Maine Board of Pesticides Control

Miscellaneous Pesticides Articles September–October 2012

(***identified by Google Alerts or submitted by individuals***)

Morning Sentinel

August 7

State to investigate weedkiller use at Messalonskee Lake

By Matt Hongoltz-HetlingMHongoltzHetling@mainetoday.com
MaineToday Media

OAKLAND — The state's pesticides control board is expected to launch an investigation today into the spraying of a weedkiller on a dam on Messalonskee Lake.

Ed Pearl, a former director of Friends of Messalonskee Lake, said that he was driving past the dam on the north end of the lake Friday afternoon when he saw a man spraying a liquid in a blue tank sprayer on weeds growing out of the dam's boards.

"I'd say more was probably going in the water than was going on the weeds," Pearl said.

Pearl said that the man appeared to be working on behalf of the company that owned the dam, and he had keys to a fence and outbuilding on the dam.

The dam is owned by Essex Hydro Associates, of Boston, according to records at the town office.

Two calls to Essex Hydro Associates were not returned Monday.

Pearl said he reported the incident to the Oakland Police Department and to the Maine Board of Pesticides Control.

The danger to humans was unclear, but the waterway is important to the area as a recreational area and contains fish that residents eat, Pearl said.

"There are a fair amount of trout in that area. There are people that kayak in it. There are people that swim it in. It goes into the Kennebec River."

Ray Connors, of the state's Pesticides Control Board, said Pearl's complaint triggers an investigation by the state, during which Pearl, the person who applied the substance and the dam owner probably would be interviewed.

"Complaints are a priority," Connors said. "Whenever possible, the BPC tries to respond to complaints the same day they are received."

Connors said the board's inspector was taking care of another case Monday, when the complaint was made, but probably would initiate his investigation today.

In addition, the site could be tested for physical evidence of the substance sprayed.

"The determination of whether or not to sample will be based in large part on the information obtained through the follow-up inspection process," Connors said.

The investigation and resolution process usually is completed within a year, Connors said, although more involved cases can take several years.

KENNEBEC JOURNAL

PRINT THIS

August 7

Messalonskee Stream Hydro under investigation for pesticide use

By Matt Hongoltz-HetlingMHongoltzHetling@mainetoday.com
MaineToday Media

OAKLAND -- The company that owns the dam on Messalonskee Lake is working with the state's pesticide control board to determine whether the recent application of a weedkiller was in compliance with the law.

Ray Connors of the Maine Board of Pesticides Control said that the investigation started Tuesday, and could include testing of the site.

Dick Norman, of Messalonskee Stream Hydro, which owns the dam, said on Tuesday, "At this point, if there is an issue that comes up like this, you indicate what's happened and let them take a look."

On Friday, resident Ed Pearl saw a man spraying weedkiller on plants growing in boards used to impound water on the north end of the lake. He filed a complaint with the Maine Board of Pesticides Control on Monday, triggering the investigation.

Norman, who also said he contacted the board Monday after an employee told him about the spraying, wouldn't discuss the details while the investigation was ongoing. He added that the company follows state and federal laws regarding pesticide use.

"We are a very heavily regulated industry, and we abide by the laws," Norman said.

Messalonskee Stream Hydro, an affiliate of Essex Hydro Associates, of Boston, owns three projects in the Kennebec River system, and the Benton Falls dam on the Sebasticook River.

Norman said that the company has been a leader in promoting environmental practices, and pointed to innovative designs that allow fish to migrate over the dams as an example.

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KENNEBEC JOURNAL

October 4

Messalonskee dam owner faces penalty for toxic spray

State investigating use of weed killer, may levy fine against company

By Matt Hongoltz-HetlingMHongoltzHetling@mainetoday.com
MaineToday Media

OAKLAND -- The company that owns Messalonskee Dam will face a penalty from the state after an employee was caught spraying a toxic weed killer in and around the water.

The amount of the herbicide Durazone sprayed Aug. 3 by an employee of Essex Hydro Associates, the parent company of Messalonskee Stream Hydro, was small, according to Maine's Board of Pesticides Control. Durazone in large amounts can cause severed effects in humans and animals.

Henry Jennings, the board's director, said the tiny amounts of toxin detected after the spraying were unlikely to have any meaningful environmental consequences. He said the net effect was putting a half-ounce of herbicide into the lake. "It's going to quickly get below the biologically active level," he said.

Durazone, sold by Bayer, kills a wide variety of plants, and contains the active ingredients indaziflam, diquat dibromide and glyphosate isopropylamine salt. Its label warns it's toxic to plants, fish and other aquatic animals. The National Pesticide Information Center says prolonged or extreme exposure by humans can cause severe health effects in humans, from shedding fingernails to spontaneous late-term abortions.

"To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters," its label reads.

Jennings said that chemical warning labels are legal documents that applicators are federally required to comply with.

The Board of Pesticides has one full-time investigator and four seasonal investigators, who together handle about 600 investigations a year, Jennings said. Because of the high volume of cases handled by the small staff of the board it could take months to determine what the penalty will be.

"We're confident that some enforcement is appropriate, but we haven't arrived at exactly what that would be," Jennings said. "Clearly education is a part of it. The company needs to have a better understanding of the applicable laws."

Jennings said Essex Hydro Associates is cooperating and the incident appears to be isolated.

Oakland resident Ed Pearl, a former director of Friends of Messalonskee Lake, was driving by the dam when he saw the man spraying Durazone on plants growing in spillway boards used to impound water on the north end of the lake. He confronted the man and later filed a complaint with the state board, triggering the investigation.

While most are routine inspections of places where pesticides are used commercially, Jennings said that the board also responds to about 100 complaints every year.

"We rely on the public to be our eyes and ears," he said.

Messalonskee Stream Hydro also owns three projects in the Kennebec River system and the Benton Falls dam on the Sebasticook River.

If the company has to pay a fine, the money goes to the state's general fund. Jennings said that helps ensure that the enforcement agency doesn't benefit by assessing high fines.

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Pesticides Control Board Investigating Herbicide Spray at Messalonskee Dam

by Catherine Pegram - October 5th 2012 07:40pm - Read more Local News

Oakland - State officials says the company that owns Messalonskee River dam is facing anything from a warning to a fine after an employee sprayed toxic weed killer around the water.

Maine's Board of Pesticides Control is investigating the incident from August.

The board's director says a man in Oakland noticed an employee of Essex Hydro spraying the herbicide Durazone on a spillway board of the dam.

We're told the worker stopped and the net result was about a half-ounce of herbicide spread in the area, which was not enough to result in any environmental consequences.

Officials say it could take a few months for the investigation to be complete and a penalty determined.

Print this Story

Portland Press Herald

September 5

Natural Foodie: Food-fight fallout may drift over Maine

By Avery Yale Kamilaakamila@mainetoday.com
Staff Writer

A multimillion-dollar referendum food fight is heating up in California, where citizens have secured a ballot question asking voters if they want foods that contain genetically engineered ingredients to be labeled. Should the citizens' initiative succeed at the ballot box, experts say the impact will be felt across the nation, including here in Maine.

click image to enlarge

May contain genetically engineered ingredients? Companies that include Ocean Spray, Hormel, Coca-Cola, PepsiCo, McCormick, Hershey's, Kellogg's, Morton Salt and ConAgra Foods have donated millions of dollars to defeat a California referendum that would require foods containing genetically engineered foods to be labeled.

Gordon Chibroski/Staff Photographer

WHAT CALIFORNIANS WILL SEE ON THE BALLOT

GENETICALLY ENGINEERED FOODS. LABELING. INITIATIVE STATUTE. Requires labeling of food sold to consumers made from plants or animals with genetic material changed in specific ways. Prohibits marketing such food, or other processed food, as "natural." Provides exemptions.

A YES VOTE MEANS: Genetically engineered foods sold in California would have to be specifically labeled as being genetically engineered.

A NO VOTE MEANS: Genetically engineered foods sold in California would continue not to have specific labeling requirements.

FISCAL IMPACT: Increased annual state costs from a few hundred thousand to over $1 million to regulate the labeling of genetically engineered foods. Additional, but likely not significant, governmental costs to

address violations under the measure.

"I think it will have implications nationally and for Maine," said Mark Lapping, distinguished professor of public policy at the Muskie School of Public Service at the University of Southern Maine in Portland. "The best comparison I can provide is the Texas school board when it chooses textbooks."

Those choices influence the material printed in textbooks for the rest of the country because the Texas market is so huge. Likewise, if food manufacturers are forced to label foods that contain genetically engineered ingredients in California, the same labels are bound to show up on store shelves across the country.

"California is a big enough state that when they pass something like this it's more economical to have one label," said Mario Teisl, an economics professor at the University of Maine in Orono, where he's conducted research on consumer attitudes about labeling genetically engineered food. "If Maine passed this they'd just ignore us, most likely."

Demonstrating the importance they place on the ballot issue, multinational food and chemical companies have ponied up $25 million to fight the initiative, with political strategists predicting the contributions could soar as high as $50 million before the November election. Supporters have only raised $2 million.

Donations to defeat the referendum come from familiar household brands, such as Kellogg's, Hershey's, PepsiCo, Coca-Cola, Ocean Spray, Hormel, McCormick, ConAgra Foods and Morton Salt; and from top chemical firms, including Monsanto, Dupont and Dow. All the companies fighting the initiative have a financial stake in the battle, either producing genetically modified seeds and related pesticides (whose use has risen since the introduction of genetically altered crops) or presumably using genetically engineered ingredients in their foods.

SURVEY SAYS

The reason agribusiness companies are worried is because the majority of Americans favor labeling and are wary of genetically engineered food.

Teisl's research, conducted nationally in 2002, found that 85 percent of respondents wanted genetically engineered food to be labeled. In Maine, his research found that 87 percent of respondents wanted these same labels.

More recent national polling has found an even higher percentage of Americans in favor of labeling genetically engineered food. Last year, an MSNBC poll found 90 percent of respondents supportive of labeling, while an ABC News poll put the figure at 93 percent.

A national survey conducted in April by the Mellman Group for a nonprofit in favor of labeling genetically engineered food found a similar percentage of Americans supported it. The poll also found that only 25 percent of respondents felt genetically engineered foods are "basically safe."

It's these sort of numbers that have prompted multinational companies to pour such large amounts of cash into the fight to defeat the California labeling initiative.

A poll conducted in California in July by the California Business Roundtable and Pepperdine University, showed 64.9 percent of respondents supported the referendum and 23.9 percent opposed it. The decrease in support from national polls likely reflects the opposition's media blitz on the issue.

One person in Maine closely watching the outcome of the California vote is potato seed farmer Jim Gerritsen, who heads the Organic Seed Growers and Trade Association.

The national organic farmers organization is currently embroiled in a federal legal battle with Monsanto, a

leading producer of genetically engineered seeds and the top campaign donor to the effort to defeat the California labeling referendum. The farmers' lawsuit challenges Monsanto's seed patents and seeks blanket protection from patent infringement lawsuits should organic crops become contaminated by Monsanto's genetically altered plants.

"The biotech industry is the only industry I know of that is so ashamed of its products that it's afraid of the American public finding out what's in them," Gerritsen said. "In a democracy, everybody benefits when there is a free flow of information. When you deny that information, there is a dysfunction in the economy."

Teisl said his research shows that the longer the period of time consumers are exposed to a particular food ingredient, such as genetically-engineered ingredients, the less resistant they are to consuming it. He said the industry may have avoided such consumer suspicion and political battles had it opted to market its genetically engineered food from the get-go.

The Grocery Manufacturers Association estimates that more than 70 percent of processed foods sold today contain genetically-engineered ingredients. These genetically-modified foods first appeared in grocery stores in 1994 and their presence has steadily increased since then.

"Today if a person feels strongly about genetically modified food and wants to avoid it, they really have to buy certified organic food," said John Jemison, who is a cooperative extension professor at the University of Maine.

By law, certified organic food cannot contain genetically engineered ingredients.

LABELS OR LAWSUITS

Should voters approve the referendum, don't expect to see new labels sprouting up on Coke bottles or Corn Flakes boxes anytime soon.

"They've made such a big deal of it, they would look like fools if they didn't challenge it in the courts," said Lapping.

As with any legal challenge, this could likely drag on for years. But should the referendum survive its day in court, then food manufacturers would face a choice between labeling or reformulating their products. However, removing genetically modified ingredients may prove difficult in the short term.

"I think the pervasiveness of Monsanto's GMOs in the Corn Belt is so great that it's going to be very, very hard to reformulate anything that contains corn," Lapping said.

Most corn, soy, canola and sugar beets grown today are genetically engineered.

If they can't source ingredients that aren't genetically engineered, food manufacturers would be forced to adopt labels.

Lapping suspects that rather than adding clear labels that say something like "This product contains genetically engineered ingredients," food processors will try to obscure the fact in an avalanche of information.

"They'll probably provide so much information that it's not the ease of accessing information that the supporters of (the referendum) want. It will be in very technical language," said Lapping.

Teisl predicts that the new label information could offend consumers initially, but might not change long-term buying habits.

"If all of sudden a boatload of products have GM labels stuck on them, everyone is going to be shocked and disgusted, but what are they going to do?" Teisl asked. "Will they stop eating it? People will probably ignore it in the long run, that would be my guess.

"The fact that they've been eating it and didn't know about it, means that some people will react and be really mad," Teisl said. "The more you hide it, the more likely that people are really going to react."

MAINE'S NATURAL ADVANTAGE

Maine companies have long traded on the state's pristine image. Because Maine's agricultural sector is comprised of relatively small farms (compared to other parts of the country) and a robust organic industry, the state's food producers could gain a marketing advantage in a post-labeling world.

Even one of Maine's largest agricultural crops -- potatoes -- is free of genetically engineered traits. While a gene-altered potato was introduced more than a decade ago, it never took hold because major firms such as McDonald's announced that they didn't want genetically engineered french fries. This caused the market for genetically engineered potatoes to instantly dry up.

"One of the many things that the food sector in Maine has is this sense of small-scale, clean, chemical-free agriculture," Lapping at the Muskie School said. "I think that becomes a very useful marketing device."

He pointed to Oakhurst Dairy's successful battle against Monsanto over its advertising claim that its milk is free of genetically engineered growth hormones.

"That became a very important marketing device that Oakhurst was able to employ," Lapping said. "They've secured a real niche in the marketplace."

Many other Maine food companies could find a similar niche if genetically engineered foods are forced to bear labels.

As Jemison at Cooperative Extension said, "in some ways (genetically engineered labeling) could help these alternative, smaller industries we're trying to build in Maine."

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Portland Press Herald

September 2

Maine potato farmers anticipate stunted crop

July and August have left Maine cheated of its typical rainfall, which may result in fewer and smaller spuds.

By Edward D. Murphyemurphy@mainetoday.com
Staff Writer

Last summer, Maine potato farmers were dealt too much rain, which led to blight and rot.

click image to enlarge

Matt Porter of Presque Isle stands in one of his potato fields. Porter says many of his potatoes are undersized because of lack of rain for the last two months.

Photos by Gabe Souza/Staff Photographer

click image to enlarge

Porter displays the small-sized current crop of russets compared with a more typical size he'd expect to see by late August.

Additional Photos Below

This year, the farmers are struggling with the opposite extreme: too little rain, which is stunting the potatoes' growth and will hit farmers' wallets hard this fall.

Like the corn crop in the Midwest, Maine potatoes are withering, but they're underground and out of sight, so how poorly they're doing is a bit of a guessing game.

The crop, most of which will be harvested this month, is expected to be smaller than normal, both in total yield and the sizes of individual potatoes. And that means not only fewer potatoes to sell, but also a loss of premiums -- bonuses that processors pay for potatoes that are larger or heavier than normal and are particularly attractive to french fry producers.

Those premiums are the key to a profitable season.

"We won't get any of those bonuses," lamented Matt Porter, who farms about 700 acres on plots between Washburn and Presque Isle and said he expects that, at best, he will break even this year.

Porter's not alone in fretting over the crop. Farmers all across Aroostook County, particularly the southern part of the county, are preparing for a poor harvest when they begin pulling potatoes from the ground next month.

June was wetter than normal and so far, the rainfall for the year is actually running a little ahead of average, said meteorologist Rich Norton of the National Weather Service's Caribou office.

But just 1.73 inches of rain fell in July, less than half the average, he said. And into the last week of August, only about 2 inches had fallen for the month, and the average for the month is more than 3 inches.

Farmers also note the rain has been particularly spotty, with some areas missing out entirely when showers have moved through. For instance, in July, when Caribou reported 1.73 inches of rain, a University of Maine gauge in Presque Isle -- only about 15 miles away -- recorded just 0.4 inches.

The timing of the lack of rain was critical, with July and August being the time that most potatoes bulk up.

Russet Burbank potatoes -- the variety prized by potato processors -- go through about 0.2 inches of water a day, said Steven Johnson, a crop specialist with the University of Maine Cooperative Extension. Without

that vital moisture, some plants die and those that survive produce smaller potatoes.

Bruce Flewelling, of Flewelling Farms in Easton, said he lost about 200 of his 900 acres of potatoes to the drought and unusual warmth.

"They just burned up, dried up," Flewelling said.

Last year's rain caused some potatoes to rot in the warehouses, he said. This year's dry weather means warehouses won't be as full.

"It's a one-two punch," Flewelling said. "It's just one extreme to another and, boy, that's rough."

Flewelling said he has irrigation on about 25 percent of his crop and that helped save fields he was able to water. He hopes to add irrigation for another 100 acres before next summer, but doesn't have access to enough water to go beyond that.

Porter said irrigation is expensive. He notes that the federal government provides some financial help, but only to upgrade inefficient irrigation systems, not for installing new ones.

To be eligible, he noted with a laugh, he'd have to put in an inefficient system and then wait five years to apply for aid to pay for a more efficient one. So he relies on Mother Nature, who hasn't been too reliable lately.

Gregory Porter, a professor in the University of Maine's department of plant, soil, and environmental sciences and -- this being close-knit Aroostook County -- Matt Porter's uncle, said no more than 25 percent to 30 percent of Maine's potato fields are irrigated, either because of cost or a lack of access to adequate water.

He noted that the lack of rain, ironically, will result in pretty good quality potatoes, but that won't offset the low yields and small sizes.

Size matters to farmers because processors pay more for potatoes that weigh more than 10 ounces, said Dana Wright, executive director of the Presque Isle-based Agricultural Bargaining Council, which represents about 80 growers in negotiating contracts with processors -- primarily McCain Foods, which has a large plant in Easton.

The growers also get premiums for potatoes that are free from defects, are particularly dense or are whiter than average, Wright said.

The dry weather "will affect the size profile and, of course, the size profile dictates yield," Wright said.

He said the 10-ounce threshold will be difficult to meet for many farmers, although he doesn't want to give up hope that they may be able to get some late-season growth if it rains in September.

Potatoes that don't earn a premium bring low prices from processors.

Wright said the contracts with processors mean run-of-the-mill potatoes often fetch less than the going price for table potatoes -- the kind that find their way to supermarket produce sections.

The current contract with the processors calls for a median price of $10.40 for 100 pounds. That's for potatoes that are pulled from warehouses in April, the halfway point of the storage season, and meet five-year averages on a range of quality measures. The last two years, that's been less than the price for table potatoes, he said.

Wright said that even in the best of times, potato farming is a gamble that can pay very well, but is more often than not a losing bet.

He noted that red table potatoes were hot last year, getting $30 for 100 pounds. This year, when farmers reacted by planting more red potatoes, the price is down to about $3 for 100 pounds.

Many farmers prefer to sell to processors because they have a better handle on what they'll earn, rather than being subject to the vagaries of the market, Wright said. But this year will likely show that even with a guaranteed buyer, the business involves a little luck.

"If you get a perfect storm on that contract, you can make a lot of money," he said. "And if you don't get a perfect storm, you either break even or you don't make any money."

Matt Porter said he, like many farmers, plans to "push" his Russet Burbanks and harvest them later. The potato is normally among the last varieties to be harvested anyway and the farmers hope another week or two will boost the size.

"We're going to let our potatoes grow for a little bit and take some risks," he said.

But it's no sure thing. Early October rains don't evaporate as quickly or as completely as those in July and August, so potatoes harvested after a rain are likely to be wet. And potatoes that are wet when they go into storage can rot.

A hard frost can also damage the potatoes, so delaying the harvest increases the possibility of exposing the spuds to freezes.

Johnson, the Cooperative Extension crop specialist, said delaying the harvest probably isn't worth it.

Potatoes just don't grow much in September, he said, and even some additional rain -- and rain that's not too much and not too close to harvest -- isn't likely to make a difference

"I do not see a rapid recovery," Johnson said. "They're not going to really bulk up," and the downside risks are pretty steep.

Even an inch of rain a week would fall short of the Russet Burbank's normal needs, he noted.

Matt Porter noted that he, like most farmers, buys crop insurance, which covers some of the shortfall if the fields fail to produce.

But, he said, that only averts a disaster and doesn't really substitute for a solid crop.

"That's not the answer for paying all the bills out at the end of the year," he said.

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Maine.gov

Response from the Maine Department of Agriculture, Conservation and Forestry

October 1, 2012
Department of Agriculture, Conservation and Forestry

AUGUSTA, Maine -- The Maine Department of Agriculture, Conservation and Forestry (ACF) responded today to inaccuracies outlined in a scorecard released by the Maine Conservation Voters. “A Report Card to the People of Maine” is not a factual representation of the efforts of ACF to improve Maine’s environment and natural resources.

“Governor LePage’s leadership in merging the departments of Conservation and Agriculture puts the sustainable use of farm, forest and recreation resources in the best position to utilize scarce public dollars,” said ACF Commissioner Walter Whitcomb. “Unlike all the previous governors who tried to merge natural-resources departments, Governor LePage repeated instructed us to keep efficiency savings and use those funds to grow our natural-resource economy.”

The LePage Administration took the lead and actually completed what had only been squabbled about in other administrations – the merger and consolidation of two major natural-resource agencies into one comprehensive, cost-efficient department focusing on Maine’s land-based sectors, including agriculture, forestry, natural landscape, outdoor recreation and public-access interests.

Nowhere in the MCV report is this significant accomplishment acknowledged or even mentioned.

The combining of the departments of Agriculture and Conservation into the Maine Department of Agriculture, Conservation and Forestry already is supporting the state’s natural resource economy, improving and supporting existing land-based industries, and streamlining the use of funds.

The Department has continued to provide excellent customer service during the merger process; it is facilitating team work in land-use planning, conservation and economic activity; and it is working with all the many constituencies that have a strong interest in our land-based natural resources.

