersey state representative. "I had no idea they were a modern scourge." But when she scratched the surface, she found the bedbug matter to be "a can of worms," so to speak. "I had no idea how many stakeholders there were in the bedbug issue."

An official from the New Jersey Apartment Association (Jersey is a hotbed of bedbug activity) concurred. "I hesitate to use the words 'It became a sexy issue,' but it became a cause celebre," said the official, Conor Fennessy. "It kind of got legs for a while."

Actually, six legs and two antennae, according to the eight-inch drawing of a bedbug on the sign outside the Sheraton ballroom yesterday announcing "National Bed Bug Summit -- Please Sign In." The sign-in area was well stocked with coffee (sleep disruption is common in bedbug circles). Inside the ballroom, 200 people, some in military uniform, others in Orkin Man-style uniform, listened as Lois Rossi, from the EPA's pesticide division, spoke of "the size of the problem we have with bedbug infestations."

Bedbugs had been all but eradicated decades ago, panelist Potter explained, but thanks to increased travel, pesticide bans and resistance, we've "let bedbugs get back in the game."

Now, said Hernandez, the congressional staffer, "bedbugs invade luggage, burrowing deep into clothes, and are transported back home, where they infest their victims' homes . . . and the affected people have no choice but to trash their furniture, clothes and linen."

Audience members were squirming and scratching by the time Cooper told them of where he's found bedbug infestations: "behind picture frames or other wall hangings, or inside the bindings of books or on stuffed animals. Or how about an entire reproducing population with over 30 eggs inside the head of an adjustable wrench?" On the projection screen, the bugs in his presentation looked to be about three feet long.

After a representative of the National Pest Management Association divulged the "startling" fact that, in the pest-control business, the bedbug has surpassed the fire ant and is closing in on the flea, Harold Harlan, from the Armed Forces Pest Management Board, described the savage beast's method of attack. "They have piercing, sucking mouth parts -- that's important," said Harland, who boasted of the "trained" bedbugs he keeps in his lab. "They feed only on blood" -- known as a "blood meal" in the bedbug community.

Dini Miller of the Virginia Polytechnic Institute reported her findings that a particularly nasty strain of insecticide-resistant super-bedbug has taken up residence in Arlington. "It's pretty amazing how tough these bugs are," she said, showing a spray can of "Bedlam" aerosol. "Very determined, these bedbugs."

But what about that article two weeks ago in the Journal of the American Medical Association finding "little evidence" that the bugs transmit disease?

Well, consider the "mental health aspects" of the bedbug. "When you've got bedbugs, your bed is not your comfort," explained Tom Neltner of the National Center for Healthy Housing. "It can have a tremendous impact on the mental health of people."

Potter, who boasted that he's spent "the last three years of my life digging deep into the history of bedbug management," offered a challenge: "I'd like to take anybody who thinks bedbugs is not a big deal, and we'll sprinkle a few in their house and see what they think."

The rest of us can sleep tight, knowing our government is doing all it can not to let the bedbugs bite.