Maine Conservation Voters fails to acknowledge additional efforts of the LePage Administration as well. Those include:

The Administration’s support for the joint invasive insect purple-trap survey now under way within the ACF department. More than 900 bug traps have been set out and are being collected and examined to determine if the highly destructive emerald ash borer, found in Massachusetts and Connecticut, has entered Maine.

The LePage Administration, through the ACF Commissioner, has initiated a number of category refinements that provided increased opportunities for small fruit growers and farm-to-school programs to qualify for federal research funding in the 2012 round of USDA Specialty Crop Block Grant.

Efforts to grow and market Maine produce from all size of producers continue on a daily basis.

A number of efforts surrounding proper use of pesticides and pesticide monitoring have taken place under the LePage Administration. The Administration, through the ACF department, strongly supported a combined effort of the Maine Farm Bureau and Maine Organic Farmers to require more safe handling training for pesticide use. This is especially important new training for users of organic pesticides.

The LePage Administration supported the repeal of an extremely burdensome and redundant law regarding pesticide-application notification. Stakeholders now are working to reach consensus on a new version that meets the needs of both land managers and those interested in being notified about pesticide application.

The Administration recently appointed the two public members on the Maine Board of Pesticides Control, one a PhD ecologist and the other a licensed arborist.

Regarding the Maine forests, the LePage Administration was particularly supportive of new legislation creating “chop-and-drop” procedures – putting wood in streams to enhance cold water fisheries.

Under the LePage Administration, the consolidation of most Forest Practices Act regulation enforcement has been turned over to the Maine Forest Service from LURC and DEP. This is a significant efficiency for the agencies.

Under this Administration, the Maine Forest Service has begun issuing reports on the conditions of Maine’s spruce/fir and hardwood forests. This is a great benefit to all interested parties, including landowners.

Through the efforts of the LePage Administration, significant reform took place on the management, development and conservation of Maine’s 10.4 million acres of unorganized territories. The Land Use Planning Commission is better positioned today to engage in meaningful, prospective planning for the future of the unorganized and deorganized areas of the State, including Maine’s North Woods. The need for and importance of this forward-looking planning process is recognized in the LUPC’s 2010 Comprehensive Land Use Plan. With the transfer of many permitting responsibilities to the Department of Environmental Protection, the LUPC now will have an opportunity to focus on this important planning.

The recent reform legislation (LD 1798), which the Governor supported, enhances the qualification requirements for county nominees serving on the Land Use Planning Commission and recognizes the importance of the unorganized and deorganized areas of Maine to regions across

the State. An individual nominated by a county to serve on the Commission must have expertise in commerce and industry, fisheries and wildlife, or forestry or conservation issues as they relate to the Commission's jurisdiction. This is a new mandatory requirement. Each of the eight counties with the most acreage within the unorganized and deorganized areas has the opportunity to nominate an individual to serve on the Commission, this citizen board will be diverse and better positioned to represent and be responsive to individuals throughout these areas and across the State.

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News & Events

Do you have old metal pesticide containers? - 09/26/2012

Are there old metal pesticide containers hiding in the back of your storage area?

If there are, please take action! The metal may be weak, and may be leaking or about to leak. Pack them (container and all) into plastic sealable pails (5 gallon paint pails work great) and store them in a safe, dry location. If the pesticides are still legal to apply, use them up as soon as possible, following label directions. If they are no longer legal to use, you may be eligible for free disposal through the BPC obsolete pesticide disposal program http://www.maine.gov/agriculture/pesticides/public/obsolete.htm .

Most metal containers left over from the 1980?s have come to the end of their useful life span. Our inspectors have found many containers weeping product and some which had already leaked out their entire contents. So please check the back corner of your storage and take action to prevent a spill. You don't want to contaminate your storage area or potentially affect the ground water. Just a few minutes of checking around could save many hours of cleanup time in the future.

Henry Jennings, Director

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Beyond Pesticides Daily News Blog

« Proposed Pesticide Ban in Manitoba Charges Forward, Public Input Sought

Proposed Rulemaking in Maine Undermines Comprehensive School Pesticide Reform

28 Sep

(*Beyond Pesticides*, September 28, 2012) Over the last few months, heated debate over toxic pesticide use in school buildings and grounds have dominated discussion in Maine. Unfortunately, new amendments to Maine's school pesticide legislation make no mention of safer, preventive pest management practices, or the use of least-toxic pesticides only as a last resort, setting back efforts to reform pesticide legislation for schools in Maine. Should these new amendments be approved, students in Maine will not receive the same protections as students in other states that have been eliminating unnecessary pesticide use by adopting pest prevention practices and using least-toxic pesticides as the last resort. **Tell the Maine Board of Pesticide Control to keep pesticides out of Maine Schools by today, September 28, 2012**.

Integrated pest management (IPM) is a program of prevention, monitoring, and control that eliminates or drastically reduces the use of pesticides. This is accomplished by utilizing a variety of methods and techniques, including cultural, biological, and structural strategies. It also stipulates the use of least-toxic chemical options only as the last resort. The amendments to **Maine's Chapter 27**, which in 2007 established integrated pest management (IPM) procedures and standards for school buildings and on

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school grounds, do not make provisions for instituting preventive pest management practices nor the use of least-toxic options, which means the officials will still be able to spraying school property with potentially toxic pesticides, contrary to IPM. At the very least, provisions need to provide safe alternatives that will protect students, teachers, and community members alike.

The proposed rulemaking provides wide latitude for discretion on the part of the IPM coordinator and exterminator to determine whether pesticides should be applied to meet cosmetic threshold levels, (allowing pesticide management practitioners (PMPs) to decide whether dandelions are unsightly or spiders are undesirable), contrary to integrated pest management (IPM) practices. IPM should not support the application of pesticides for cosmetic purposes. The new amendments to Chapter 27 will exempt certain indoor pesticide use and mosquito spraying from advanced parental notification, and also exempt agricultural and horticultural educational centers from proper notification and the use of IPM techniques, further exposing students to potentially toxic pesticides.

The proposal allows pesticide management practitioners (PMPs) to decide whether dandelions are unsightly or spiders are undesirable. Most egregious of all, is the pointed lack of concern for personal safety and environmental fate that are intrinsic to herbicide and insecticide application. At the very least, provisions need to provide safe alternatives that will protect students, teachers, and community members alike.

Equally alarming is that the proposed rulemaking would exempt greenhouses, nursery plots and other agricultural educational centers from notification requirements prior to pesticide spraying. The proposal goes on the state “students entering treated areas must be trained as agricultural workers, as defined by the federal Worker Protection Standard.” However, students are not agricultural workers and must not be considered as such. Children are **especially vulnerable** to chemicals due to physiological, metabolic, and behavioral characteristics that differ from adults. Training students as agricultural workers does not mitigate the unique circumstances that surround children’s exposures to pesticides.

Even without the proposed changes, persistent pesticide violations at schools highlight the need to strengthen existing policy. To name just one example, in June 2012 Tripp Middle School of southwestern

Maine was **fined $250 for a violation** that sent five school employees to a medical facility. After school hours, a school employee applied Misty Wasp/Hornet Killer IIb to the school kitchen to control a fly problem. Exposure to Misty Wasp, active ingredient **permethrin**, may lead to headaches, dizziness, anesthetic effects, nausea, respiratory depression. Chronic exposure has other serious health impacts, including central nervous system damage. The following morning employees who intended to clean the application area reported seeing pools of pesticides, smelling chemical fumes and feeling ill. They were examined at a nearby medical facility.

Schools and day care centers must nurture a healthy environment in which children can grow and learn. Children are especially sensitive to pesticide exposure as they take in more pesticides relative to their body weight than adults and have developing organ systems that are more vulnerable and less able to detoxify toxic chemicals. Even at low levels, exposure to pesticides can cause serious adverse health effects. **Numerous studies** document that children exposed to pesticides suffer elevated rates of childhood leukemia, soft tissue sarcoma and brain cancer. Studies also link pesticides to childhood asthma, respiratory problems, and learning disabilities and inability to concentrate. For more information, see Beyond Pesticides' **Children and Schools page**. To see more scientific research on the effects of pesticides on human health, see our **Pesticide-Induced Diseases Database**.

While the U.S. Environmental Protection Agency, the U.S. Department of Agriculture, Centers for Disease Control and Prevention, and the National PTA, among others, recommend schools adopt pesticide-reduction programs, without minimum federal standards, such as those contained in the proposed **School Environment Protection Act**, the protection provided children is uneven and inadequate across the country. SEPA provides basic levels of protection for children and school staff from the use of pesticides in public school buildings and on school grounds by requiring schools to implement a strictly defined IPM system and identify allowed least-toxic materials as a last resort for building management and organic practices for school grounds.

Aside from the serious concerns associated with pesticide use, it also should be noted that it has been repeatedly demonstrated that organic land management, when properly applied, can result in full, healthy, and weed-free turf. Organic land management is not simply a "hands-off" approach in which one is expected to sit back and do nothing to

maintain the area. It requires careful fertility management, monitoring, and examination of weed and pest issues to diagnose problems, determine their source, and alter maintenance practices accordingly. Additionally, it has been shown that this approach can actually **lower maintenance costs** in the long term. Beyond Pesticides maintains numerous resources regarding research and guidance on **organic lawn care**.

Beyond Pesticides, founded in 1981, has worked extensively to promote sound IPM and organic policy in communities throughout the country. To this end, we support the implementation of strong Integrated Pest Management (IPM) policy in Maine and throughout the U.S., although the term IPM has been misused to characterize pesticide-dependent management systems. With proper design and preventive practices, there is little to no need to use any pesticide product. Existing buildings can be repaired and retrofitted and grounds can be planted with tolerant, native species, with nonsynthetic fertilization that supports healthy soils and virtually eliminates the use of pesticides. Join us in our fight against toxic pesticide use!

Take Action: **Let the Maine Pesticide Control Board know that students are not "mini adults" and should be protected from pesticides on school grounds** with strategies that eliminate pesticide dependency.

Send an **email** to the Maine Pesticide Control Board by **TODAY - Friday, Sept. 28,** if you are concerned about pesticides on school grounds.

All unattributed positions and opinions in this piece are those of Beyond Pesticides.

This entry was posted on Friday, September 28th, 2012 at 12:01 am and is filed under Children/Schools, Maine, Take Action. You can follow any responses to this entry through the RSS 2.0 feed. You can skip to the end and leave a response. Pinging is currently not allowed.

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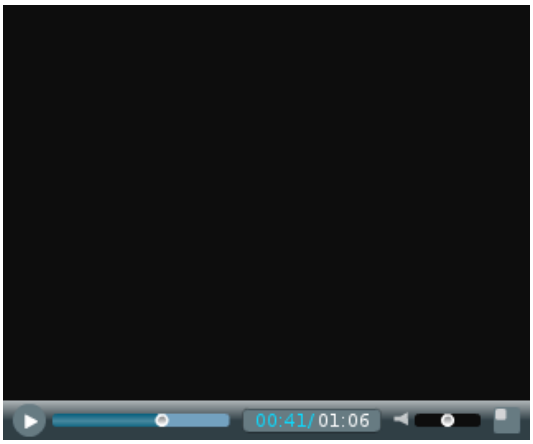
Grubs Destroying Lawns In Central Maine

by Rob Poindexter - September 11th 2012 08:34pm - Read more Local News

Winslow - Janice Stetson has lived in the same house in Winslow for the past 50 years. A few months ago she noticed her lawn was being destroyed one patch at a time. "I don't know how you're ever going to get grass to grow back here again," she said Tuesday.



Janice Stetson says she's seen the culprits in action. They're wild turkeys. "I've seen probably around, well close to 30," Stetson said. "They're big when they're scratching but their legs just look so small you can't believe they can do this much damage."

According to Keel Kemper, a Wildlife Biologist with the Maine Department of Inland Fisheries and Wildlife, Janice Stetson is not alone. He says his office has fielded around 20 complaints in the past few weeks from people all over central Maine. "From towns as diverse as Monroe, Manchester, Readfield."

Kemper says the problem isn't so much the turkeys digging, it's what they're digging for. Grubs. "We're finding them on the order of about 3 grubs per square meter which is certainly a very high protein source," Kemper said. "The grubs are attacking the root structure of the grass which is why the grass is brown."

Turkeys may be the least of people's problems. The grubs also attract skunks, raccoons, and black bears. One homeowner in Sidney recently reported seeing a black bear digging up their lawn. "The bear actually peels back the sod and almost rolls it up like a rolled up piece of sod," Kemper said. "Whereas the skunk is digging a small hole, the raccoons are digging a small hole, the turkey is scratching, but the bear is very diagnostic. The turf is literally rolled back."

The solution Keeler says is to buy grub killer at your local hardware store. "If you eliminate the food source, then the problem is going to be eliminated. The wildlife coming in is the symptom of the underlying problem which is this phenomenal grub problem."

Unfortunately for Janice Stetson that's a lot of grub killer when you consider she has about 20 acres of land that's under attack. "Well I would probably have to buy out the company or they'd have to move the

company here and do the manufacturing right here and use all they manufacture right here on this property."

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BANGOR DAILY NEWS

New fruit fly a ‘game-changer’ for Maine growers

By Kathryn Skelton, Sun Journal
Posted Sept. 26, 2012, at 6:22 a.m.

It’s the bug to watch: Less than one-sixteenth of an inch long, the ladies fly around with serrated saws, the men with dots on their wings.

Last September the state caught the spotted wing drosophila here for the first time, by the half-dozens.

This summer, less than a year later, Monmouth traps bagged up to 3,000 a week.

The fruit fly newcomer would be an annoyance like its cousins if not for one major difference, according to experts: The spotted wing drosophila cuts a small hole in ripening fruit to lay eggs. The fruit, to the naked eye, can look fine for another day or two.

“If this was just another fruit fly that only attacked rotten fruit, we’d say no big deal,” said David Handley, vegetable and small fruit specialist for the University of Maine Cooperative Extension, based at Highmoor Farm in Monmouth.

“Because you’re picking fruit that looks perfectly sound and you put it on the kitchen shelf and the next morning you come out there’s maggots swimming in a soup, you’re going to be an unhappy customer and you’re not going to go visit that grower again,” Handley said.

For blueberry growers, its arrival could be particularly worrisome. Growers are used to spraying crops up to two times a season, but keeping the spotted wing drosophila at bay could mean spraying twice a week.

“This could have huge impacts on the wild blueberry industry,” Handley said. “This is a game-changer.”

He’s part of a team that received a $50,000 federal grant to study the fly next year.

At a recent regional meeting of small fruit experts in New York, “this was the hot topic,” said Eric Sideman, crop specialist for the Maine Organic Farmers and Gardeners Association. “Everyone is applying for money for grants to do research on this topic. Extension people are out visiting farms all over to assess the damage and get a handle on what kind of damage there is. It’s so new.”

The fruit fly, native to northern Asia, was first spotted in California in 2008, according to Jim Dill, a UMaine Cooperative Extension pest management specialist and professor of biological sciences.

Last year in the wake of Hurricane Irene, Dill set traps around raspberry fields, red cups with apple cider vinegar and apple juice and yeast concoctions.

“A lot of times, things come in after hurricanes,” he said.

Dill found Spotted Wing Drosophila in small numbers at four Maine locations. This year, he started trapping around strawberries in June. The flies didn’t bother that crop. Numbers didn’t start to grow, and grow, until late July.

“We’re assuming the winter does knock the population back and it takes awhile to build up, so the late-season small fruit crops are the ones that are of concern: blueberries, fall raspberries, blackberries,” Dill said.

Add chokecherries, elderberries, peaches and grapes to that list. The flies don’t appear to bother cranberries, apples or bananas.

The female spotted wing drosophila has a serrated egg-depositor that saws into soft-skinned, ripening fruit. It can lay 300 eggs during its 14-day lifespan.

“You can see how the population would explode,” Handley said. “In each of those eggs there’s a little white maggot in one of your berries, and they don’t stop there.”

One very early estimate from the wild blueberry industry: The flies could affect up to 20 percent of the crop, he said.

The extension plans to survey farmers in early October for a more accurate damage count. Blueberries in Maine are a multimillion-dollar industry. It’s too early to know the effect on growers and prices.

“Raspberries are a fairly expensive fruit, anyway,” Dill said. “Now, if you’re spraying twice a week it might double the cost of them.”

He has heard growers say they plan to hang it up.

Sprays exist for both traditional and organic farmers but brands have to be rotated with care; the fly can quickly develop resistance.

Dill said that he has found spotted wing drosophila this year everywhere he has set traps. The next year will be spent on research: Do some sprays work better than others? Could small netting work? Should growers harvest earlier? Is there a parasite that might develop a taste for the fly?

“As a grower, do you really want your income stream to stop at the end of July?” Handley said. “It’s pretty hard to make it as a farmer that way, unless you’re growing things that this thing won’t take an interest in.”

He added, “We don’t have a good answer for this one yet. We’re kind of in the position, unless you’re willing to let the crop go, you’ve got to protect it. Hopefully, research will send us down a road where we can find a good answer, but it’s pretty dark at the end of the tunnel right now.”

Dill’s best advice for consumers: Refrigerate your produce.

Traps can be made at home, he said, with a soda bottle, a piece of paper rolled up as if to create a funnel, a little apple cider vinegar and a few drops of detergent.

KENNEBEC JOURNAL

PRINT THIS

September 26

Invasive fruit fly bad news for Maine blueberries

The Associated Press

MONMOUTH — Maine farmers are seeing a sudden increase in the numbers of an invasive fruit fly, which is potentially bad news for the state's blueberry industry.

click image to enlarge

This July 2012 photo released by the University of Maine Cooperative Extension Service shows a male, left, and female, right, spotted wing drosophila, an invasive fruit fly. The insect was first detected in Maine in small numbers in the summer of 2011. But during the summer of 2012, traps in Monmouth, Maine, bagged thousands per week. (AP Photo/University of Maine Cooperative Extension Service, Griffin Dill)

AP

The spotted wing drosophila, a native of northern Asia, was first detected in Maine last summer in small numbers. This summer, traps in Monmouth have bagged thousands per week.

"This could have huge impacts on the wild blueberry industry," said David Handley, who specializes in vegetables and small fruits for the University of Maine Cooperative Extension. "This is a game-changer."

Instead of attacking rotten fruit, the females cut small holes in ripening fruit to lay eggs. The fruit looks fine for a day or two afterward but quickly becomes inedible. A consumer may cut into a perfectly good looking

fruit, and find tiny maggots inside, Handley told the Sun Journal of Lewiston.

Fighting the insect could cost farmers, who may have to spray pesticides twice a week.

Blueberries are the biggest concern. Maine is the nation's No. 1 producer of wild blueberries, with 60,000 acres of fields. The state's blueberry crop has averaged 80 million to 85 million pounds a year for the past five years, and this year the harvest is projected to reach 90 million to 95 million pounds.

The fruit fly, which is one-sixteenth of an inch long, was first spotted in California in 2008, said Jim Dill, a pest management specialist for the UMaine Cooperative Extension.

In the wake of Hurricane Irene last year, Dill set out traps and discovered the spotted wing drosophila in small numbers at four locations. This year, he set out traps early and found nothing in June. But the fruit flies began reappearing in late July, putting late-season crops at risk.

Those crops include blueberries, fall raspberries and blackberries, as well as chokecherries, elderberries, peaches and grapes. The flies don't appear to bother cranberries, apples or bananas.

At a recent regional meeting of small-fruit experts in New York, the fruit fly was a hot topic, and many scientists were applying for research grants, said Eric Sideman, crop specialist for the Maine Organic Farmers and Gardeners Association. "Extension people are out visiting farms all over to assess the damage and get a handle on what kind of damage there is," Sideman said. "It's so new."

Handley is part of a team that received a $50,000 federal grant to study the fly next year. The extension plans to survey farmers in early October for a more accurate damage assessment.

Portland Press Herald

October 14

Maine Gardener: Winged interloper threatens Maine's hardwoods

By TOM ATWELL

Maine has a new pest that defoliates and has the potential to kill the state's hardwood trees.

click image to enlarge

Male winter moths are light brown to tan and have four fringed wings. Females are flightless, with very small wings, and gray.

Shutterstock.com photo

The winter moth has already established colonies in Harpswell and Vinalhaven, and could expand from those two coastal communities.

"The winter moth is a little inchworm caterpillar that is already causing a major problem in eastern Massachusetts," said Charlene Donahue, a forest entomologist with the Maine Forest Service. "The infestation just started this spring in those two communities, and is centered in the populous parts of town. It has the potential of having a significant impact on the hardwood trees of Maine."

It also could affect food production because it attacks blueberries, cranberries and apple trees.

Donahue said the winter moth is originally from Europe, but she believes it arrived in Harpswell and Vinalhaven -- communities with a large population of summer houses -- when people from eastern Massachusetts dug up plants from their winter homes and brought them to Maine. With those plants came cocoons of the winter moth.

The moth's first appearance in North America was in the 1930s, in Nova Scotia. In addition to

Massachusetts, colonies have also been found in coastal British Columbia.

And while the moths have been found only in coastal locations, the eggs can survive really cold temperatures, so they could migrate inland.

Mainers are most likely to notice the winter moth in November and December, when the males congregate around outside lights when the lights are turned on after dark. The moths are light brown to tan, and have four fringed wings.

Females are flightless, with very small wings, and gray. They emit a sex pheromone that attracts the males for mating. The females then climb up hardwood trees, lay their eggs and die. The eggs will hatch in spring, producing the inchworm caterpillars.

Donahue said the residents of both Vinalhaven and Harpswell have been wonderful to work with, and have stopped giving any plants to people outside their area.

Cyndy Bush, president of the Harpswell Garden Club, said she and other people interested in fighting the winter moth will be holding informational meetings about the problem from 6 to 8 p.m. every Monday in October at the Harpswell Land Trust building on Route 123.

Bush said the winter moth has been confirmed only in the 400 acres on Harpswell Neck along Route 123, but that Jeff Gillis of WellTree plans to band trees in other neighborhoods where he thinks there might be some populations.

Donahue said conventional wisdom says that a hardwood tree can die after being defoliated three or four years in a row. Practically, however, it could take longer to eliminate trees in an infected area because the same trees are not likely to be defoliated every year.

And, she said, there are things that homeowners can do to control the winter moth, even though those efforts will not eliminate the problem.

"They can try banding the trees in their yard," she said. By putting sticky bands around the trees, the flightless females climbing the trunks will get stuck and be unable to lay their eggs.

There are a few problems with banding, though.

"If the count gets too high and the band gets loaded with moths, other moths can just walk over them," Donahue said. "And the eggs that get laid on forest trees can balloon on silk (sort of like a parachute) and re-infest trees that are banded."

Bush said her group will be selling banding kits at its Monday meetings and also showing people how they can make their own bands with duct tape and Tanglefoot.

In the spring, Donahue said, people can use horticultural oil on hardwoods, suffocating the eggs so they don't hatch.

Donahue said state officials don't recommend chemical spraying to kill the moths, especially on Harpswell Neck, because it is a sensitive environmental area with a lot of lobstering. She said Bt, an organic treatment, works on young larvae, but not on older ones.

"There are biological controls," Donahue said. "There is one that has been used very effectively, first in Nova Scotia in the 1960s and '70s. It's a parasitic fly, and they have not had a winter moth problem there since."

The parasitic fly has also been used effectively in British Columbia, and has been introduced in Massachusetts.

Donahue said the U.S. Department of Agriculture, the U.S. Forest Service, the University of Massachusetts and the University of Maine have all agreed to work together on the Maine winter moth problem.

Some of the parasitic flies will be released in Harpswell next spring and, Donahue hopes, in Vinalhaven the spring after that.

"It is not an immediate solution, and not enough to eliminate the winter moth, but they are making an impact on the population elsewhere," she said.

Donahue said the Maine Forest Service will be doing surveys in other parts of the state to see if winter moths are appearing elsewhere.

If people see a lot of moths flying around outside lights in November or December, they should contact her at 287-3244 or charlene.donahue@ maine.gov. They also can contact other offices, such as the Pest Management Office in Orono, because they all share information.

And people can contact Bush about the Harpswell efforts at bushcyndy@aol.com.

There is a catch, however. Maine has a native moth, closely related to the winter moth, called the Bruce spanworm that also flies in October and November. And the spanworm has been increasing in population recently.

So, while the moths you see in November might not be the ones that are the big concern, Donahue wants people to notify them anyway so they do not miss any winter-moth populations.

Tom Atwell has been writing the Maine Gardener column since 2004. He is a freelance writer gardening in Cape Elizabeth and can be contacted at 767-2297 or at:

tomatwell@me.com

BANGOR DAILY NEWS

Parasitic flies to be deployed in Harpswell to kill invasive moths

Ecology of Commanster

Parasitic flies like the one pictured here in a Wikipedia Commons photograph by James Lindsey of Ecology of Commanster will be released into the forests of Harpswell in the spring in an effort to control the invasive winter moth population.

By Dylan Martin, The Forecaster
Posted Oct. 04, 2012, at 9:09 p.m.

HARPSWELL, Maine — Next spring, armies of parasitic flies will lay siege on the winter moth, an invasive species that threatens the town's forests.

State entomologist Charlene Donahue said this is one of the efforts the Maine Forest Service is taking to control the winter moth population, in coordination with the U.S. Forest Service, the University of Maine and the University of Massachusetts.

Signs of the winter moth caterpillar were first reported in May — a grave concern because of the massive devastation the moth can cause in forests.

"They've been here for some time, because of the amount of acreage that's already affected and how severe it is in some places," Donahue said in July.

Representatives from the agencies and universities visited Harpswell forests on Sept. 28 to decide where to place devices that will monitor the winter moth population and the general conditions of the forest, Donahue said.

He said the state and federal agencies will seek grants to fund prevention, monitoring and research efforts.

The University of Maine will monitor the effects winter moth has on the surrounding environment in Harpswell, Donahue said. The University of Massachusetts already has helped the Maine Forest Service positively identify the winter moth caterpillar.

To control the winter moth population, parasitic flies — known as Cyzenis albicans — will be released into the forest.

Joseph Elkinton, a professor of environmental conservation at University of Massachusetts, said the flies will lay eggs on leaves in the spring, which the winter moth caterpillars will eat. The eggs will then hatch within the caterpillars, killing them before they create cocoons.

The newly hatched flies will then stay in the cocoons as shelter during the winter and emerge to lay eggs on leaves and begin the cruel cycle once again.

Elkinton said that because the flies rely on the caterpillar cocoons for winter survival, the fly population will naturally decrease when the winter moth does.

Donahue said that decreasing the winter moth population will take several years, but the species will never be fully exterminated.

“The winter moth won’t go away. It’s here,” he said. “This will just create an equilibrium so the impact is not as bad.”

A Generation in Jeopardy

How pesticides are undermining our children's health & intelligence

OCTOBER 2012

PESTICIDE ACTION NETWORK NORTH AMERICA

Pesticide Action Network North America

Pesticide Action Network North America (PAN North America) works to replace the use of hazardous pesticides with ecologically sound and socially just alternatives. As one of five PAN Regional Centers worldwide, we link local and international consumer, labor, health, environment and agriculture groups into an international citizens' action network. This network challenges the global proliferation of pesticides, defends basic rights to health and environmental quality, and works to ensure the transition to a just and viable society.

Acknowledgements

This report would not have been possible without the dedicated and careful work of hundreds of scientists at academic institutions in the U.S. and around the world. The contribution of these researchers to our collective understanding of the links between pesticide exposure and children's health is truly invaluable.

A Generation in Jeopardy also reflects the efforts and expertise of many individuals both within Pesticide Action Network and among our partner organizations and institutions. Susan Kegley, Heather Pilatic, Linda Wells and Kathryn Gilje provided useful comments and direction as the report was being developed and finalized. Several academic reviewers representing expertise in neurodevelopmental and carcinogenic impacts of pesticides on children's health provided substantive comments. Laura Cossette, Kristen Parks and Maria Reyna provided valuable research assistance.

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The authors bear responsibility for any factual errors. Recommendations and views expressed are those of Pesticide Action Network North America, and do not necessarily represent the views of our funders and supporters.

Special thanks to our colleagues at Californians for Pesticide Reform (CPR), Tracey Brieger and Sarah Aird, for strategic thinking and input as the report was being conceived and drafted, as well as assistance with the report's release and dissemination. PAN North America is a member of CPR, and is releasing this report in partnership with the coalition. The CPR coalition includes over 185 public interest organizations committed to improving and protecting public health, sustainable agriculture, and environmental quality by building a movement across California to change statewide pesticide policies and practices. See www.PesticideReform.org or call 510-788-9025 for more information about CPR's statewide work.

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A Generation in Jeopardy

How pesticides are undermining our children's health & intelligence

Kristin S. Schafer, MA
Emily C. Marquez, PhD

with
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Kendra Hutchens, PhD Candidate
Margaret Reeves, PhD
Meriel Watts, PhD, PAN Asia-Pacific

October 2012
Pesticide Action Network North America

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A Generation in Jeopardy

Executive Summary

Children today are sicker than they were a generation ago. From childhood cancers to autism, birth defects and asthma, a wide range of childhood diseases and disorders are on the rise. Our assessment of the latest science leaves little room for doubt: pesticides are one key driver of this sobering trend.

As the recent President's Cancer Panel reports, we have been "grossly underestimating" the contribution of environmental contamination to disease, and the policies meant to protect us have fallen far short. Nearly 20 years ago, scientists at the National Research Council called for swift action to protect young and growing bodies from pesticides.[1] Yet today, U.S. children continue to be exposed to pesticides that are known to be harmful in places they live, learn and play.

This report reviews dozens of recent studies that examine the impact of pesticides on children's health. Our analysis reveals the following:

- **Compelling evidence now links pesticide exposures with harms to the structure and functioning of the brain and nervous system.** Neurotoxic pesticides are clearly implicated as contributors to the rising rates of attention deficit/hyperactivity disorder, autism, widespread declines in IQ and other measures of cognitive function.
- **Pesticide exposure contributes to a number of increasingly common health outcomes for children, including cancer, birth defects and early puberty.** Evidence of links to certain childhood cancers is particularly strong.
- **Emerging science suggests that pesticides may be important contributors to the current epidemic of childhood asthma, obesity and diabetes.**
- **Extremely low levels of pesticide exposure can cause significant health harms,** particularly during pregnancy and early childhood.

Children's developing bodies are particularly vulnerable to the health harms of pesticides.

Prioritizing children's health requires real change

As a nation, we value the wellbeing of our children. In addition to our natural urge to protect what we love, we know that at a societal level their successful development is key to a vibrant, secure future. Poll after poll shows more than 80 percent of Americans consider healthy children a top priority. We must line up our practice and policies with these values.

Many communities across the country have stepped up to create local or state policies to protect children from pesticide exposure. From pesticide-free schools, parks and playgrounds to protective buffer zones in agricultural areas, locally-driven actions are leading the way to healthier childhood environments.

But to ensure protection of all children from the harms of pesticides, we must dramatically reduce the use of these chemicals nationwide. An estimated 1.1 billion

pounds of pesticides are used in the U.S. every year, with more than 20,000 products on the market. This volume of use is undermining the health of the next generation and, as the science demonstrates, derailing development of our children's potential.

Scientists have understood for decades that children are particularly vulnerable to the harms of pesticide exposure. Quickly growing bodies take in more of everything; they eat, breathe and drink more, pound for pound, than adults. As physiological systems undergo rapid changes from the womb through adolescence, interference from pesticides and industrial chemicals—even at very low levels—can derail the process in ways that lead to significant health harms.

Reducing overall pesticide use would not only limit children's exposure during their most vulnerable years, it would also lower pesticide levels in the bodies of men and women of childbearing age—protecting current and future generations in one fell swoop. Those pesticides most harmful to children should be first on the list.

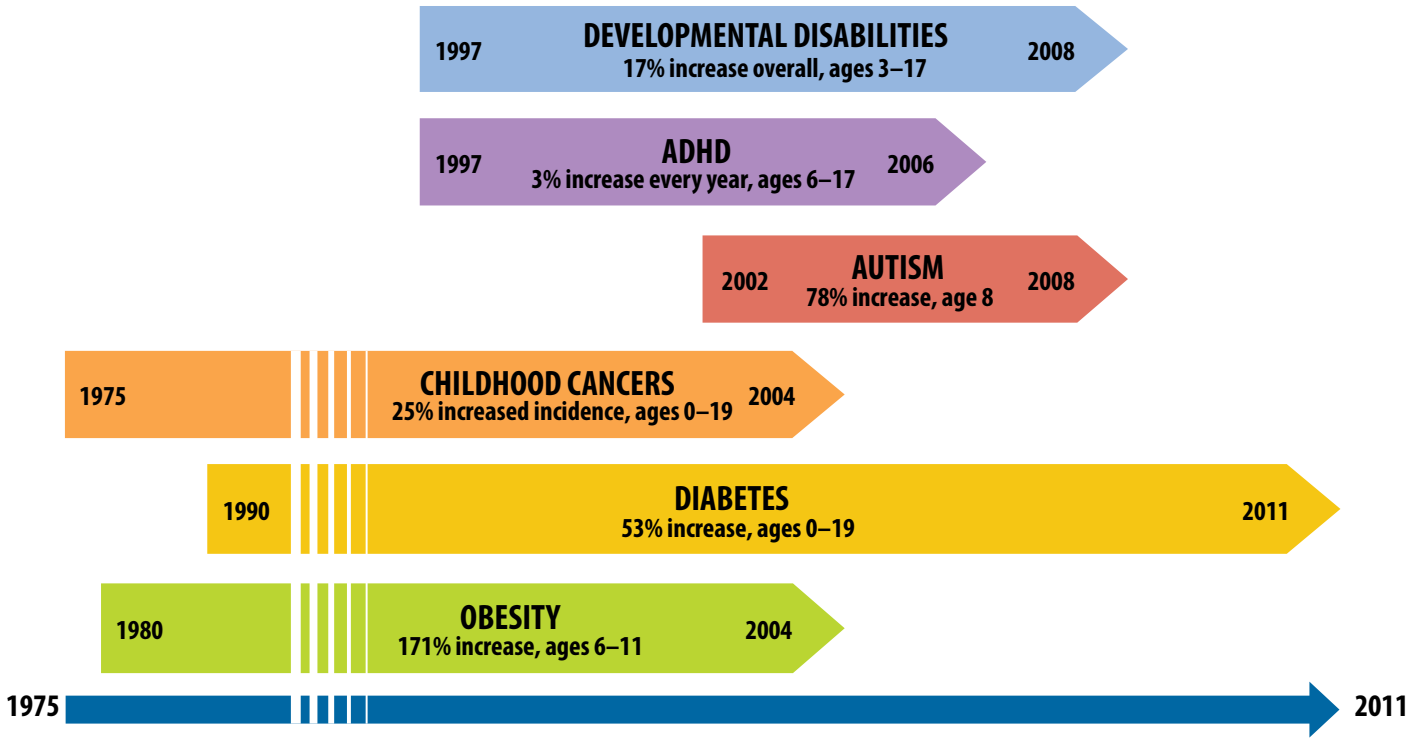
While we must each do what we can with food choices and decisions about home pest control, we cannot accomplish this goal at an individual household level. Policy change is required.

Effective policies urgently needed

To protect children from the health harms of pesticides, policymakers need much more effective tools. We believe change is most urgently needed in the way decisions are made about these three questions:

- Which pesticides are used in agriculture?
- Which pesticides are used in places children live, learn and play?
- How are farmers supported as they reduce reliance on pesticides?

Figure 1: Children's Health Harms on the Rise, 1975–2011*



Statistics show steady increases in many childhood diseases and disorders over the past 30 years. Those highlighted here are just some of the health harms on the rise.
Sources: see endnotes 4, 13,24, 52 and 94.

* With the exception of cancer, all other data are prevalence data, i.e., representing the U.S. population or based on data at several sites within the U.S. Prevalence is total number of cases in a population at a given time, while incidence is a measure of the number of new cases per year. The autism data are from 14 sites in the Autism and Developmental Disabilities Monitoring Network and are not considered fully representative of the U.S. population. The 1990 diabetes data are for type 1 only (type 2 being extremely rare among children at that time), while 2011 data include both type 1 and 2. Prevalence of type 2 diabetes among children is difficult to determine for various reasons, including difficulty of diagnosis.

We recommend the following policy changes in each of these arenas:

1. Prevent the pesticide industry from selling agricultural products that can harm children's health

- *Take swift action on existing pesticides:* If studies find a pesticide to be a neurodevelopmental or reproductive toxicant, endocrine disruptor or human carcinogen—*and* it has been measured in humans, in schools or homes, or as residues on food or in drinking water—EPA should target the pesticide for rapid phaseout, triggering USDA resources to assist rapid farmer transitions to safer pest control methods.

- *Block harmful new pesticides:* EPA should not approve any new pesticide that scientific studies suggest is a neurodevelopmental or reproductive toxicant, endocrine disruptor or human carcinogen—including short-term "conditional" registrations.

- *Prevent harmful low-level exposures:* EPA should act on existing evidence that exposures to endocrine disrupting pesticides pose a particular danger to developing children; the long-delayed endocrine disruptor screening program (EDSP) should be swiftly implemented.

2. Protect children where they live, learn & play

- *Kid-safe homes, daycares & schools:* EPA should withdraw approval of existing pesticide products and not approve new pesticides for use in homes, daycare centers or schools when scientific evidence indicates the chemicals are possible neurodevelopment or reproductive toxicants, endocrine disruptors or human carcinogens.

- *Safer parks & playgrounds:* State and local officials should enact policies requiring that all public playgrounds, playing fields and parks be managed without using pesticides that studies show are harmful to children's health.

Table 1: Pesticides & Childhood Health Harms

		Childhood Health Harms*					
		Brain & nervous system impacts	Childhood cancers	Birth defects	Reproductive & developmental harms	Metabolic effects (e.g., obesity, diabetes)	Immune disorders, asthma
Pesticides	**Herbicides** 442 million lbs † *e.g., atrazine, glyphosate, 2,4-D*	✓	✓	✓	✓		✓
	Insecticides 65 million lbs *e.g., chlorpyrifos, malathion, permethrin*	✓	✓		✓	✓	✓
	Fungicides 44 million lbs *e.g., mancozeb, chlorothalonil*	✓	✓	✓	✓		✓
	Fumigants 108 million lbs *e.g., metam sodium, methyl bromide, chloropicrin*	✓	✓		✓		

Researchers have linked exposure to various pesticides with a range of childhood health harms. A ✓ indicates that links to the health harm are particularly well supported by scientific evidence.

* See Appendix A and www.pesticideinfo.org

† 2007 use estimates, refers to "active ingredient." From *Pesticide Industry Sales & Usage, 2006 and 2007 Market Estimates,* U.S. EPA, Washington, DC, Feb 2011. See www.epa.gov/opp00001/pestsales/07pestsales/market_estimates2007.pdf. Table 3.4.

3. Invest in farmers stepping off the pesticide treadmill

- *Corral resources for farmers:* Federal and state officials should mobilize and coordinate existing resources to help farmers adopt well-known, effective pest management strategies that reduce reliance on pesticides.

- *Increase investment in innovative farming:* Congress should authorize significant funding for programs supporting farmers' adoption of sustainable practices that reduce use of harmful pesticides.

- *Set use reduction goals:* EPA and USDA should set specific and aggressive national pesticide use reduction goals, focusing first on pesticides that studies show to be harmful to children. To track progress toward this goal, farmers should work with applicators and pest control advisors to report their pesticide use to a nationally searchable database.

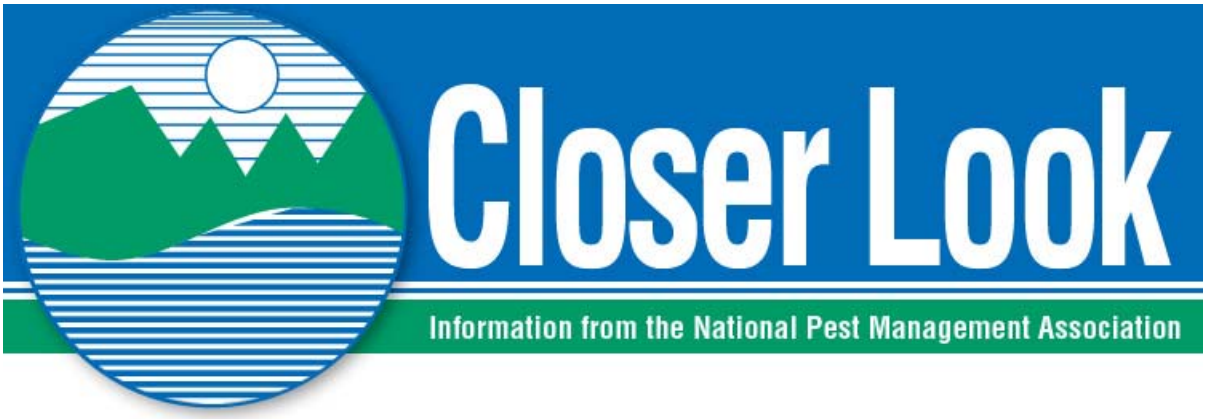
- *Source for children's health:* Food distributors should require that their suppliers limit use of pesticides that harm children's health.

These proposals are all common-sense measures in the face of clear evidence that our children's wellbeing is at risk. It's time to muster the political will to prioritize the health of our children, grandchildren and future generations.

Even at very low levels, pesticide exposure can derail development and undermine the ability to learn.

Schlein, Paul B

From: National Pest Management Association <npma@pestworld.org>
Sent: Thursday, October 11, 2012 1:08 PM
To: AF-Pesticides Internet
Subject: Response to Pesticide Action Network of North America's Report on Effects of Pesticides on Children's Health & Intelligence



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Response to Pesticide Action Network of North America's Report on Effects of Pesticides on Children's Health & Intelligence

Overview and Speaking Points

Prepared for the National Pest Management Association
By the Professional Pest Management Alliance
October 10, 2012

Background

On October 10, 2012, the Pesticide Action Network of North America (PANNA), an organization whose self-proclaimed mission is to "replace the use of hazardous pesticides with ecologically sound and socially just alternatives," published a new report ("A Generation in Jeopardy: How Pesticides Are Undermining Our Children's Health and Intelligence") detailing a review of dozens of studies that claim to examine the impact of pesticides on children's health, and calling for effective pesticide regulations and policy changes to phase out the use of pesticides on agricultural products and in places where children live, learn and play.

PANNA **claims** the analysis revealed the following:

- Evidence linking pesticide exposures with harm to the

structure and functioning of the brain and nervous system.

- Pesticide exposure contributes to a number of increasingly common health outcomes for children, including cancer, birth defects and early puberty.
- Emerging science suggests that pesticides may be important contributors to the current epidemic of childhood asthma, obesity and diabetes.
- Extremely low levels of pesticide exposure can cause significant health harms, particularly during pregnancy and early childhood.

The findings of this study were published by several outlets, largely online, on October 10, including The San Francisco Chronicle, The Fresno Bee, BusinessWeek, ScienceDaily and Bakersfield Californian websites. Due to the findings and our experience with previous studies of this nature, we are closely monitoring this story to see whether it receives further attention by national and other local media outlets and generates inquiries from customers and/or employees.

Click here to view the full report

Statement

"NPMA is aware of the findings of this report and the studies citied within, as they have been published over a period of several years. We cannot speak to the credibility of the studies examined in this report. However, the science the Environmental Protection Agency (EPA) uses to evaluate products is sound. Pest management products used within the industry are registered by the EPA after it has reviewed extensive heath and safety data and made a determination that the product meets the federal government's tough health standards. Consumers should feel confident that the application of these products is safe to both family and home when applied correctly by qualified and licensed pest professionals as directed on the product label.

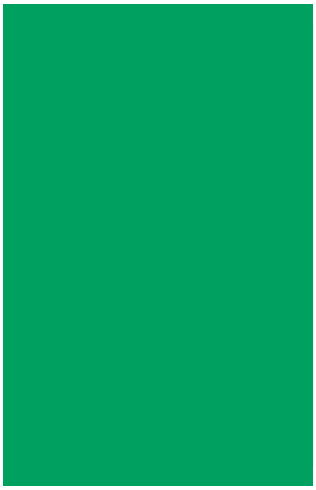
The professional pest control industry's primary concern is for the health, safety and protection of its customers and the American public. Common household pests pose significant health risks including the transmission of bacteria and disease, and can exacerbate respiratory issues such as allergies and asthma. As such, pest control should not be taken lightly, but rather it should be handled in partnership with a licensed pest professional to properly identify, assess and treat the infestation. Consumers should discuss Integrated Pest Management solutions with their pest professional."

Speaking Points

- The professional pest management industry can confidently say that professional products used in the treatment of residential pest infestations are rigorously reviewed and registered by the Environmental Protection Agency (EPA) to be used by certified applicators for pest management. The National Pest Management Association works closely with the EPA to ensure that all products used in pest management practices are consistently reviewed, re-registered and provided with accurate and comprehensive labeling for use.
- If consumers are concerned by the issues raised by the PANNA report related to the products used by pest control companies in their homes, offices and children's schools and daycares, the National Pest Management Association encourages them to discuss these concerns with their pest professional as well as the proactive and preventative measures they can take to minimize risks, including risks posed by pests. More importantly, by working with a pest professional, consumers can ensure that a pest problem is properly identified and treated effectively and efficiently.
- Professional pest management plays a vital role in protecting public health and property. Household pests pose serious risks to our health by spreading bacteria and disease, contaminating food and causing respiratory problems such as asthma. Some household pests can also severely damage property. Wood destroying insects eat away at a home's structural stability and rodents gnaw away at drywall and electrical wires, posing a serious risk for fires.

Additional background regarding the study

- None of the studies cited in the report are new, nor do they present any new findings that our industry hasn't seen before.
- While there is a focus on products used by the professional pest management industry, the report significantly focuses on agricultural pesticides.
- The report also points to studies done in other countries as well as effects of DDT, which has not been in use in the U.S. since 1972.



- Several health problems cited in the report such as childhood obesity, autism and asthma have been studied by numerous entities concluding that a number of factors are responsible for a rise in these diseases over the past several decades.
    - For example, the rise in children's asthma has been attributed to pollution and cockroach allergens in a recent Columbia University study.

Forward to a friend.

4 September 2012, Vol 157, No. 5>

Reviews | 4 September 2012

Are Organic Foods Safer or Healthier Than Conventional Alternatives?: A Systematic Review

Crystal Smith-Spangler, MD, MS; Margaret L. Brandeau, PhD; Grace E. Hunter, BA; J. Clay Bavinger, BA; Maren Pearson, BS; Paul J. Eschbach; Vandana Sundaram, MPH; Hau Liu, MD, MS, MBA, MPH; Patricia Schirmer, MD; Christopher Stave, MLS; Ingram Olkin, PhD; and Dena M. Bravata, MD, MS

[+] Article and Author Information

See Also:
Correction: Are Organic Foods Safer or Healthier Than Conventional Alternatives?

Ann Intern Med. 4 September 2012;157(5):348-366

Background: The health benefits of organic foods are unclear.

Purpose: To review evidence comparing the health effects of organic and conventional foods.

Data Sources: MEDLINE (January 1966 to May 2011), EMBASE, CAB Direct, Agricola, TOXNET, Cochrane Library (January 1966 to May 2009), and bibliographies of retrieved articles.

Study Selection: English-language reports of comparisons of organically and conventionally grown food or of populations consuming these foods.

Data Extraction: 2 independent investigators extracted data on methods, health outcomes, and nutrient and contaminant levels.

Data Synthesis: 17 studies in humans and 223 studies of nutrient and contaminant levels in foods met inclusion criteria. Only 3 of the human studies examined clinical outcomes, finding no significant differences between populations by food type for allergic outcomes (eczema, wheeze, atopic sensitization) or symptomatic *Campylobacter* infection. Two studies reported significantly lower urinary pesticide levels among children consuming organic versus conventional diets, but studies of biomarker and nutrient levels in serum, urine, breast milk, and semen in adults did not identify clinically meaningful differences. All estimates of differences in nutrient and contaminant levels in foods were highly heterogeneous except for the estimate for phosphorus; phosphorus levels were significantly higher than in conventional produce, although this difference is not clinically significant. The risk for contamination with detectable pesticide residues was lower among organic than conventional produce (risk difference, 30% [CI, −37% to −23%]), but differences in risk for exceeding maximum allowed limits were small. *Escherichia coli* contamination risk did not differ between organic and conventional produce. Bacterial contamination of retail chicken and pork was common but unrelated to farming method. However, the risk for isolating bacteria resistant to 3 or more antibiotics was higher in conventional than in organic chicken and pork (risk difference, 33% [CI, 21% to 45%]).

Limitation: Studies were heterogeneous and limited in number, and publication bias may be present.

Conclusion: The published literature lacks strong evidence that organic foods are significantly more nutritious than conventional foods. Consumption of organic foods may reduce exposure to pesticide residues and antibiotic-resistant bacteria.

Primary Funding Source: None.

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The Salt

Why Organic Food May Not Be Healthier For You

Categories: Food For Thought

03:22 am

September 4, 2012

by ALLISON AUBREY and DAN CHARLES

AP

A shopper surveys the produce at Pacifica Farmers Market in Pacifica, Calif., in 2011.

Yes, organics is a $29 billion industry and still growing. Something is pulling us toward those organic veggies that are grown without synthetic pesticides or fertilizers.

But if you're thinking that organic produce will help you stay healthier, a new finding may come as a surprise. A new study published in the Annals of Internal Medicine finds scant evidence of health benefits from organic foods.

"There's a definite lack of evidence," says researcher Crystal Smith-Spangler at Stanford University School of Medicine, especially when it comes to studies of people.

She and her colleagues collected 200 peer-reviewed studies that examined differences between organic and conventional food, or the people who eat it.

A few of these studies followed people who were eating either organic or conventional food and looked for evidence that the choice made a difference in their health.

One study, for instance, looked at whether eating organic food while pregnant would

influence the likelihood of eczema and other allergic conditions among children, and another looked at whether eating organic meat would influence the risk of a Campylobacter infection, a bacterial food-borne illness. When the researchers looked at the body of evidence, they found no clear benefits. But they say more research is needed.

It's important to note, though, that such studies have a really hard time uncovering subtle effects of our environment, or what we eat, on our health. Too many other powerful influences get in the way. Also, these studies only followed people for a very short time — about two years or less. That's hardly enough time to document any particular health benefit.

Most of the studies included in this collection looked at the food itself — the nutrients that it contained as well as levels of pesticide residues or harmful bacteria.

As you might expect, there was less pesticide contamination on organic produce. But does that matter? The authors of the new study say probably not. They found that the vast majority of conventionally grown food did not exceed allowable limits of pesticide residue set by federal regulations.

Some previous studies have looked at specific organic foods and found that they contain higher levels of important nutrients, such as vitamins and minerals. We've reported on one particularly ambitious experiment, which is supposed to go on for a hundred years, comparing plots of organic and conventional tomatoes. After 10 years, the researchers found that tomatoes raised in the organic plots contained significantly higher levels of certain antioxidant compounds.

But this is one study of one vegetable in one field. And when the Stanford researchers looked at their broad array of studies, which included lots of different crops in different situations, they found no such broad pattern.

Here's the basic reason: When it comes to their nutritional quality, vegetables vary enormously, and that's true whether they are organic or conventional. One carrot in the grocery store, for instance, may have two or three times more beta carotene (which gives us vitamin A) than its neighbor. That's due to all kinds of things: differences in the genetic makeup of different varieties, the ripeness of the produce when it was picked, even the weather.

So there really are vegetables that are more nutritious than others, but the dividing line between them isn't whether or not they are organic. "You can't use organic as your sole criteria for judging nutritional quality," says Smith-Spangler.

Of course, people may have other reasons for buying organic food. It's a different style of agriculture. Organic farmers often control pests by growing a greater variety of crops. They increase the fertility of their fields through nitrogen-fixing plants, or by adding compost instead of applying synthetic fertilizer.

That can bring environmental benefits, such as more diverse insect life in the field or less fertilizer runoff into neighboring streams. But such methods also cost money. That's part of what you are buying when you buy organic.

So if you really want to find the most nutritious vegetables, and the organic label won't take you there, what will?

At the moment, unfortunately, there isn't a good guide. But a lot of scientists are working on it.

They're measuring nutrient levels in all kinds of crops, and discovering some surprising things, as The Salt reported last week — such as supernutritious microgreens. They're trying to breed new varieties of crops that yield not a bigger harvest but a more nutrient-rich harvest.

The problem is, farmers still get paid by the pound, not by the vitamin. And consumers buy their food the same way. What this really requires is a whole new food system that can track those extra-nutritious crops from farmer's field to consumer's shopping basket.

Maybe, down the road, you will actually see signs in the supermarket that advertise, for instance, iron-rich beans. Maybe they'd be organic, or maybe not.

Tags: organic food, agriculture, Fitness & Nutrition

Portland Press Herald

PRINTTHIS

September 6

Studies reveal raw truths on organic foods

A review of studies finds little increase in nutrient or vitamin content, but some buyers say their goals are to avoid pesticides and help local farmers.

By Avery Yale Kamilaakamila@mainetoday.com
Staff Writer

A study released this week casts doubt on the idea that organic foods contain more nutrients than conventional foods, but some experts and shoppers say nutrition isn't why they buy organic food.

Today's poll: Organic food

Do you think buying organic food is worth it?

- Yes
- No

Vote View Results

click image to enlarge

Beth Taylor of Portland shops at the Fishbowl Farm stand Wednesday at the Portland farmers market in Monument Square. She said she tries to buy organic because she wants “clean food” grown mostly free of such things as pesticides and synthetic fertilizers.

John Patriquin/Staff Photographer

click image to enlarge

Anna Korsen of Portland, shopping with her 2-year-old son, Arlo Korsen-Cayer, says, "I tend to buy organic because of the impact conventional farming has on the environment and the pesticides that are in a lot of conventionally grown food."

John Patriquin/Staff Photographer

ORGANICS IN MAINE

In 2010, the Maine Organic Farmers and Gardeners Association counted 582 organic farms in Maine, which generated over $36 million in sales.

The study, conducted with help from the U.S. Department of Agriculture, the State Planning Office and the University of Maine, also found that “organic farmers are more likely to be younger and female than their conventional counterparts,” and that organic agriculture creates slightly more jobs per farm than conventional agriculture.

WHAT IS ORGANIC?

U.S. Department of Agriculture’s legal definitions:

100 percent organic: Can contain only foods grown or produced without synthetic pesticides, synthetic fertilizers, radiation, genetic engineering, antibiotics or hormones.

Organic: Must be made from 95 percent organic ingredients that meet the above criteria.

Made with Organic Ingredients: Must contain at least 70 percent organic ingredients that meet the criteria.

LABELING: The name of the certifying agent, such as the Maine Organic Farmers and Gardeners Association, must appear on the label. Anyone certified through MOFGA can use the USDA organic label, the MOFGA label or both.

Several Mainers said Wednesday that they choose organically grown food because they want to ingest fewer pesticides and they support the more environmentally sensitive practices of organic farming.

"I tend to buy organic because of the impact conventional farming has on the environment and the pesticides that are in a lot of conventionally grown food," said Anna Korsen of Portland, who shopped

Wednesday at the farmers market in Monument Square with her 2-year-old son, Arlo Korsen-Cayer. "I don't want that in my body or my family's bodies."

In the study, published in the Sept. 4 issue of Annals of Internal Medicine, a team led by two physicians at Stanford University examined previous studies comparing the nutritional quality of conventional and organic food. The team found that organic food can reduce exposure to synthetic pesticides, but it did not find statistically significant evidence that organic farming boosts the vitamin or nutrient content of produce.

The review of 237 research papers, including 17 studies and six random clinical trials, did find that organic milk may contain higher levels of beneficial omega-3 fatty acids, and that organic chicken and pork contained fewer antibiotic-resistant bacteria than conventionally raised products.

The study's authors based their work on the premise that consumers choose organic food because they believe it is nutritionally superior to conventionally grown and raised food. Yet Mainers who buy organic food, and researchers who study organic farming, say the study misses the mark.

"It's a red herring," said Molly Anderson, chair of Food and Sustainable Agriculture Systems at the College of the Atlantic in Bar Harbor. "It's asking the wrong question. The nutritional reasons are not the reasons why I think people are buying organic."

Instead, she said, consumers are being driven toward organic by the issues of conventional farmers who routinely feed antibiotics to healthy animals, and the use of synthetic pesticides and subsequent soil and water degradation.

Many public health experts have blamed the use of antibiotics in conventional farming for the rapid rise in antibiotic-resistant strains of deadly bacteria.

"(The researchers) were operating within that very narrow and non-systemic viewpoint that a physician has, of what affects an individual consumer, and not what affects ecosystem health and the health of the population," Anderson said. "To my mind, that's not why we buy organic, to get a little extra vitamin C. We do buy it to get a little less pesticide residues and to support a healthy environment and the continued efficacy of antibiotics on which the population depends."

The study's findings didn't surprise Mary Ellen Camire, a professor in the department of food science and human nutrition at the University of Maine. She has conducted comparable trials on wild blueberries, with similar results to what the Stanford researchers found.

"We haven't seen a lot of differences when we've looked at conventionally grown produce and organic produce," Camire said.

But Camire agreed with Anderson that superior nutrition isn't the driving factor behind sales of organic food.

"It really comes down to do you want pesticides," she said. "Organic practices are oftentimes better for the environment. It's something that I think a growing number of consumers are thinking about."

Her assessment was echoed by shoppers Wednesday at the farmers market in Portland.

"I feel like organic is better for the environment altogether and better for our health," said Susan Lakari of South Portland. "I try to buy organic when I can. I like to support the farmers because I think they're working hard."

Beth Taylor of Portland agreed.

"I'm looking for clean foods that keep farmers clean," Taylor said after buying organic heirloom tomatoes.

Some shoppers, such as Matt Powell of Scarborough, said other factors influence their purchases of organic food.

"I buy what looks best," said Powell, who buys organic and conventionally grown produce.

After buying organic vegetables at the farmers market, Rachel Lawrence of Gorham said, "I shop here more because of local. I'm less focused on organic."

Catherine Morlino, who was visiting Maine from Boston, said that although she buys organic food, supporting local farmers is more important to her.

"I look more for local," Morlino said. "I like to support local businesses in general."

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http://www.pressherald.com/news/raw-truths-on-organics_2012-09-06.html

EDITORIAL

The case for organic food

Stanford's research showing that organic produce probably isn't any more nutritious than the conventional variety is mostly remarkable for what it omitted.

A new study from Stanford University shows that organic produce probably isn't any more nutritious than the conventional variety. Above: Containers of fresh pineapple sit on display at a Whole Foods Market in San Francisco, Calif. (Justin Sullivan / Getty Images / September 4, 2012)

'Organic' a waste of money? Depends on your reason for buying it

September 5, 2012

So a new study from Stanford University shows that organic produce probably isn't any more nutritious than the conventional variety. We doubt the folks at Whole Foods are trembling in their Birkenstocks. We're not aware of too many people who thought otherwise — it doesn't make a lot of sense to assume the application of pesticides would have much impact on a fruit's vitamin content. But that doesn't

Organic food -- better for you or not? A study takes a look

Taking sides in California's genetically engineered food fight

Farming's sweet lessons

Bring back the tasty tomatoes

mean it isn't safer to eat.

Perhaps the most valuable thing about the study of available research undertaken by Stanford's Center for Health Policy is that it points up how little is yet known about the benefits of organics and the harms done by widespread pesticide use. The review, which looked at 240 studies from around the world on the health effects of eating organic and the comparative levels of nutrients and contaminants, made headlines because it supposedly struck a blow against the perception that cheaper, conventionally grown produce — which usually involves both pesticides and chemical fertilizers — is bad for you. "There isn't much difference between organic and conventional foods, if you're an adult and making a decision based solely on your health," concluded senior study author Dena Bravata.

Not only is that debatable, but it fails to get to the heart of the reason most people spend extra for organics. The Stanford researchers found studies showing that 38% of conventional produce contains pesticide residue (compared with 7% of organic produce), yet shrugged this off because the chemical traces were usually below the levels considered safe for human consumption by the Environmental Protection Agency. But debate rages about whether EPA limits are really safe; in 2010, President Obama's Cancer Panel recommended that consumers eat organic produce, concluding that federal protections are weak and research on the subject is inadequate.

VIDEO: 'Organic' a waste of money?

Meanwhile, some people buy organic for reasons that have little to do with health. Broad-scale use of pesticides and chemical fertilizers is environmentally ruinous, polluting waterways and producing a massive "dead zone" in the Gulf of Mexico. Organic farming removes more carbon from the air, protects wildlife and promotes soil fertility, making it more sustainable. And organic meat and dairy don't contain the antibiotics and hormones of conventional products, which means they don't promote the development of drug-resistant bacteria or such possible hormone-related side effects as early puberty in girls.

What's most glaring about the Stanford review is what's missing from it, which is any examination of processed foods. You can't get a realistic picture of health effects by looking at fruits, veggies and meats but none of the processed items that make up the bulk of the American diet. Is a kid's peanut butter and jelly sandwich more healthful if it's made from organic ingredients? A lack of comprehensive research on the totality of what we eat means we simply don't know.

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Are lower pesticide residues a good reason to buy organic? Probably not.

By Christie Wilcox | September 24, 2012

A lot of organic supporters are up in arms about the recent Stanford study that found no nutritional benefit to organic foods. Stanford missed the point, they say—it's not about what organic foods have in them, it's what they don't. After all, avoidance of pesticide residues is the #1 reason why people buy organic foods.

Yes, conventional foods have more synthetic pesticide residues than organic ones, on average. And yes, pesticides are dangerous chemicals. But does the science support paying significantly more for organic foods just to avoid synthetic pesticides? No.

A Pesticide Is A Pesticide

I'm not saying that pesticides, herbicides, and insect repellants aren't toxic. I certainly wouldn't recommend drinking cocktails laced with insect-repelling chemicals, for without a doubt, they can be bad for you. Pesticide exposure has been linked to all kinds of diseases and conditions, from neurodegenerative diseases like Parkinson's to cancer. What we do know, though, is that natural isn't synonymous with harmless. As a 2003 review of food safety concluded, "what should be made clear to consumers is that 'organic' does not equal 'safe'."

I've said it before and I'll say it again: there is nothing safe about the chemicals used in organic agriculture. Period. This shouldn't be that shocking – after all, a pesticide is a pesticide. "Virtually all chemicals can be shown to be dangerous at high doses," explain scientists, "and this includes the thousands of natural chemicals that are consumed every day in food but most particularly in fruit and vegetables."

There's a reason we have an abundance of natural pesticides: plants and animals produce tens of thousands of chemicals to try and deter insects and herbivores from eating them. Most of these haven't been tested for their toxic potential, as the Reduced Risk Program of the US Environmental Protection Agency (EPA) applies to synthetic pesticides only. As more research is done into their toxicity, however, we find they are just as bad as synthetic pesticides, sometimes worse. Many natural pesticides have been found to be potential – or serious – health risks, including those used commonly in organic farming.

In head-to-head comparisons, natural pesticides don't fare any better than synthetic ones. When I compared the organic chemicals copper sulfate and pyrethrum to the top synthetics, chlorpyrifos and chlorothalonil, I found that not only were the organic ones more acutely toxic, studies have found that they are more chronically toxic as well, and have higher negative impacts on non-target species. My results match with other scientific comparisons. In their recommendations to Parliament in 1999, the Committee on European Communities noted that copper sulfate, in particular, was far more dangerous than the synthetic alternative. A review of their findings can be seen in the table on the right (from a recent review paper). Similarly, head to head comparisons have found that organic pesticides aren't better for the environment, either.

	Mancozeb	Copper
Human health		
LD_{50}	>5000 mg/kg	50 mg/kg
EPA class	Practically non-toxic	Corrosive and toxic
Health effects	Non-toxic by oral route	Kidney and liver damage
Ecotoxity		
Earthworms	Low toxicity	Very toxic
Birds	Low	Moderately toxic
Small mammals	Non-toxic	Harmful
DT_{50}soil	6–15 days	Non-degradable

Organic pesticides pose the same health risks as non-organic ones. No matter what anyone tells you, organic pesticides don't just disappear. Rotenone is notorious for its lack of degradation, and copper sticks around for a long, long time. Studies have shown that copper

sulfate, pyrethrins, and rotenone all can be detected on plants after harvest—for copper sulfate and rotenone, those levels exceeded safe limits. One study found such significant rotenone residues in olives and olive oil to warrant "serious doubts...about the safety and healthiness of oils extracted from drupes treated with rotenone." Just like with certain synthetic pesticides, organic pesticide exposure has health implications—a study in Texas found that rotenone exposure correlated to a significantly higher risk of Parkinson's disease. The increased risk due to Rotenone was *five times higher* than the risk posed by the synthetic alternative, chlorpyrifos. Similarly, the FDA has known for a while that chronic exposure to copper sulfate can lead to anemia and liver disease.

So why do we keep hearing that organic foods have fewer pesticide residues? Well, because they have lower levels of *synthetic* pesticide residues. Most of our data on pesticide residues in food comes from surveys like the USDA's Pesticide Data Program (PDP). But the while the PDP has been looking at the residues of over 300 pesticides in foods for decades, rotenone and copper sulfate aren't among the usual pesticides tested for—maybe, because for several organic pesticides, fast, reliable methods for detecting them were only developed recently. And, since there isn't any public data on the use of organic pesticides in organic farming (like there is for conventional farms), we're left guessing what levels of organic pesticides are on and in organic foods.

So, if you're going to worry about pesticides, worry about all of them, organic and synthetic. But, really, should you worry at all?

You Are What You Eat? Maybe Not.

We know, quite assuredly, that conventionally produced foods do contain higher levels of synthetic chemicals. But do these residues matter?

While study after study can find pesticide residues on foods, they are almost always well below safety standards. Almost all pesticides detected on foods by the USDA and independent scientific studies are at levels below 1% of the Acceptable Daily Intake (ADI) set by government regulators. This level isn't random – the ADI is based on animal exposure studies in a wide variety of species. First, scientists give animals different amounts of pesticides on a daily basis throughout their lifetimes and monitor those animals for toxic effects. Through this, they determine the highest dose at which no effects can be found. The ADI is then typically set 100 times *lower* than that level. So a typical human exposure that is 1% of the ADI is equivalent to an exposure 10,000 times lower than levels that are safe in animal models.

Systematic reviews of dietary pesticide exposure all come to the same conclusion: that typical dietary exposure to pesticide residues in foods poses minimal risks to humans. As the book *Health Benefits of Organic Food* explains, "while there is some evidence that consuming organic produce will lead to lower exposure of pesticides compared to the consumption of conventional produce, there is no evidence of effect at contemporary concentrations." Or, as a recent review states, "from a practical standpoint, the marginal benefits of reducing human exposure to pesticides in the diet through increased consumption of organic produce appear to be insignificant."

Reviews of the negative health effects of pesticides find that dangerous exposure levels don't come from food. Instead, non-dietary routes make for the vast majority of toxin exposures, in particular the use of pesticides around the home and workplace. A review of the worldwide disease burden caused by chemicals found that 70% can be attributed to air pollution, with acute poisonings and occupational exposures coming in second and third. Similarly, studies have found that indoor air concentrations of pesticides, not the amount on foodstuffs, correlate strongly to the amount of residues found in pregnant women (and even still, there was no strong correlation between exposure and health effects). Similarly, other studies have found that exposures to toxic pyrethroids come primarily from the environment. Children on organic diets routeinely had pyrethroids in their systems, and the organic group actually had higher levels of several pyrethroid metabolites than the conventional one. In other words, you have more to fear from your home than from your food.

Your home probably contains more pesticides than you ever imagined. Plastics and paints often contain fungicides to prevent mold—fungi that, by the way, can kill you. Your walls, carpets and floors also contain pesticides. Cleaning products and disenfectants contains pesticides and fungicides so they can do their job. Ever used an exterminator to get rid of mice, termites, fleas or cockroaches? That stuff can linger for months. Step outside your house, and just about everything you touch has come in contact with a pesticide. Insecticides are used in processing, manufacturing, and packaging, not to mention that even grocery stores use pesticides to keep insects and rodents at bay. These chemicals are all around you, every day, fighting off the pests that destroy our buildings and our food. It's not surprising that most pesticide exposures doesn't come from your food.

That said, there are some studies that have found a link between diet and exposure to specific pesticides, particularly synthetic organophosphorus pesticides. Lu et al. found that switching children from a conventional food diet to an entirely organic one dropped the urinary levels of specific metabolites for malathion and chlorpyrifos to nondetectable levels in a matter of days. But, it's important to note that even the levels they detected during the conventional diet are three orders of magnitude *lower* than the levels needed in animal experiments to cause neurodevelopmental or other adverse health effects.

While it might seem that decreasing exposure to pesticides in any way could only be good for you, toxicologists would differ. Contrary to what you might think, lower exposure isn't necessarily better. It's what's known as hormesis, or a hormetic dose response curve. There is evidence that exposure to most chemicals at doses significantly below danger thresholds, even pesticides, is beneficial when compared to no exposure at all. Why? Perhaps because it kick starts our immune system. Or, perhaps, because pesticides activate beneficial biological pathways. For most chemicals, we simply don't know. What we do know is that data collected from 5000 dose response measurements (abstracted from over 20,000 studies) found that low doses of many supposedly toxic chemicals, metals, pesticides and fungicides either reduced cancer rates below controls or increased longevity or growth in a variety of animals. So while high acute and chronic exposures are bad, the levels we see in food that are well below danger thresholds may even be good for us. This isn't as surprising as you might think—just look at most pharmaceuticals. People take low doses of aspirin daily to improve their heart health, but at high chronic doses, it can cause anything from vomiting to seizures and even death. Similarly, a glass of red wine every day might be good for you. But ten glasses a day? Definitely not.

No Need To Fear

To date, there is no scientific evidence that eating an organic diet leads to better health.

What of all those studies I just mentioned linking pesticides to disorders? Well, exactly *none* of them looked at pesticides **~~from dietary intake~~** and health in people. Instead, they involve people with high occupational exposure (like farmers who spray pesticides) or household exposure (from gardening, etc). Judging the safety of dietary pesticide intake by high exposures is like judging the health impacts of red wine based on alcoholics. A systematic review of the literature found only three studies to date have looked at clinical outcomes of eating organic – and none found any difference between an organic and conventional diet. My question is: if organic foods are so much healthier, why aren't there any studies that show people on an organic diet are healthier than people eating conventionally grown produce instead?

More to the point, if conventional pesticide residues on food (and not other, high exposure routes) are leading to rampant disease, we should be able to find evidence of the connection in longitudinal epidemiological studies—but we don't. The epidemiological evidence for the danger of pesticide residues simply isn't there.

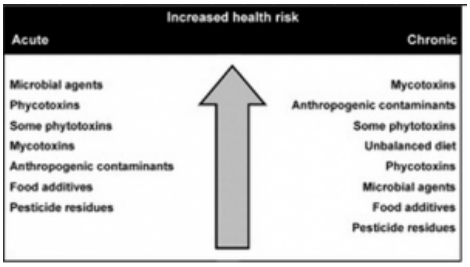
If dietary exposure to pesticides was a significant factor in cancer rates, we would expect to see that people who eat more conventionally grown fruits and vegetable have higher rates of cancer. But instead, we see the opposite. People who eat more fruits and vegetables have significantly lower incidences of cancers, and those who eat the most are two times less likely to develop cancer than those who eat the least. While high doses of pesticides over time have been linked to cancer in lab animals and *in vitro* studies, "epidemiological studies do not support the idea that synthetic pesticide residues are important for human cancer." Even the exposure to the persistent and villainized pesticide DDT has not been consistently linked to cancer. As a recent review of the literature summarized, "no hard evidence currently exists that toxic hazards such as pesticides have had a major impact on total cancer incidence and mortality, and this is especially true for diet-related exposures."

The closest we have to studying the effects of diet on health are studies looking at farmers. However, farmers in general have high occupational pesticide exposures, and thus it's impossible to tease out occupational versus dietary exposure. Even still, in this high-risk group, studies simply don't find health differences between organic and conventional farmers. A UK study found that conventional farmers were just as healthy as organic ones, though the organic ones were happier. Similarly, while test-tube studies of high levels of pesticides are known to cause reproductive disorders, a comparison of sperm quality from organic and conventional farmers was unable to connect dietary intake of over 40 different pesticides to any kind of reproductive impairment. Instead, the two groups showed no statistical difference in their sperm quality.

In a review of the evidence for choosing organic food, Christine Williams said it simply: "There are virtually no studies of any size that

have evaluated the effects of organic v. conventionally-grown foods." Thus, she explains, "conclusions cannot be drawn regarding potentially beneficial or adverse nutritional consequences, to the consumer, of increased consumption of organic food."

"There is currently no evidence to support or refute claims that organic food is safer and thus, healthier, than conventional food, or vice versa. Assertions of such kind are inappropriate and not justified," explain scientists. Neither organic nor conventional food is dangerous to eat, they say, and the constant attention to safety is unwarranted. Worse, it does more harm than good. The scientists chastise the media and industry alike for scaremongering tactics, saying that "the selective and partial presentation of evidence serves no useful purpose and does not promote public health. Rather, it raises fears about unsafe food."



Furthermore, the focus on pesticides is misleading, as pesticide residues are the lowest food hazard when it comes to human health (as the figure from the paper on the right shows). They conclude that as far as the scientific evidence is concerned, "it seems that other factors, if any, rather than safety aspects speak in favor of organic food."

If you don't want to listen to those people or me, listen to the toxicologists, who study this stuff for a living. When probed about the risk that different toxins pose, over 85% rejected the notion that organic or "natural" products are safer than others. They felt that smoking, sun exposure and mercury were of much higher concern than pesticides. Over 90% agreed that the media does a terrible job of reporting the about toxic substances, mostly by overstating the risks. They slammed down hard on non-governmental organizations, too, for overstating risk.

What's in a Name?

There's good reason we can't detect differences between organic and conventional diets: the labels don't mean that much. Sure, organic farms have to follow a certain set of USDA guidelines, but farm to farm variability is huge for both conventional and organic practices. As a review of organic practices concluded: "variation within organic and conventional farming systems is likely as large as differences between the two systems."

The false dichotomy between conventional and organic isn't just misleading, it's dangerous. Our constant attention to natural versus synthetic only causes fear and distrust, when in actuality, our food has never been safer. Eating less fruits and vegetables due to fear of pesticides or the high price of organics does far more harm to our health than any of the pesticide residues on our food.

Let me be clear about one thing: I'm all for reducing pesticide use. But we can't forget that pesticides are used for a reason, too. We have been reaping the rewards of pesticide use for decades. Higher yields due to less crop destruction. Safer food because of reduced fungal and bacterial contamination. Lower prices as a result of increased supply and longer shelf life. Protection from pests that carry deadly diseases. Invasive species control, saving billions of dollars in damages—and the list goes on. Yes, we need to manage the way we use pesticides, scrutinize the chemicals involved and monitor their effects to ensure safety, and Big Ag (conventional and organic) needs to be kept in check. But without a doubt, our lives have been vastly improved by the chemicals we so quickly villainize.

If we want to achieve the balance between sustainability, production outputs, and health benefits, we have to stop focusing on brand names. Instead of emphasizing labels, we need to look at different farming practices and the chemicals involved and judge them independently of whether they fall under organic standards.

In the meantime, buy fresh, locally farmed produce, whether it's organic or not; if you can talk to the farmers, you'll know exactly what is and isn't on your food. Wash it well, and you'll get rid of most of whatever pesticides are on there, organic or synthetic. And eat lots and lots of fruits and vegetables—if there is anything that will improve your health, it's that.

Before you say otherwise and get mad at me for mentioning it, rotenone is currently a USDA approved organic pesticide. It was temporarily banned, but reapproved in 2010.

Before it was banned, it was the most commonly used organic pesticide, and now—well, without public data on pesticide use on organic farms, we have no idea how much it is being used today.

Food picture from FreeFoto.Com

About the Author: Christie Wilcox is a science writer and blogger who moonlights as a PhD student in Cell and Molecular Biology at the University of Hawaii. Follow on Google+. Follow on Twitter @NerdyChristie.

More õ

The views expressed are those of the author and are not necessarily those of Scientific American.

Schlein, Paul B

From: jody spear <lacewing41@gmail.com>
Sent: Saturday, October 20, 2012 11:28 AM
To: Schlein, Paul B
Subject: Recommended Article By jody spear: Should we buy organic foods?

Categories: Red Category

Hi **Paul Schlein**,
Your friend, **jody spear**, has recommended this article entitled '**Should we buy organic foods?**' to you.

Here is his/her remark:
Please post this along with other media materials, some of which (this month) include discussion of the organic food "controversy" generated by the Stanford study. Also, I'd like the addendum to my testimony to be included. Thx.

Should we buy organic foods?
Posted By UnBylined On September 9, 2012 (4:58 pm) In Contributors, Opinion

Should we care about conserving soil and water? Should we incentivize organic farming? And, to paraphrase the title of the Aug. 14 column with which I am taking issue, “should we buy organic foods?” Yes, yes and yes. But Georgia Clark-Albert, after posing these questions, comes out in a very different place.

Among the questions not asked and answered are these:

Should we allow chemical-intensive farming practices to destroy soil integrity and pollute water bodies with weed and insect killers? Should we sit by as massive applications of insecticides poison the pollinators on which food crops depend, giving rise to the ongoing bee-decimation catastrophe known as colony collapse disorder? Given the proven links between pesticides and cancer, as well as the neurological illnesses that have skyrocketed in recent years — autism, Parkinson’s and Alzheimer’s disease, in particular — are there adequate protections in place to ensure that fruits and vegetables sprayed with chemicals are safe to eat, especially those that cannot be peeled to remove residues on the surface? No, no, and no, absolutely not.

Agriculture standards are inadequate in large part because of enforcement problems at the federal level. The U.S. Inspector General faulted U.S. Department of Agriculture, the federal oversight authority, in 2010 for failure to test samples for conformity to organic standards; the agency also failed to take action against several food producers who mislabeled products as organic, and it was discovered that in cases where action was taken, there was no follow-up. In our state we are fortunate to have the Maine Organic Farmers and Gardeners Association to provide guidance.

Any nutritionist is expected to properly inform consumers of factors to be weighed in making healthy choices. She should know that commercial blueberries, apples and potatoes, three of Maine’s signature crops, are on the Dirty Dozen list published by the Environmental Working Group because of the high levels of pesticide residues found on them. For the same reason Clark-Albert favors organic milk — the requirement that no antibiotics or hormones (r-BGH) be fed to cows — she should eschew genetically modified foods. The “r” in front of BGH means recombinant, or genetically engineered, and crops modified to be herbicide tolerant (leading to overuse of chemical controls, none of which kills anything but weeds) and insect resistant (grown with a built-in pesticide) are anathema to safe-food advocates.

Scientists without ties to the chemical industry have argued that for many reasons GM foods are unsafe to eat, but money controls the debate, and regulators have allowed Monsanto and other seed companies to dominate the market. As a result, nearly all packaged foods on supermarket shelves contain GM ingredients — corn, soy, and sugar beets heading the list. GM corn containing a pesticide to repel borers was approved for human consumption in Maine in 2009 — a good reason to buy only corn certified to be organic.

A powerful agro-industrial complex exists to promote chemical-dependent crops as well as to discredit organic practices, and BDN's nutrition writer is demonstrably part of that cabal. Trivializing the harm pesticides do to humans and ecosystems, suggesting that chemical residues are negligible and, in so many words, perpetuating the "substantial-equivalence" dogma (organic crops and pesticided crops are indistinguishable, say the agro-barons) all evince the warped thinking of a propagandist who cannot be trusted. Clark-Albert's claim that "bugs … can be more harmful and deadly tha[n] pesticides ever could be" is ludicrous. Equally appalling is the ignorance in her statement that "pesticides are already out there in our soil [and no] amount of organic farming is going to remove it."

Readers seeking reputable advice should look instead to sources like the Rodale Institute and Beyond Pesticides. They will find ample information on the subject at the annual Common Ground Fair (Sept. 21-23), this year honoring Rachel Carson, author of "Silent Spring" (1962), one of the first to sound the alarm about disrupting the balance of nature with chemical poisons. A keynote speaker at the fair is Jay Feldman, director of Beyond Pesticides, who has addressed the externalities of chemical-intensive agriculture — costs to society of toxic chemical cleanup, water treatment, medical care, etc. — in a report titled "The Real Story on the Affordability of Organic Food." And a bountiful harvest will be on display in Unity, showing how it's done without jeopardizing our health and safety.

Jody Spear is a resident of Harborside.

Article taken from Bangor Daily News - http://bangordailynews.com
URL to article: http://bangordailynews.com/2012/09/09/opinion/should-we-buy-organic-foods/

JUSTICE NEWS

Department of Justice

Office of Public Affairs

FOR IMMEDIATE RELEASE Friday, September 7, 2012

Scotts Miracle-Gro Will Pay $12.5 Million in Criminal Fines and Civil Penalties for Violations of Federal Pesticide Laws

The Scotts Miracle-Gro Company, a producer of pesticides for commercial and consumer lawn and garden uses, was sentenced today in federal district court in Columbus, Ohio, to pay a $4 million fine and perform community service for eleven criminal violations of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), which governs the manufacture, distribution, and sale of pesticides. Scotts pleaded guilty in February 2012 to illegally applying insecticides to its wild bird food products that are toxic to birds, falsifying pesticide registration documents, distributing pesticides with misleading and unapproved labels and distributing unregistered pesticides. This is the largest criminal penalty under FIFRA to date.

In a separate civil agreement with the U.S. Environmental Protection Agency (EPA), Scotts agreed to pay more than $6 million in penalties and spend $2 million on environmental projects under a settlement that resolves additional civil pesticide violations . The violations include distributing or selling unregistered, canceled or misbranded pesticides, including products with inadequate warnings or cautions.This is the largest civil settlement under FIFRA to date.

“As the world’s largest marketer of residential use pesticides, Scotts has a special obligation to make certain that it observes the laws governing the sale and use of its products. For having failed to do so, Scotts has been sentenced to pay the largest fine in the history of FIFRA enforcement,” said Ignacia S. Moreno, Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice. “The Department of Justice will continue to work with EPA to assure that pesticides applied in homes and on lawns and food are sold and used in compliance with the laws intended to assure their safety.”

“The misuse or mislabeling of pesticide products can cause serious illness in humans and be toxic to wildlife,” said Cynthia Giles, Assistant Administrator for EPA’s Office of Enforcement and Compliance Assurance. “Today’s sentence and unprecedented civil settlement hold Scotts accountable for widespread company noncompliance with pesticide laws, which put products into the hands of consumers without the proper authorization or warning labels.”

In the plea agreement, Scotts admitted that it applied the pesticides Actellic 5E and Storcide II to its bird food products even though EPA had prohibited this use. Scotts had done so to protect its bird foods from insect infestation during storage. Scotts admitted that it used these pesticides contrary to EPA directives and in spite of the warning label appearing on all Storicide II containers stating, “ Storcide II is extremely toxic to fish and toxic to birds and other wildlife.” Scotts sold this illegally treated bird food for two years after it began marketing its bird food line and for six months after employees specifically warned Scotts management of the dangers of these pesticides. By the time it voluntarily recalled these products in March 2008, Scotts had sold more than 70 million units of bird food illegally treated with pesticide that is toxic to birds.

Scotts also pleaded guilty to submitting false documents to EPA and to state regulatory agencies in an effort to deceive them into believing that numerous pesticides were registered with EPA when in fact they were not. The company also pleaded guilty to having illegally sold the unregistered pesticides and to marketing pesticides bearing labels containing false and misleading claims not approved by EPA. The falsified documents submitted to EPA and states were attributed to a federal product manager at Scotts.

In addition to the $4 million criminal fine, Scotts will contribute $500,000 to organizations that protect bird habitat, including the Ohio Audubon’s Important Bird Area Program, the Ohio Department of Natural Resources’ Urban Forestry Program, the Columbus Metro-Parks Bird Habitat Enhancement Program, the Cornell University Ornithology Laboratory, and The Nature Conservancy of Ohio to support the protection of bird populations and habitats through conservation, research, and education.

At the time the criminal violations were discovered, EPA also began a civil investigation that uncovered numerous civil violations

spanning five years. Scotts' FIFRA civil violations included the nationwide distribution or sale of unregistered, canceled or misbranded pesticides, including products with inadequate warnings or cautions. As a result, EPA issued more than 40 Stop Sale, Use or Removal Orders to Scotts to address more than 100 pesticide products.

In addition to the $6 million civil penalty, Scotts will complete environmental projects, valued at $2 million, to acquire, restore and protect 300 acres of land to prevent runoff of agricultural chemicals into nearby waterways.

The criminal case was investigated by EPA's Criminal Investigation Division and the Environmental Enforcement Unit of the Ohio Attorney General's Office, Bureau of Criminal Identification & Investigation. It was prosecuted by Senior Trial Attorney Jeremy F. Korzenik of the Justice Department's Environmental Crimes Section of the Environment and Natural Resources Division, by Michael J. McClary, EPA Criminal Enforcement Counsel and Special Assistant U.S. Attorney and by Assistant U.S. Attorney J. Michael Marous.

The civil case was investigated by U.S. EPA Region 5's Land and Chemicals Division and Office of Regional Counsel, and the U.S. EPA Headquarters Office of Civil Enforcement, assisted by the Office of Pesticides Program.

More information about the civil settlement and recalled products:
www.epa.gov/compliance/resources/cases/civil/fifra/scottsmiraclegro.html

More information about EPA's criminal enforcement program: www.epa.gov/enforcement/criminal/index.html

More information about EPA's pesticide program: http://epa.gov/pesticides/

12-1088 Environment and Natural Resources Division

Schlein, Paul B

From: Fish, Gary
Sent: Tuesday, September 04, 2012 11:53 AM
To: Fish, Gary
Cc: Mary Cerullo (mcerullo@cascobay.org); Jennings, Henry; Hicks, Lebelle; Schlein, Paul B; Bills, Anne
Subject: Azinphos-methly update for growers and dealers

Azinphos-Methyl - Use of Existing Stocks Allowed through September 2013, All Sales to be Halted on September 30, 2012.

For Release: August 30, 2012

After considering comments from growers and other stakeholders, EPA has completed a final risk-benefit analysis for the remaining uses of the organophosphate insecticide azinphos-methyl (AZM). AZM can present health risks to workers and can cause negative ecological impacts, while effective alternatives to this insecticide are available to growers. EPA has decided to maintain the September 30, 2012, effective date for cancellation of the remaining uses of AZM, on apples, blueberries, sweet and tart cherries, parsley, and pears.

Due to unusual bad weather conditions in 2012, **EPA will modify the cancellation order to allow growers to use only existing stocks of AZM in their possession for another year, through September 30, 2013**. All the required mitigation measures now reflected on AZM labeling will remain in effect during this use. **Distribution or sale of AZM after September 30, 2012, remains prohibited**. This decision will not result in greater use of AZM than originally anticipated, and provides a safer alternative to disposal arrangements.

First registered in 1959, AZM has been used to control insect pests on a wide variety of agricultural crops and on ornamentals, tobacco, and trees. In the late 1990s, EPA began reevaluating AZM with the full involvement of a wide range of stakeholders. In 2001, certain uses were immediately canceled or phased out over a four-year period because of concerns regarding worker health and negative ecological impacts.

In 2006, EPA announced a final decision to phase out the remaining ten AZM uses in three phases, with the last uses ending September 30, 2012. This phase-out helped facilitate the transition to safer alternatives, and includes mitigation measures such as reduced application rates and buffer zones around water bodies and occupied dwellings. In July 2012, EPA released and sought comment on an updated grower impacts assessment for the remaining uses of AZM, which has been useful to the agency in developing this final decision on AZM.

EPA's final AZM risk-benefit analysis will be available on the azinphos-methyl page in Chemical Search (www.epa.gov/pesticides/chemicalsearch/) and in docket EPA-HQ-OPP-2009-0365 at www.regulations.gov. Further information is available in AZM docket EPA-HQ-OPP-2005-0061 at Regulations.gov.

Aetiology

DISCUSSING CAUSES, ORIGINS, EVOLUTION, AND IMPLICATIONS OF DISEASE AND OTHER PHENOMENA

with TARA C. SMITH

Eastern Equine Encephalitis: The Mosquito that bit the Snake

Posted by **Tara C. Smith** on October 17, 2012

Guest post by Hillary Craddock

Last week a new study regarding Eastern Equine Encephalitis (EEE) was published online (Bingham et.al.). EEE is a mosquito-borne virus that can cause serious, and sometimes deadly, disease in humans and equines. In warmer parts of North America, the virus is spread year-round, but in areas where mosquitoes get killed off in the winter it has been something of a mystery as to how the virus makes it from year to year. Humans and equines are both dead-end hosts, which means that a mosquito can not be infected from biting an infected person or horse. Researchers in Alabama found that wild snakes in the Tuskegee National Forest were positive for Eastern Equine Encephalitis virus (EEEV), which could explain how EEE was maintained after the first frosts killed off infected mosquitoes. Essentially, what would happen is that an infected mosquito bites a snake, probably during the summer or early fall, and the snake harbors the virus in its blood during the winter. Then, in the spring, an uninfected mosquito (which overwinters as a larva) bites the snake and acquires the virus. This now-infected mosquito can bite a horse or a human, who can then get sick. (I'm sensing a Chad Gadya theme here. Just me? Ok…)

Amphibians and/or reptiles as the winter reservoir of EEE is not a recent research question. A book, Reptiles as possible reservoir hosts for eastern encephalitis virus, (which I was unfortunately unable to get my hands on, since apparently only the University of Alberta has an available copy) was published in 1961, and another study in 1980 by Smith and Anderson stated that two New England species of turtles could be infected by the virus. Interestingly enough, a 2012 study by Graham et. al. (same research group as Bingham et.al.) found that, out of 27 species surveyed, only snakes showed high seropositivity (positive for virus antibodies in the blood), while amphibians, turtles, and lizards had low to no seropositivity. A 2004 study by Cupp et.al., also in Alabama, found that mosquitoes carrying EEEV had fed on amphibians and reptiles in addition to birds and mammals. Now, it's all well and good to show that a reptile can act as a host, but just because something *can* be the host doesn't mean that it *is* the host in the actual system. The crucial step was testing their hypothesis in a wild population.

And test they did. The researchers were careful to state that the question of snakes acting as reservoir hosts is "unresolved," but there is "mounting evidence" that snakes are the winter hosts of the virus. Cottonmouths (*Agkistrodon piscivorus*) were the most common snake sampled,

making up 41% of sampled reptiles. They were also frequently seropositive, with 35.4% testing positive for EEEV. Of the five species sampled, one other, the copperhead (*Agkistrodon contortrix*) was found to be positive. The researchers tested for active infection in addition to antibodies, and found that some snakes were actively infected. This means that, if a mosquito bit the snake, the mosquito could possibly acquire the virus and pass it on to other creatures.

So why am I so excited? When I took my first Emerging Infectious Diseases class in college, the professor explained to us that zoonotic infectious diseases were most likely to jump between closely related species. Granted, I'm using the word "close" loosely here. She meant that diseases were far more likely to jump mammal to mammal or bird to mammal than, say, fish to mammal or reptile to mammal. I was also taught that if you can understand how a disease is transmitted, you're one step closer to controlling it.

Which answers the ultimate question – so what does this all mean? When we better understand how a disease is transmitted, it's easier to control it. Further research in other parts of the country is needed to see if snakes are harboring the virus in the North East and Midwest regions, but the implications for disease control are there. If we understand where or when snakes congregate, we might be able to better predict disease dynamics, specifically outbreaks. If the first outbreaks in the summer originate from mosquitoes biting snakes, then it's possible that scientists could conduct heavier surveillance in areas where snakes are known to congregate. In this case, we have two entire categories of experts – herpetologists (reptile specialists) and wildlife scientists – that public health practitioners can work with to try to control the disease. This paper is amazing because it unlocks a whole new cavalcade of questions and potential solutions.

This post was republished with permission by the author, and was originally published at Mind the Science Gap.

Hillary is a second year master's student in Epidemiology at the University of Michigan, and she is currently working in influenza research. Her primary interests include zoonotic, emerging, and vector-borne infectious diseases, disaster preparedness and response, and public health practice.

Keywords: ecology EEE EEEV reservoir host Snakes

Comments

Eastern Equine Encephalitis: The Mosquito that bit the Snake – ScienceBlogs (blog) | Health and diseases news
October 17, 10:05 pm

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Snakes in the Wild Harbor Deadly Mosquito-Borne EEEV Virus Through Hibernation, Study Finds

ScienceDaily (Oct. 1, 2012) — Snakes in the wild serve as hosts for the deadly mosquito-borne Eastern equine encephalomyelitis Virus (EEEV), possibly acting as a "bridge" to the next season, according to researchers studying endemic areas in the Tuskegee National Forest in Alabama. This sets the stage for mosquitoes feeding on the infected snakes -- primarily in the early spring -- to become virus carriers. Scientists have been puzzled as to how the virus survived a harsh winter. With this new link established in the transmission cycle, a viable strategy to counter the virus may be at hand.

The findings were published today online in the *American Journal of Tropical Medicine and Hygiene* and will be published in the December print issue.

While previous studies demonstrated that snakes experimentally infected with EEEV in laboratories could harbor the virus in their blood through hibernation, this is the first evidence documenting wild-caught snakes with EEEV already circulating in their blood. "This study confirms that the snakes carry the live virus across seasons," said study co-author Thomas R. Unnasch, Ph.D., of the University of South Florida's Global Health Infectious Disease Research Program. "So after hibernating all winter, when they emerge in the sun in the spring, they still have the virus in their blood ready to share with a new crop of mosquitoes which can then spread it on to other animals."

"Triple E is one of the most deadly viruses that's endemic to the United States and what this result allows us to do is to start thinking about early season interventions to basically eliminate the virus transmission early in the season and interrupt it before it gets going, before it will be a threat to human beings later on in the season," he said.

EEEV has been detected in Central, South and in North America, along the Atlantic and Gulf coasts of the U.S. as well as Michigan and Ohio. Most human cases have occurred in Florida, Georgia, New Jersey, New York and Massachusetts. Currently, in Massachusetts public health officials have confirmed that at least seven residents have contracted the virus commonly called "Triple E" (EEE) and two of them have died from the disease. The number of cases in the state alone has already reached the average number of EEE cases reported annually nationwide.

EEEV -- Deadly to Horses and Humans

EEEV is transmitted through the bite of an infected mosquito. The virus can be passed to a wide range of animals including birds, reptiles, amphibians and mammals. But once infected, horses and humans appear to suffer the most adverse effects. For horses with EEE there's a 90 percent chance of death. And although there is a vaccine available, hundreds of horses go unvaccinated. According to the U.S. Department of Agriculture (USDA), on average 200 EEE horse cases were reported annually over the past five years. For humans EEE is rare, with approximately five to ten cases reported annually in the U.S., according to the Centers for Disease Control and Prevention (CDC). About 35% of the people who contract the disease will die and among those who survive, 35% will have long term severe neurological damage. In severe cases of the virus (involving encephalitis, an inflammation of the brain) symptoms include the sudden onset of headache, high fever, chills and vomiting. The illness may then progress into disorientation, seizures or coma. There is no cure for EEEV and care is based on symptoms. There is currently no vaccine approved for human use.

EEEV Breeding grounds

Freshwater hardwood swamps in the Northeast are hotbeds for EEEV and the virus is maintained through a cycle of *Culiseta melanura* mosquitoes which primarily get their blood meals from birds. As infection rates rise among

more mosquitoes feeding on their avian hosts, the birds spread the virus rapidly and broadly but it takes a mosquito species (*Aedes*, *Coquillettidia* and *Culex*) capable of bridging the infection from infected birds to uninfected mammals for the virus to be transmitted.

Until now, the mystery of how the virus survived the winter has been an outstanding question because the virus has appeared in the same locations in several Northeastern U.S. states from year to year. "There are no mosquitoes there in the winter and not many birds and there's never been evidence that mosquitoes can carry the virus over the winter," Unnasch said.

Snake Wrangling

For their research for this study, scientists from the University of South Florida and Auburn University wrangled snakes for blood samples from an area in the Tuskegee National Forest where EEEV has circulated for years. They found that the infected snakes, mostly cottonmouths, hibernate the virus in their blood during winter. They also discovered that the virus in snakes peaked in April and September. Unnasch said when the major transmission agents, migratory birds, leave the area in the fall the mosquitoes turn to the snakes -- feeding through the eye membranes of the vipers, not their tough skin -- which is why infection rates peak in September. He added that there is no research on whether the virus can be transmitted by a snake bite, but they plan to use defanged snakes in their next experiments."

Prevention

Unnasch and his colleagues believe that the virus can be stopped before it becomes a threat. Further study could prove whether early season interventions could be really useful in eliminating infections in the summer, which may involve humans. "We'd like to test this experimentally by doing some early season insecticide treatments for mosquitoes in Florida," said Unnasch, adding that according to the CDC his home state has far more cases of Triple E virus than any other.

"This study not only offers insight into the ways to prevent the outbreaks of deadly mosquito-borne viruses like EEEV and West Nile Virus, it also provides a path toward finding cures and vaccines that will save lives and money," said James W. Kazura, MD, President of the American Society of Tropical Medicine and Hygiene, which publishes the journal, and director of the Center for Global Health and Diseases at Case Western Reserve University. "We must never forget that the lives of real people are at stake here. Each year, through the generosity of the Labell family, ASTMH's American Committee on Arthropod-Borne Viruses awards a $2000 grant to a graduate student conducting research on EEEV or other mosquito-borne diseases in the name of their daughter, Kelly, a New Hampshire teenager who died tragically in 2005 from EEEV. This research is another step closer to preventing tragedy for another family."

The study was supported by a grant from the National Institute of Allergy and Infectious Diseases.

Story Source:

Journal Reference:

1. Andrea M. Bingham, Sean P. Graham, Nathan D. Burkett-Cadena, Gregory S. White, and Thomas R. Unnasch. **Detection of Eastern Equine Encephalomyelitis Virus RNA in North American Snakes**. *American Journal of Tropical Medicine and Hygiene*, 2012; DOI: 10.4269/ajtmh.2012.12-0257

Maine Weekly Arboviral Surveillance Report

October 15, 2012

Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services
Paul R. LePage, Governor Mary C. Mayhew, Commissioner

January 1, 2012 – October 13, 2012:

Humans

	Number Tested	WNV positive	EEE Positive
Current Week	1	0	0
2012 Year to Date	72	1*	0

Human arboviral testing performed at Maine's Health and Environmental Testing Laboratory (HETL); testing may be performed year round

*1 human tested positive for WNV in Maine, however the patient was a Philadelphia resident and will be counted as a case in PA

Animals

	Number Tested	WNV positive	EEE Positive
Current Week	0	0	0
2012 Year to Date	33	0	3*

Animal arboviral testing may be performed at HETL or through the National Veterinary Services Laboratory (NVSL); testing may be performed year round

* 28 mist-netted birds were submitted to CDC-Fort Collins as part of a serosurvey, 2 were sero-positive for EEE. Sero-positivity indicates exposure to the disease, not necessarily active infection.

Mosquitoes

	Pools Tested	WNV positive	EEE Positive
Current Week	30	0	0
2012 Year to Date	1322	7	0

Mosquito arboviral testing performed at HETL; mosquito collection begins July 1 and continues through September 30*

*Mosquito collections extended through October 6

Only completed testing is included in this report.

WNV = West Nile Virus
EEE = Eastern Equine Encephalitis

2012 Positive Results

Species	Date Collected	County	Agent
Veery	05/21/2012	Cumberland	EEE
Gray Catbird	05/14/2012	Cumberland	EEE
Culiseta melanura	08/01/2012	York	WNV
Culex pipiens/restuans	08/01/2012	Cumberland	WNV
Culiseta melanura	08/23/2012	Cumberland	WNV
Culiseta melanura	08/23/2012	Cumberland	WNV
Culiseta melanura	08/31/2012	Cumberland	WNV
Culex pipiens/restuans	09/06/2012	York	WNV
Culiseta melanura	08/30/2012	Cumberland	WNV
Pheasant	09/06/2012	York	EEE

* 28 mist-netted birds were submitted to CDC-Fort Collins as part of a serosurvey, 2 were sero-positive for EEE. Sero-positivity indicates exposure to the disease, not necessarily active infection.

MAINE PUBLIC HEALTH ALERT NETWORK SYSTEM

Maine Department of Health and Human Services
Maine Center for Disease Control and Prevention (Maine CDC)
(Formerly Bureau of Health)
11 State House Station
Augusta, Maine 04333-0011
Phone 1-800-821-5821 / Fax 207-287-7443

*****ADVISORY – Important Information*****

2012PHADV015

TO: Academic, Animal Care, Epidemiologists, HETL, City and County Health Departments, All Healthcare, Lab Facilities, County EMA, Maine Medical Association, Public Health, EMS Regional Coordinators, Regional Resource Centers

FROM: Dr. Sheila Pinette, Maine CDC Director
Dr. Stephen Sears, State Epidemiologist

SUBJECT: **Eastern Equine Encephalitis Positive Pheasant**

DATE: Tuesday, September 11, 2012

TIME: 3:00PM

PAGES: 2

PRIORITY: **Medium**

Eastern Equine Encephalitis Positive Pheasant

On September 10, 2012 Maine's Health and Environmental Testing Laboratory (HETL) confirmed Eastern equine encephalitis (EEE) in a pheasant flock from Lebanon in York County. Maine CDC and the Maine Department of Agriculture were notified of multiple deaths in a pheasant flock in the first week of September. The bird that tested positive died on September 6th as a result of the infection.

This is the first report of EEE activity in Maine in 2012, however, 4 pools of mosquitoes tested positive for West Nile virus (WNV) earlier this year. Like WNV, EEE is transmitted through the bite of an infected mosquito. EEE is the most severe arboviral illness in the United States. It can cause illness in humans, horses, llamas, alpacas, and game birds. While there is a vaccine for horses, there is no human vaccine to protect against EEE. Treatment is based on alleviating the symptoms of the infection. In the fall of 2008, a Massachusetts resident vacationing in Cumberland County died of the disease; it is unclear where he contracted the infection. In 2009, Maine experienced unprecedented EEE activity with 19 animals and 2 mosquito pools testing positive. Regionally there has been EEE activity in Massachusetts, New Hampshire, and Vermont in 2012, including 5 human cases – 2 in Vermont and 3 in Massachusetts.

Prevention:
Maine CDC recommends the following preventative measures to protect against EEE and other mosquito-borne illnesses:

- **Use an EPA approved repellent when outdoors, especially around dawn and dusk** – always follow the instructions on the product's label
- Wear protective clothing when outdoors, including long-sleeved shirts, pants, and socks
- Use screens on your windows and doors to keep mosquitoes out of your home
- Limit time outdoors at dawn and dusk when many species of mosquitoes are most active
- Practice household mosquito-source reduction: standing water should be removed from artificial water-holding containers in and around the house
- Vaccinate horses (there are effective vaccines to prevent EEE and WNV in horses; horses with arboviral illness do not pose a risk to human health)

Testing:
Maine CDC encourages providers to test for arboviral illness in patients presenting with unexplained encephalitis, meningitis or high fever (greater than 100.4°F or 38°C) during the late summer and early fall.

If arboviral infection is suspected based on clinical evidence, serum samples and CSF (if available) should be submitted for arboviral testing. Arboviral testing for EEE and WNV can be performed at HETL. HETL requires the submitter to complete an arboviral submission form. All samples of CSF should be accompanied by a serum sample. Ideally an acute and a convalescent serum sample should be submitted for each patient.

- Acute serum samples should be collected within 14 days of onset of symptoms
- Convalescent serum samples should be collected 10 days to 4 weeks following the acute specimen

Reporting:
Arboviral illness is reportable in Maine. All suspect cases, and any positive laboratory reports should be reported by phone to the disease reporting and consultation line at 1-800-821-5821 or by fax to 1-800-293-7534.

More Information:
More information on arboviral illness is available at Maine CDC's Vector-Borne Disease website at http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/index.shtml.
Information on pesticides and repellents is available at the Maine Board of Pesticides Control website at http://www.maine.gov/agriculture/pesticides/public/index.htm#mosquito.

EEE and WNV updates: On the Positive Side

October 10th, 2012

It's been a difficult year for much of the country in regards to mosquito-borne disease, but Maine seems to have done relatively well, according to the most recent CDC update. Most mosquito activity is over for the year. The Maine 2012 season passed with no human cases, and relatively little animal disease due to EEE and WNV — probably thanks to many factors, including vaccination of horses and mosquito control for humans, pets, and livestock. Planning for mosquito control for next year is a good idea, and keeping equine vaccinations current is a big part of lessening the impact of EEE and WNV in Maine.

For more information, see "2012 US Arboviral Activity Update" (listed under Weekly reports) at westnile.ca.gov.

Tags: EEE, West Nile Virus

Posted in News

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- Eastern Equine Encephalitis (EEE) a Late Summer Risk
- Hantavirus in Maine 2012: Reducing the Risk
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Statistics, Surveillance, and Control

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West Nile Virus (WNV) Human Infections Reported to ArboNET, by State, United States, 2012 (as of October 16, 2012)

Human Disease Cases Reported To CDC					
State	Neuroinvasive Disease Cases	Non–Neuroinvasive Disease Cases	Total Cases*	Deaths	Presumptive Viremic Blood Donors†
Alabama	24	7	31	1	0
Arizona	52	31	83	4	23
Arkansas	40	15	55	6	4
California	163	122	285	11	50
Colorado	57	68	125	3	0
Connecticut	8	8	16	0	1
Delaware	1	6	7	1	0
District Of Columbia	2	0	2	1	0
Florida	38	17	55	2	4
Georgia	34	24	58	4	13
Idaho	4	10	14	0	2
Illinois	139	61	200	7	22
Indiana	40	28	68	6	15
Iowa	9	16	25	0	6
Kansas	17	23	40	2	0
Kentucky	4	2	6	0	3
Louisiana	118	121	239	11	32
Maryland	20	21	41	3	12
Massachusetts	18	6	24	1	0
Michigan	132	57	189	10	37
Minnesota	33	35	68	1	33
Mississippi	95	134	229	5	20
Missouri	13	5	18	4	8
Montana	0	5	5	0	0
Nebraska	29	107	136	1	36
Nevada	5	2	7	1	1
New Hampshire	1	0	1	0	0
New Jersey	20	22	42	4	4
New Mexico	20	18	38	1	6

New York	53	37	90	5	15
North Carolina	6	0	6	2	2
North Dakota	36	48	84	0	17
Ohio	69	42	111	5	16
Oklahoma	94	79	173	10	37
Oregon	0	3	3	0	0
Pennsylvania	17	7	24	2	4
Rhode Island	2	2	4	0	0
South Carolina	19	9	28	3	12
South Dakota	59	141	200	3	42
Tennessee	18	11	29	1	1
Texas	725	855	1580	55	58
Utah	3	2	5	1	0
Vermont	1	1	2	0	0
Virginia	16	8	24	3	2
Washington	3	1	4	0	0
West Virginia	3	3	6	0	0
Wisconsin	30	14	44	3	15
Wyoming	3	4	7	0	1
Totals	**2,293**	**2,238**	**4,531**	**183**	**554**

* Includes confirmed and probable cases.
†Of the 554 presumptive viremic blood donors, 84 (15%) developed clinical illness and are also included as "Human disease cases reported to CDC".

Neuroinvasive disease cases, refers to severe cases of disease that affect a person's nervous system. These include encephalitis which is an inflammation of the brain, meningitis which is an inflammation of the membrane around the brain and the spinal cord and acute flaccid paralysis which is an inflammation of the spinal cord that can cause a sudden onset of weakness in the limbs and/or breathing muscles.
Click here for further explanation of WN meningitis and/or encephalitis.
Click here for further explanation of acute flaccid paralysis

Nonneuroinvasive disease cases refers to typically less severe cases that show no evidence of neuroinvasion—primarily West Nile fever. WN fever is considered a notifiable disease, however the number of cases reported (as with all diseases) may be limited by whether persons affected seek care, whether laboratory diagnosis is ordered and the extent to which cases are reported to health authorities by the diagnosing physician.

See the case definition (2011) for Neuroinvasive and Non-Neuroinvasive Domestic Arboviral Diseases (includes diseases caused by California serogroup viruses; eastern and western equine encephalitis viruses; and Powassan, St. Louis encephalitis, and West Nile viruses).

Presumptive viremic blood donors (PVDs) are people who had no symptoms at the time of donating blood (people with symptoms are deferred from donating) through a blood collection agency, but whose blood tested positive in preliminary tests when screened for the presence of West Nile virus. Some PVDs do go on to develop symptoms after donation, at which point they would be included in the count of human disease cases by their state.

Total Human Cases Reported to CDC: These numbers reflect both mild and severe confirmed and probable human disease cases occurring in 2012 to ArboNET by state and local health departments. ArboNET is the national, electronic surveillance system established by CDC to assist states in tracking West Nile virus and other mosquito-borne viruses. Information regarding 2012 virus/disease activity is posted when such cases are reported to CDC.

Of the 4,531 WNV cases, 2,293 (51%) were reported as neuroinvasive disease cases and 2,238 (49%) were reported as nonneuroinvasive disease cases. Five hundred and fifty four WNV presumptive viremic blood donors (PVDs) have been reported at this time.

Please refer to state health department web sites for further details regarding state case totals.

Note: The high proportion of neuroinvasive disease cases among reported cases of West Nile virus disease reflects surveillance reporting bias. Serious cases are more likely to be reported than mild cases. Also, the surveillance system is not designed to detect asymptomatic infections. Data from population-based surveys indicate that among all people who become infected with West Nile virus (including people with asymptomatic infections) less than 1% will develop severe neuroinvasive disease. See: Mostashari F, Bunning ML, Kitsutani PT, et al. Epidemic West Nile Encephalitis, New York, 1999: Results of a household-based seroseroepidemiological

survey. Lancet 2001;358:261-264.

For Case Information:

2009|2010|2011
For these and other posted surveillance pages please visit the West Nile virus surveillance archives

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Content source: Centers for Disease Control and Prevention
National Center for Emerging and Zoonotic Infectious Diseases (NCEZID)
Division of Vector-Borne Diseases (DVBD)

Portland Press Herald

PRINTTHIS

<bAugust 31

How Maine's mosquito squad is tracking advance of West Nile

Sherrie Juris is on the front line of a small army of people collecting and counting mosquitoes as part of Maine's disease surveillance program.

By North Cairnncairn@pressherald.com
Staff Writer

Schoolchildren call her "the tick lady."

click image to enlarge

Sherrie Juris, a biologist with Atlantic Pest Solutions, explains how a gravid trap that she had just set up lures egg-bearing female mosquitoes with “stinky water,” then traps them.

John Ewing / Staff Photographer

Related headlines

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But Sherrie Juris, a biologist, does much more than teach about ticks and mosquitoes and how to be protected from the infections they carry -- Lyme disease and other tick-borne illnesses, West Nile virus and eastern equine encephalitis.

She's on the front line of a small army of people that the state of Maine has assigned to gather information on specific diseases where they often appear first: in mosquitoes.

In summer, Juris spends much of her time collecting and counting mosquitoes as part of Maine's disease surveillance program. With six monitors and 26 stations statewide, the program tracks insect populations to determine whether and where West Nile virus or eastern equine encephalitis has surfaced.

"People don't realize the legwork" that's involved in testing insects for infections that can be transmitted to humans, she said.

Juris and other trained site monitors practice a form of science that seems mostly low-tech and very labor-intensive for the critical job of informing the public about the spread of infectious diseases. It's good science, even if it's a little reminiscent of early human medicine or 8th-grade science projects.

Juris, for example, uses equipment that includes everything from women's nylon knee-high stockings to contraptions that call to mind Rube Goldberg inventions, designed from blackened liquor boxes (camouflage), plastic dish tubs (mimicking vernal pools), fishing tackle or tool boxes, PVC pipe, battery-operated mini-fans and covers of giant potato chip cans.

These traps and bait stations are relatively inexpensive essentials that do a reliable job in a crucial task -- monitoring mosquitoes for a range of infectious diseases.

Juris keeps track of 40 mosquito traps at five sites in York County. Whether it's in blistering heat, squalls of rain or balmy breezes, she heads out once a week into the field -- more precisely, the forest -- to set up traps and bait some of them with "stinky water," a repugnant blend of rotting straw and standing water.

"You don't want to spill this in your car," she said.

The traps operate for one day and one night, in most cases at least 15 to 24 hours, attracting and snaring mosquitoes and other insects. The next morning, Juris returns, collects the mosquitoes and returns to a modest lab in a small cottage in Arundel. She uses a microscope, tweezers and intense concentration to count and identify every single mosquito and separate the whole take into specific genus and species.

"When you look for a while" through the microscope lens, she said, "your eyes get kind of boggly."

Juris isn't counting dead bugs. The various traps for mosquito-monitoring harvest live mosquitoes, which are kept in chilled coolers and then transferred to Petri dishes on dry ice. The cold keeps the mosquitoes sleepy.

The state is interested now in testing only six species of mosquitoes, those in which diseases have been found. Juris, who works for Atlantic Pest Solutions in Arundel, a state contractor in the program, records the number, genus and species of the mosquitoes she captures.

Afterward, the insects, dead, are driven to Maine Medical Center in Portland. Once again, the numbers are confirmed and documented, then the insects, frozen and packed in dry ice to preserve their DNA, are shipped off by courier to the health and environmental testing lab in Augusta.

Maine Medical Center is a kind of "bug hub" in the surveillance work: Mosquitoes from all over the state are delivered to the lab there, arriving in test tubes, called pools, containing from one to 50 mosquitoes.

The samples come from the 26 stations -- some with several traps -- around York, Cumberland, Waldo, Kennebec and Aroostook counties, said Chuck Lubelczyk, a field biologist who supervises the Maine Medical Center portion of the work.

"We like to think of ourselves as flying-on-our-feet scientists," said Lubelczyk. Describing a small vacuum that sucks mosquitoes into a trap, he said it "involved a lot of tinkering (and) was a long time in the making."

"It's a fun science," he said -- a good thing, since the tests detect some sobering illnesses. To make it all work, he said, "we are regular shoppers at hardware stores."

When the mosquitoes reach their destination in Augusta, they are "ground up, mushed together" before DNA testing is done for specific human and animal diseases, said Sara Robinson, an epidemiologist with the infectious-disease division of the Maine Center for Disease Control and Prevention.

If any test turns up positive for, say, West Nile virus or EEE, it is repeated to double-check the finding, she said. Only when it is re-confirmed is it deemed a clearly positive result and reported to local authorities.

Once local authorities have been contacted, a public announcement can be issued -- the end of an intricate, if unromantic, chain of detective work.

"It's not a glamorous job ... but I love this," Juris said as she vacuumed out a black box during a routine check at the margin of a forested area.

"Yeah, mosquitoes excite me," she said. "There's a lot of information that we get from them. They don't have a voice, but they can speak volumes."

Staff Writer North Cairn can be contacted at 791-6325 or at:

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Portland Press Herald

September 10

Mainers' fear of West Nile, EEE takes off

The mosquito-borne illnesses are spreading steadily northward and seem to strike 'out of the blue.'

By North Cairnncairn@pressherald.com
Staff Writer

With the deaths last week of one Massachusetts man from West Nile virus and another from Eastern equine encephalitis, concern about mosquito-borne illnesses has spiked anew throughout New England.

Related headlines

- **How Maine's mosquito squad is tracking advance of West Nile**

Health officials in Massachusetts also have confirmed three new West Nile cases in women; two from the Boston area and one from Middlesex County, which has had the most cases. All are recovering.

In total, there have been 13 cases of West Nile this year in the Bay State, up from six last year, and two of EEE, one of which officials believe may have been contracted outside the commonwealth.

In Maine, no person has been infected this summer by either EEE or West Nile virus, but the steady spread northward of the two diseases has sparked renewed concern -- and, in some cases, fear. It has been expressed in various ways, from the use of pesticide spraying to changing ordinary routines of spending time outdoors.

In Maine, the focus has been on West Nile virus, though of the two diseases, EEE is the far more virulent and serious, public health officials say. In fact, EEE is quite often fatal, while many people infected by West Nile will never become ill or be aware they were exposed to the virus.

Even so, recent fatalities in neighboring states and reports of West Nile being found in Maine in mosquito-surveillance pools in Lebanon and Standish have heightened awareness, and with it, alarm. Officials in the MSAD 60 regional school district, which includes Lebanon, decided in late August to have the margins of two elementary school properties sprayed to create a buffer zone to protect returning students and community residents using playgrounds and athletic fields.

Such responses have led some homeowners to seek advice from professional pesticide-application companies about whether spraying would be appropriate in their yards. The number of calls from individual homeowners began to pick up after the Lebanon school spraying, said Ted St. Amand, owner of Atlantic Pest Solutions in Arundel.

Anxieties only rose further when the virus was found in a blood sample from a Pennsylvania woman who had been infected in her home state but sickened by the virus while visiting Maine.

St. Amand, whose company handled the spraying of the Lebanon school properties, said no other school districts had inquired about spraying, but private individuals were calling more frequently. His company does not automatically recommend the use of pesticides, he said, but instead thoroughly assesses the

likely level of risk and what methods of prevention or protection might be most appropriate for a family or neighborhood.

But the calls alone have demonstrated that people are nervous about the situation, he said, and worried about what might happen before a hard frost quells the mosquito population in the fall.

Many state officials have consistently advised that residents limit their exposure to mosquitoes rather than apply broad-spectrum pesticides, which do not simply target mosquitoes but indiscriminately kill all insects in a spray zone.

Several entomologists -- including the head of the Maine Entomological Society -- have said specifically that pesticide use is unwise and dangerous, particularly in light of the stresses on other declining insect populations, including pollinating bees, important to agriculture. James Dill of the University of Maine Cooperative Extension, in contrast, has advocated at least limited spraying as an effective preventive measure.

But about one thing there's no debate: There's something about West Nile virus that has people on edge.

Whatever that is, it isn't entirely irrational, public health officials say. Though it is by no means the nation's leading public health threat, this year has brought a significant uptick in reported cases, to more than 1,100 by the end of last week. Most of the illness, which was first discovered in the U.S. in 1999, has occurred in the South, much of it concentrated in Texas and Lousiana. Eighty-seven people have died.

And there is something about its seemingly inexorable spread that scares people. Google "West Nile virus 2012" and what comes up is a jigsaw of states with active cases, or deaths: Texas, Louisiana, Massachusetts, Mississippi, New Jersey, Washington, Georgia, California, Michigan, Indiana and more.

Part of the worry has to do with the continuing -- some would say, unrelenting -- media coverage of every single development in the story of the virus and its victims. It almost seems like "a feeding frenzy of some kind," said Maine state epidemiologist Dr. Stephen Sears, who has been busy for weeks dealing with the daily business of West Nile, EEE and infectious other diseases, while also fielding countless media calls.

"I'm not blaming the press," Sears said, but the accretion of coverage can leave "the impression of (the virus) being overwhelming. If we add to that EEE" -- and people see disease statistics mounting and the death count climbing -- "how do we make (the) message clear" that it is important to stay informed but not be afraid?

It becomes all the more difficult because, in fact, this has been "one of the more significant years" for these viruses, said Sears. "It's of concern" in Maine, "because we have all these potentials" that could mushroom into real problems, Sears said.

"Sooner or later someone will get exposed and will get sick," he said. "It appears immediate (but) without specific reason."

People become even more apprehensive because West Nile "strikes sort of out of the blue," Sears said. And EEE seems to attack "absolutely out of the blue" -- and ferociously.

"Why does it happen to one person and not another?" Sears said. "What's the trigger? There's no science on that. It's a range of things."

But it is precisely that seemingly random nature of the virus that contributes to making it more frightening than other illnesses and creates a public information nightmare for health officials. People often confuse the West Nile and EEE, said Sears, because both are inflicted through bites from infected mosquitoes.

Part of it, too, said Joanna Torow, chief educator at the Maine State Museum in Augusta, lies in "the name

of it being so exotic." People hear "West Nile virus," she said, and it triggers an subconscious xenophobia -- an unreasonable fear of foreigners or strangers viewed as outsiders, or of their way of life. They think of "this thing that's coming from Africa," she said. It taps into irrational fears and misinformation about other deadly diseases -- like ebola or AIDS -- that emerged in that part of the world.

However, many diseases that carry tags with names of particular places do not reflect where the disease may predominate or even originate, Sears pointed out. Rocky Mountain spotted fever, for example, is a disease of unknown origin but is concentrated in North Carolina, not in the West.

But, with West Nile, the name alone gives "some cache to it ... an exotic nature," he conceded.

"It's very exotic; it sounds a little scary," Torow said. And for many people, "the more they hear about it, the more aware they are and the more they think about it.

"We want to be cautious not to overreact," said Torow, who heads up the state's annual Bug-MAINE-ia celebration, a one-day event to acquaint school-age children to the wonders of the insect world. Now in its 10th year, Bug-MAINE-ia attracts nearly 2,000 students to Augusta, for a message that's "just the opposite" of the upsetting news many people are hearing these days. The event teaches that when it comes to insects, "some are creepy and some are really beautiful."

It's not as hard a sell as you might think in these days of mosquito-borne disease, said Torow, who was introduced to the insect world by way of art. Studying these creatures, she marveled at the way their bodies are constructed and how form and function correspond with such intricacy and beauty.

"There's a lot of good bugs" that need to be preserved, she said, adding that often "adults seem more uncomfortable" than children about insects and have "a more fixed attitude" about keeping them at a distance.

But, here again, facts might help soothe the fear. Even with West Nile and EEE, the odds are against contracting the disease, Sears said.

"There are 45 different species of mosquitoes. Only five or six are associated with these diseases," he said.

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Find this article at:
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Public Safety

State Officials Announce Seventh Human Case of EEE, Remind Residents to Take Caution

A Plymouth County resident was diagnosed with EEE.

By Patrick Maguire | Email the author | September 26, 2012

Related Topics: EEE in Massachusetts

A seventh human case of Eastern Equine Encephalitis was found in Massachusetts yesterday.

A Plymouth County male under the age of 18 was diagnosed with the virus, the Massachusetts Department of Public Health announced.

It is the second human case from Plymouth County. Other human findings have been Middlesex, Worcester, Franklin and Essex Counties. Two of the human findings have resulted in death.

So far, no human cases have been reported in Mansfield or anywhere in Bristol County.

“Summer may be over but the threat of mosquito-borne illness is not — we can expect to continue seeing mosquito activity until the first hard overnight frost,” said DPH State Epidemiologist Dr. Al DeMaria said in a statement. “People need to continue to use insect repellant, cover up exposed skin, and avoid being outdoors at dusk and after nightfall when mosquitoes are at their most active.”

For more information on EEE, click here.

Portland Press Herald

September 11

30 Maine pheasants die from EEE virus

By Dennis Hoeydhoey@mainetoday.com
Staff Writer

The Maine Center for Disease Control and Prevention has confirmed that 30 farm-raised pheasants died recently in the town of Lebanon from eastern equine encephalitis -- a rare but serious viral disease spread by mosquitoes.

Lebanon Selectman Jason Cole said Dr. Stephen Sears, the state epidemiologist, notified board Chairman Robert Frizzell on Monday that EEE had been found in the flock of pheasants.

Cole said all of the pheasants died around the same time, prompting the farm's owner to contact state officials.

Tests done by the state confirmed the pheasants died from being infected with EEE.

The town's three selectmen met Monday afternoon and decided to issue a statement in hopes of averting a townwide panic, Cole said. The statement was issued late Monday.

"The Lebanon Board of Selectmen wants to make sure that the residents are aware of the situation and are provided the facts that we were provided. There is no need for alarm, we simply want to ensure the residents have the information that we have been provided so they can make the appropriate safety measures," Frizzell said in the statement.

Cole said the state would not disclose the location of the farm where the pheasants died, but he said there are about two dozen farms in Lebanon, a York County town that borders Rochester, N.H.

West Nile virus and EEE have been spreading north from Massachusetts, where health officials have confirmed three new West Nile cases in women.

All of those victims are recovering.

In total, there have been 13 cases of West Nile virus in Massachusetts and two EEE cases. In Maine, no person has been infected by EEE or West Nile virus.

EEE is considered to be far more virulent and serious.

Maine's first case of West Nile virus was detected in a mosquito pool in Lebanon. The mosquitoes were collected Aug. 1, and the positive test results were confirmed on Aug. 17.

Since that test was conducted, no other mosquito pools in Maine have tested positive for the virus.

EEE typically affects people and horses, but it can also sicken captive birds such as ring-necked pheasants, emus, ostriches, quail and ducks. EEE can occur occasionally in livestock, deer, dogs, reptiles and amphibians.

Mosquitoes are known to breed in low-lying areas and standing pools of water, which are common in

Lebanon, Cole said. There are several swampy areas along Route 202, for instance.

Cole said residents may want to consider using DEET insect repellent. EEE is transmitted by the bite of a mosquito.

"We don't want to cause panic, we just want people to know that this is out there," Cole said.

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WICKED LOCAL EASTON
WITH NEWS FROM THE EASTON JOURNAL

Frost ends EEE threat; Easton lifts dawn-to-dusk ban

By Susan Parkou Weinstein
Wicked Local Easton
Posted Oct 18, 2012 @ 01:42 PM

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Easton — The EEE threat is officially over in Easton as the health board confirmed the first hard fros of the season and lifted a recommended dusk to dawn curfew.

The recorded 28-degree nighttime temperature on Oct. 12 killed off any Eastern equine encephalitis-infected mosquitoes and threat of human disease.

“The big news is that there were no cases of EEE in Easton. I think we can all agree that the precautio that everyone took helped with that,” Town Administrator David Colton said Monday.

Local health officials had issued advisories to curtail dusk to dawn ball games and outdoor activities following the first reports of EEE in trapped mosquitoes in Easton.

The reports put Easton and surrounding communities at critical risk for contracting disease.

While there were seven human cases of EEE and two-EEE related deaths in Massachusetts this year, there were no reported human cases of EEE in Easton or anywhere in Bristol County.

The health board also adopted a regulation giving it the authority to ban many outdoor activities duri a heightened threat of mosquito-borne disease. It never had to put that authority into action.

Easton Health Agent Mark Taylor thanked local residents, school groups and recreational organizatic for their cooperation in following the board’s guidelines.

“Due to this fact the board of health feels that at this time it is safe to lift the recommendation urging the curtailment of nighttime activities. This has been a historic year for mosquito infection as well as infection in humans in the state of Massachusetts. Because the efforts of all those involved of the schools and sports groups, there has not been a single confirmed case of West Nile virus or EEE in a human in the town of Easton,” Taylor wrote in his announcement on Oct. 15.

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DAILY NEWS
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October 3, 2012

Official: EEE claims another life

By Angeljean Chiaramida
STAFF WRITER

GEORGETOWN — It appears that a second person from the local area has died after contracting Eastern equine encephalitis.

Georgetown health officials say an elderly man who matches the age and address of a man that the state reported had contracted the mosquito-borne illness died on Sept. 27. However, the state cannot confirm the death, because it is not required to keep track of such statistics.

The man was the first confirmed case of EEE in the northeast region of Massachusetts, the second being an Amesbury woman, Charlene Manseau. Both diagnoses were confirmed by the state Department of Health and reported to local health authorities, however the state did not release the names of the victims.

Manseau's EEE diagnosis was confirmed by family members who spoke with The Daily News. The paper contacted a member of the Georgetown man's family, but did not receive a response.

On Saturday, Sept. 24, Manseau died after contracting Eastern Equine Encephalitis. The 63-year old wife, mother, grandmother and retired nurse had battled cancer twice, and was in remission when the diagnosed with EEE. Family members said they believe cancer treatments may have suppressed her immune system, leaving her more vulnerable to EEE. Doctors say the elderly, the young and people battling illnesses are particularly vulnerable to EEE.

The Georgetown and Amesbury diagnoses of human EEE cases brought the total number of human EEE case in the state to six.

Although many in Georgetown believe the man who had been hospitalized with EEE died of the illness, the Department of Public Health hasn't called to pass on any information in that regard, according to Georgetown Health Agent Deb Rogers. Amesbury Health Agent Jack Morris, also said the DPH never contacted Amesbury to report that its EEE case resulted in a fatality.

According to state public health officials, that's usually the case.

Kevin Cranston, director of the state Bureau of Infectious Disease, said although his agency's regulations require the medical community to report the incidence of infectious diseases like EEE when it's diagnosed, the bureau's regulations do not require the medical community to notify the agency on the "clinical outcomes" of victims. Cranston said no one is required contact state health officials when someone dies.

Cranston said the roll of public health departments especially in cases of infectious diseases is to determine the risk to the public in various cases of illness and death. As a result, the bureau has regulations that require the medical community to report the diagnoses of cases of a long list of reportable diseases, such as EEE.

But, Cranston said, there is no requirement for clinicians to get back to the bureau to report on deaths from those same diseases or to report on recovery.

"We're very concerned about the well being of these human beings," he said, "but we don't have the authority to require their outcomes be reported to the bureau."

Cranston said ultimately, all deaths through death certificates are reported to the public health department's bureau of vital statistics. From the cause of death listed on the certificates, state health officials can create the statistics that provide information about how and why residents fall ill and die. But an illness like EEE isn't always listed as the cause of death, he said. The death could be listed as heart or respiratory failure.

According to the Center of Disease Control and Prevention, EEE is one of many reportable illnesses, meaning medical authorities must notified their state public health departments when any such designated illnesses are diagnosis. Public health authorities in each state then send their statistics on these diseases to the CDC for compilation and review.

Notifiable illnesses include many communicable diseases, including anthrax, cholera, diphtheria, plague and tuberculosis, as well as influenza, measles, polio, tetanus and rubella, along with many others.

1st 2 human EEE cases confirmed in Vermont

BURLINGTON, Vt. (AP) — Two people have been hospitalized in Vermont with Eastern Equine Encephalitis, the state Health Department said Saturday, confirming the state's first human cases.

Both cases involve adults from the Addison and Rutland counties in western Vermont, where mosquito pools recently tested positive for EEE and West Nile virus, the department said. The first and only confirmed cases of EEE in animals to date occurred in September 2011 in emus.

Like West Nile virus, EEE is spread by the bite of an infected mosquito. With the human cases confirmed, health and agriculture officials are considering an aerial spraying program as early as next week, weather permitting, for the area where EEE was detected.

''The severe form of EEE is a terrible disease, and we want to take every reasonable action to prevent people from becoming infected,'' Health Commissioner Harry Chen said in a statement. ''These viruses will continue to circulate until the first freeze. Although spraying will help reduce the risk of infection, it's important that we all take personal precautions to avoid mosquito bites no matter where we live.''

Elsewhere in northern New England, suspected cases of EEE and West Nike were reported in Maine in August. EEE was found in August in a mosquito batch in New Hampshire, the first time an animal tested positive for the disease there since 2010.

In Vermont, infectious disease epidemiologist Erica Berl said mosquito surveillance is limited. While EEE and West Nile have been detected in one area of the state, Berl warned Vermonters that the viruses could be circulating anywhere.

People infected with EEE can develop two types of illness. One comes on suddenly and is characterized by chills, fever, malaise, joint and muscle pain, and lasts about one to two weeks. The more severe illness affects the central nervous system and causes fever, headache, irritability, restlessness, drowsiness, convulsions and coma. About one-third of people with severe EEE die from the disease, the health department said.

Most who get West Nile show no symptoms. But up to 20 percent of those infected have symptoms such as fever, headache and body aches, nausea and vomiting. About one in 150 people infected with West Nile virus will develop severe illness, which can also be fatal.

To avoid getting bitten by mosquitoes, officials suggest wearing long sleeves and pants, avoid being outdoors at dusk and dawn, get rid of standing water and using repellents. Also, officials say, horses, emus, llamas and alpacas should be vaccinated. There is no vaccine for humans.

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Online:

Health Department's website: http://healthvermont.gov/prevent/arbovirus/index.aspx

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Local Authorities Report State's 3rd EEE Death

By Jack Lepiarz October 3, 2012

BOSTON — A Georgetown man is the third person to die of Eastern equine encephalitis in Massachusetts this year, officials confirmed Wednesday.

Georgetown town manager Michael Farrell says 76-year-old Jack L'Hommedieu died Sept. 27. The case has not been confirmed by state health officials.

An obituary for L'Hommedieu in the Newburyport Daily News listed him as a graduate of MIT and a former carpenter, fisherman and lobsterman.

The family of 63-year-old Amesbury resident Charlene Manseau said she died in September as a result of complications from EEE. Officials have said a Worcester County man in his 70s also died earlier this year.

State public health officials have reported seven human cases of EEE in Massachusetts so far this year, as well as 20 cases of West Nile Virus.

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BIGGEST AERIAL SPRAYING IN BAY STATE LEAVES BIG QUESTIONS —
Mosquito Spraying for Equine Encephalitis Lacks Permit and Adequate Monitoring

Boston — This past weekend, the State of Massachusetts undertook what is thought to be its largest aerial spraying of pesticides covering nearly 400,000 acres and 21 communities. By using the pretext of a new emergency, the state improperly evaded Clean Water Act protections according to Public Employees for Environmental Responsibility (PEER). PEER has asked for a federal investigation.

The massive spraying was triggered by the trapping of mammal-biting mosquitos which tested positive for Eastern Equine Encephalitis (EEE) on July 9th. On July 17th, the state Department of Public Health declared a pest emergency to justify aerial spraying over Bristol and Plymouth Counties through September 30, 2012. The spraying took place July 20th, 21st, and 22nd.

Typically, aerial spraying of pesticides requires a federal pollution discharge permit but the permit may be dispensed with if the application is done “less than ten days after identification of the need for pest control” – a requirement violated in this case. In addition, PEER charges that the state knew it would conduct aerial spraying in this area for months and is inappropriately using an emergency declaration to avoid the need for a permit. The permit is not merely red tape, in that PEER argues it allows public review of –

- The type of pesticide used. Massachusetts is using a synthetic compound called Anvil which contains an ingredient classified by the U.S. Environmental Protection Agency (EPA) as a possible human carcinogen;
- Scientific data that explains the basis for the scope of the proposed aerial spraying, together with a Pesticide Discharge Management Plan; and
- The Commonwealth’s efforts to minimize the discharge of pesticides to waters of the United States, including the evaluation of alternatives to aerial spraying.

“By lurching from emergency to emergency, Massachusetts clings to an uncoordinated posture which precludes effective preemptive strikes against the mosquitos carrying EEE,” stated New England PEER Director Kyla Bennett, a biologist and attorney formerly with EPA, pointing out that state officials admit they have no data showing whether or how effective their spraying is. “Aerial spraying is like superstition – people are afraid to stop even though they know there is no rational basis for it.”

PEER is asking the EPA Office of Inspector General to examine whether Massachusetts is skirting federal law, which includes a requirement that spraying programs undergo comprehensive efficacy studies – a process that has yet to even begin in Massachusetts.

“We should be looking at more efficient and less environmentally damaging methods

of preventing outbreaks of mosquito-borne diseases, including elimination of suspected carcinogenic chemicals in the ingredients of pesticides," Bennett added.

EEE is frequently found in mosquitoes in southeastern Massachusetts. It is fatal to between a third and a half of people infected. There is no treatment for EEE and people who survive it often experience permanent disabilities.

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Read the PEER complaint to the EPA Inspector General

Look at the state declaration of a pest emergency

See the spray area map

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September 19, 2012
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Pesticide Spray Success Claims Against West Nile-Carrying Mosquitoes Questioned By Critics

Posted: 09/18/2012 9:04 pm Updated: 09/18/2012 11:00 pm

Pesticide spray from airplanes has killed vast numbers of West Nile virus-carrying mosquitoes, some officials say.

Massachusetts boasted a 60 percent kill rate. Vermont claimed up to 69 percent. And, in Texas, a preliminary report suggested that aerial spraying of pesticides eliminated 93 percent of disease-carrying mosquitoes in some neighborhoods.

Over the last couple months, officials from across the country have engaged airplanes armed with pesticides in an attempt to battle mosquitoes that carry the West Nile virus, on track to infect more people this year than ever before in the U.S., and eastern equine encephalitis, a less common but generally more dangerous disease. The decisions to spray have often been made under heated opposition from residents and some scientists concerned about what they say is an ineffective and unsafe strategy. Nevertheless, in at least a few cases, officials subsequently reported high success rates and few health complaints.

"This is what we hoped to see. It's a meaningful reduction," said Roger Nasci, chief of the arboviral diseases branch of the U.S. Centers for Disease Control and Prevention, referring to very preliminary data from Dallas that suggested mosquito kills as high as 93 percent from aerial sprays in late August. "All things together, no one is going to say it is 100 percent positively safe. But the level of concern for risks to human health is low and certainly outweighed by the risk of West Nile."

Some remain skeptical, going as far as to threaten legal action.

"I don't believe those figures. Frankly, I don't think they're real," said David Pimentel, an emeritus professor at Cornell University, when shown the reported kill numbers from Massachusetts, Vermont and Texas. "I've done enough to know that it's not easy to kill those little devils. And measuring the kill of mosquitoes is not easy to do."

Kyla Bennett, director of the non-profit New England Public Employees for Environmental Responsibility, acted on her doubts. On Aug. 8, after reading a press release that reported July aerial sprays across nearly 500,000 acres of southeastern Massachusetts had killed approximately 60 percent of eastern equine encephalitis-carrying mosquitoes, she filed a public records request for the supporting data. Two weeks later, on Aug. 22, she appealed to the state, noting that she had not yet received any records backing up the kill claim. A response from the state supervisor of records arrived in her mailbox Monday, saying the Department of Public Health is "identifying records responsive" to her request.

"How hard could it be to search for that data? It should be at their fingertips if they issued this press release," said Bennett, a former U.S. Environmental Protection Agency worker who lives in southeastern Massachusetts. "This makes me even more suspicious that the 60 percent number isn't accurate.

"We are thinking of taking legal action at this point," Bennett added.

The Huffington Post also filed a formal public records request for the data on Monday, after being repeatedly told by the state Department of Public Health they had no one available to speak.

(Massachusetts Public Health Commissioner John Auerbach resigned this week in an unrelated scandal.)

"It is important to know how these numbers were generated," said Jay Feldman, executive director of the non-profit Beyond Pesticides. "The burden is on the regulator to show that there is efficacy. The data that is available calls that into question."

Some of the data questioning aerial spraying's effectiveness comes from the research of Cornell's Pimentel, who has found that up to 90 percent of an aerial spray misses the target and drifts away into the environment, poisoning beneficial insects such as bees.

Under ideal conditions -- with few trees to block the chemicals' descent and calm weather -- Pimentel suggested it might be possible to kill 60 percent of the mosquitoes. Southeastern Massachusetts is heavily wooded and Pimentel added that any success may be short-lived given the

short life cycle of the mosquito. Post-spray mosquito counts around Dallas, for example, were generally completed within a day or two and compared with counts from the weeks prior to the spray.

Further, Pimentel said he is concerned that spraying contributes to the development of pesticide resistance in mosquitoes, which may lead to less successful efforts against mosquito-borne diseases in the future. As HuffPost previously reported, this issue is being addressed by California officials, who added more toxic pesticides to their aerial spray cocktail this year.

Charles Apperson, a public health entomologist at North Carolina State University, said he is less concerned. "If you make repeated sprays over years, there is potential for resistant populations to develop," he said, referencing the well-known resistance resulting from the ongoing use of pesticides in Africa to combat malaria. "But in a place like Dallas, where they hardly ever spray, there is not much danger of resistance."

As for the effectiveness of aerial spraying, Apperson noted that it is highly variable. "People against spraying can sure find instances where it doesn't work," he said. "But there are a lot of instances where it does work."

Some individuals who oppose spraying have also raised concerns that exposure to even minute doses of the EPA-approved pesticides used in aerial spraying could pose risks to human health, from asthma attacks to hormone problems. At particular risk, they say, are children.

"I am worried," said Vanessa Van Gilder of Dallas, who launched a Change.org petition opposing the aerial spraying that, as of Tuesday, had accumulated 2,127 signatures. "How many times have they told us something was safe and then 10 years later it comes out that it's not safe?"

While Nasci and Apperson said they doubt any meaningful health risks are posed by the tiny pesticide droplets -- often less than one ounce per acre is used -- everyone interviewed agreed that the most important component of mosquito control is addressing the pests before they take to the air as adults. That means applying larvacides to mosquito breeding grounds, including standing water. It also means educating residents on how to eliminate standing water and of the importance of personal protection such as bug sprays and clothing that fully covers the skin.

"I'm not terribly in favor of spraying, but during times when people are getting sick and dying, we have to take action," said Apperson. "When you have a disease outbreak, the quickest way to bring down and stop transmission is by aerial spraying."

Residents protest mosquito spraying in Doylestown

By Christina Kristofic Staff Writer | Posted: Wednesday, October 17, 2012 12:15 pm

A group of about a dozen Doylestown residents attended a meeting of the Doylestown environmental advisory council this week to protest mosquito spraying in the area.

They questioned the reasons Bucks County sprays for mosquitoes, the toxicity of the chemicals the county uses, what the county does to notify residents that it intends to spray an area and whether the county attempts to get rid of mosquitoes through natural methods.

“I don’t want anyone to get West Nile virus. I don’t want anyone to get sick ever,” said Vonna DeArmond.

But DeArmond said she thought the county and the borough need to do something to protect people and animals who might be sensitive to chemical sprays, like she is.

Phil Smith, West Nile virus program coordinator for the Bucks County Department of Health, said people who are sensitive to chemicals can register with the state Department of Agriculture’s hypersensitivity registry. They will get extra alerts when the county plans to spray.

Smith said Bucks County has had a broad pest management strategy for the past 12 years: “Probably none of you even knew it.”

Starting in the spring of each year, county employees treat public lands — parks, ponds, street drains and retention basins — with a bacteria called bacillus thuringiensis (BTI). Smith said the bacteria kills mosquito larvae, but is not harmful to anything else.

The county will treat private property with BTI if it receives a written complaint about the property.

County employees then set up traps in different areas — public and private — around the county. There could be three to six traps in a municipality at a time.

County employees send the mosquitoes they trap to a laboratory in Lionville, Chester County, which tests mosquitoes for West Nile virus. If the lab finds that 50 mosquitoes in any one trap test positive for West Nile, county officials look at where the positive results came from and decide whether to spray.

Smith said five traps in Doylestown had more than 50 mosquitoes that tested positive for West Nile virus, so the county decided to spray in the borough. This was the first year the county did so. Smith said the spray the county chose is the safest spray it could find.

The county sent a press release to local media and Doylestown sent information about the spraying through its D-Mail system. Smith said the county does not use the emergency call system because it costs $5 per call, and the health department doesn’t have the money.

County employees sprayed the area on Sept. 6.

After county employees sprayed Doylestown, they came back and set up mosquito traps again. Smith said none of the traps had mosquitoes that tested positive for West Nile.

Smith said his staff sprayed adult mosquitoes elsewhere in Bucks County, and Doylestown residents were the only residents who opposed it so strongly that they requested a meeting.

Smith said the natural methods of dealing with mosquitoes that residents suggested are hard to control. He said native fish, tadpoles and bats eat mosquitoes, but the natural populations of those animals aren’t really going to grow.

Members of Doylestown’s environmental advisory committee said they will take residents’ comments and Smith’s comments under advisement, and discuss mosquito spraying again at their next meeting. The environmental advisory council will meet at 7:30 p.m. on Tuesday, Nov. 20.

Spraying for EEE criticized

By Meg Murphy Globe Correspondent / September 26, 2012

A vocal array of critics is demanding state health officials verify that aerial spraying of pesticide is an effective means of wiping out mosquitoes infected with the Eastern equine encephalitis virus.

The virus has infected seven people in the state this year and killed two. On Monday, a 7-year-old Marshfield boy with a bug bite was diagnosed with the disease.

The state Department of Public Health has blanketed 21 communities south of Boston with pesticide to prevent mosquitoes from spreading EEE, which kills more than 30 percent of humans who contract the disease and is at its highest level in three decades in Massachusetts.

“Aerial spraying is an unusual event and one we only recommend when the risk to human beings warrants it,” said Kevin Cranston, director of the state health department’s Bureau of Infectious Disease.

Environmentalists, organic farmers, and wildlife specialists say they are as sensitive as others to the public health threat posed by mosquitoes carrying the EEE or West Nile viruses. But state health officials should find a smarter solution than spraying pesticide from planes, they say.

From the epicenter of the EEE outbreak, Easton resident Kyla Bennett, director of the New England chapter of Public Employees for Environmental Responsibility, wants to know if the state made real headway by dumping pesticide on 478,308 acres in Southeastern Massachusetts, including her home and garden. Some communities, including Bridgewater, Easton, Norton, Raynham, Taunton, and West Bridgewater, were sprayed twice.

“I understand we are facing an extremely serious problem with mosquitoes causing illness and death, and that is an absolute tragedy,” she said in an interview.

“People see relatives or friends getting West Nile or EEE and dying. But what they don’t see is the long-term impact in 20 years of spraying these toxins that are getting in our water and on our vegetables,” she said.

Officials have repeatedly said the state’s chosen product, Anvil 10 + 10, a combination of sumithrin and piperonylbutoxide, has very low toxicity to humans and animals and breaks down rapidly in sunlight. It has proven itself a useful tool, they say.

“Following aerial spraying, we have seen a significant reduction in the volume of mosquitoes,” Public Health Commissioner John Auerbach said in a press release about a week after the July 20-22 operation. He said it wiped out approximately 60 percent of the mosquitoes in the areas hit.

But Bennett, a biologist and attorney formerly with the US Environmental Protection Agency, said the application of logic — not plane-delivered pesticide — is a necessary first step in dealing with a health scare. Aerial spraying may not be the smartest approach, said Bennett, who has a doctorate in ecology and evolutionary biology. She said pesticide droplets dispensed from a plane do not land on mosquitoes accurately, citing several studies that show mortality rates of 34 percent or below — even as low as zero — for mosquito populations in vegetated areas.

Aerial spraying targets only flying adults, not the eggs, larvae, or pupae, which means mosquito control lasts a week at most, she said.

“We should be working our butts off to find an alternative solution. I think the mosquito problem is only going to get worse. There has to be a better way than spraying,” she said.

According to Cranston, the Department of Public Health found high EEE infection rates among mosquitoes in southeastern Massachusetts appearing much earlier than in previous years. Since most mammal-biting mosquitoes live from spring until late summer, and can fly from 2 to 9 miles in search of nightly blood meals — typically from birds, horses, or humans — health officials anticipated a high risk of virus transmission to humans, he said.

Aerial spraying only has a transient impact on the mosquito population, but health officials use it to interrupt the life cycle, he said, adding the approach was a proactive response to signals of looming trouble. “This year turned out to be very bad. It is one of the worst years in the decade,” he said, adding state data show “you can reasonably say the spray helped drop the infection rate.”

A minimal-risk pesticide is effective when sprayed, as it was, with a low-volume, ultra-fine mist at night to hit mosquitoes and not

“non-target” insects, such as honey bees. The state compared mosquito trapping data from before and after the aerial spray, he said, calculating the kill rate at about 60 percent.

Vegetation poses a challenge, but the operation takes place at peak wind and weather conditions so the spray makes contact with the highest possible number of mosquitoes. GPS-guided planes avoid water supplies and organic farms, he said.

Meg Murphy can be reached at msmegmurphy@gmail.com.

www.chicagotribune.com/sns-rt-usa-healthwestnilel1e8lhda1-20121017,0,2851379.story

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US West Nile outbreak second-worst at more than 4,500 cases

Reuters

11:56 AM CDT, October 17, 2012

By Marice Richter

DALLAS, Oct 17 (Reuters) - The number of West Nile virus cases across the United States has topped 4,500, with another 282 cases reported last week, making 2012 the nation's second-worst year on record for the mosquito-borne disease, government figures showed on Wednesday.

The Centers for Disease Control and Prevention said 4,531 cases have been reported this year, the highest number since the record outbreak of 2003, when 9,862 cases were reported.

Another 15 deaths from the disease were reported last week, bringing the total to 183, the CDC said.

Almost 70 percent of the cases have been reported in eight states: Texas, California, Louisiana, Mississippi, Illinois, South Dakota, Michigan and Oklahoma. More than one-third were in Texas, with Dallas-Fort Worth at the center of the outbreak.

Just over half of the cases reported to the CDC this year have been of the severe neuroinvasive form of the disease, which can lead to meningitis and encephalitis.

The milder form of the disease causes flu-like symptoms and is rarely lethal.

(Editing by Paul Thomasch and Doina Chiacu)

BANGOR DAILY NEWS

Vermont man dies of EEE mosquito-borne virus

The Associated Press
Posted Sept. 05, 2012, at 8:58 a.m.

BURLINGTON, Vt. — One of two people in the western Vermont counties of Rutland and Addison infected with a mosquito-borne virus has died.

A Vermont Health Department spokesman told the Rutland Herald (bit.ly/PZuGNE) that the man died Tuesday. He was infected with Eastern equine encephalitis.

Vermont Health Commissioner Dr. Harry Chen was expected to talk about the death at a meeting in Brandon on Tuesday night to discuss spraying pesticides for mosquitoes.

Like West Nile virus, EEE is spread by the bite of an infected mosquito. The illness can come on suddenly, characterized by chills, fever, malaise, joint and muscle pain. A more severe case can affect the central nervous system and put the person in a coma. About one-third of the people with severe EEE die from the disease.

VPR News

Health Dept: EEE Threat Continues

Tuesday, 09/25/12 12:30pm and 7:30pm

LISTEN (24:23) MP3 | Download MP3

Jane Lindholm, Produced by Patti Daniels

AP/Pat Wellenbach

A Cattail mosquito is inspected at the Maine Medical Center Research Institute in South Portland, Maine. Cattail mosquitoes can transmit EEE and West Nile virus to humans.

Health Commissioner Harry Chen says spraying in Brandon and Whiting last week was successful in reducing the mosquito populations in those areas.

The state initiated the pesticide spraying after two Vermonters were diagnosed with Eastern Equine Encephalitis. Both men died from the illness, which is spread by infected mosquitoes.

Dr. Chen says "the challenge about Eastern Equine Encephalitis is it's absolutely unpredictable. So it may be here this year and may be gone next year."

Chen says discussions have already started about how to improve mosquito monitoring going forward, discussions about "how we're going to have more timely access to information for me to make those decisions, for the mosquito districts to make those decisions, and then ultimately to get that information out to Vermonters."

Chen would like to see more stable funding for research and prevention of mosquito-borne illnesses in the future and he's reached out to officials in both state and federal government about resources for next year.

From Vermont Edition: Gov. Candidate Emily Peyton; Health Dept. Addresses EEE

LISTEN

Interview: Gov. Candidate Emily Peyton

Among the lesser known candidates is independent Emily Peyton of Putney, who is outspoken against the influence of money in politics and her support of industrial hemp.

Health Dept: EEE Threat Continues

The state initiated pesticide spraying after two Vermonters were diagnosed with Eastern Equine Encephalitis. Both men died from the illness, which is spread by infected mosquitoes. Health Commissioner Harry Chen says discussions have already started about how to improve mosquito monitoring going forward.

Gayle • 23 days ago

We had a good meeting with state officials in Brandon concerning the aerial spraying and what precautions to take the evening of spraying. HOWEVER, the state did not notify us that the spraying became re-scheduled for the following evening (the day after the announced date). This was not on the website of the Health Dept. People did not know to close their windows, cover vegetable gardens, etc. on that evening. This was a very disappointing failure in communication by the state to the residents who were directly affected by the spraying of Anvil.

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VPR Discussion & Comment Policy

Tags

eastern equine encephalitis eee harry chen health

VPR News

Wilton Highlights Solvency Concerns
Thursday, 10/18/12 7:50am
Republican challenger and current Rutland City Treasurer Wendy Wilton spoke with VPR's Mitch Wertlieb as part of VPR's continuing election coverage.

Newscast: Thursday, October 18, 2012, 7:34 a.m.
Thursday, 10/18/12 7:34am

Hoax Press Release Authors Call For Middlebury Divestment
Thursday, 10/18/12 7:34am

Resigned Trooper Seeks Disability Benefits
Thursday, 10/18/12 6:06am

NPR News

No Roof Rookies Here: Cleaning The Superdome
Thursday, 10/18/12 2:32pm
The Superdome is a major part of the New Orleans skyline. A major symbol of Hurricane Katrina's misery, it's home to the Saints football team and will host the next Super Bowl. But someone has to scale and clean off the famous white dome.

Radio Liberty Going Off The Air In Russia
Thursday, 10/18/12 2:29pm

With An Army Of Vaccinators, India Subdues Polio
Thursday, 10/18/12 2:33pm

Second Federal Court Strikes Down Defense Of Marriage Act
Thursday, 10/18/12 2:48pm

This is the online edition of VPR News. Text versions of VPR news stories may be updated and they may vary slightly from the broadcast version.

Maine Health Officials on Alert after Mass. West Nile Death

09/10/2012 Reported By: Tom Porter

Biologists and public health officials in Maine are monitoring the spread of West Nile virus and other mosquito-borne diseases in nearby states. Last week a Massachusetts resident died of West Nile virus, the first such death in seven years. There was also a recent death in the Bay State from Eastern equine encephalitis, or EEE, another mosquito-borne disease. Chuck Lubelczik is a biologist with Maine Medical Center's Vector-borne Disease Laboratory in South Portland, which is involved in the mammoth job of monitoring the state's mosquito population and looking for signs of the diseases in this state.

Related Media

Maine Health Officials on Alert after Mass. West N Listen *Duration: 5:9*

Biologist Chuck Lubelczik, of **Maine Medical Center's Vector-borne Disease Laboratory** in South Portland, spoke today with Maine Things Considered host Tom Porter about the lab's efforts to monitor mosquitoes for West Nile virus and other mosquito-borne illnesses.

Return!

West Nile Virus 'Stumps' CDC

By Todd Neale, Senior Staff Writer, MedPage Today
Published: September 27, 2012

West Nile virus is "disturbingly unpredictable, disagreeable, and difficult to control," CDC researchers wrote in a new perspective piece.

As of Sept. 25, the agency had received reports of 3,545 confirmed cases of infection with the virus, including 1,816 cases of neuroinvasive disease -- which often leads to long-term functional impairment -- and 147 deaths. The cases came from 47 states and the District of Columbia; only Hawaii, Alaska, and Maine have remained untouched.

"To judge from past reporting trends, these figures suggest that this year's West Nile virus outbreak will be among the largest ever recorded," Lyle Petersen, MD, MPH, and Marc Fischer, MD, MPH, of the CDC's Division of Vector-Borne Diseases in Fort Collins, Colo., wrote online in the *New England Journal of Medicine*.

West Nile virus was first detected in New York City in 1999. One in every four or five people who are infected develop symptoms, and less than one in every 150 cases develops into neuroinvasive disease.

The virus's initial march westward led to large outbreaks in the Central States in 2002 and the Mountain States in 2003, but rates generally have been declining since then.

"Until this year's resurgence, many experts questioned whether West Nile virus would remain a substantial public health concern," Petersen and Fischer wrote.

Their characterization of the virus as hard to handle stems from the difficulty of identifying the specific ecological factors responsible for any given outbreak, as well as the lack of effective treatments and vaccines.

Many factors influenced by the weather play a role in determining the size of an outbreak, including the numbers and distributions of susceptible birds and vector mosquitoes and the rate of virus replication in mosquitoes.

Heat may also be a contributor, but not the sole culprit, because West Nile virus outbreaks are not always related to heat waves. This year, for example, most areas in which the virus is endemic that experienced heat waves do not have outbreaks.

"The complex spatial and temporal relationships among temperature, rainfall, and the underlying geographically variable ecologic factors promoting arboviral transmission have historically been difficult to sort out," Petersen and Fischer wrote. "Furthermore, even under similar circumstances, the stochastic nature of arboviral amplification may result in a wide range of outcomes in any given location simply as a result of chance. Thus, generating long-range predictions regarding West Nile virus outbreaks will be a formidable, if not impossible, task."

Dealing with West Nile virus is also complicated by the lack of effective treatments related to practical obstacles.

"The sporadic incidence and geographically dispersed distributions of cases and outbreaks of West Nile virus necessitate the participation of hundreds of clinical trial sites if researchers are to have a reasonable hope of achieving a sufficient sample size," Petersen and Fischer wrote. "As a result, all randomized clinical trials attempted to date have failed to enroll sufficient numbers of patients to demonstrate efficacy ... ."

They cited similar barriers to the development of vaccines.

Because of the difficulties presented by West Nile virus, surveillance on a national scale is key, the authors wrote, noting that the ArboNET surveillance system was set up to track West Nile and other arboviruses.

When outbreaks are detected, actions can be taken to minimize the risk. Those include applications of insecticides either with truck-based or aerial spraying to control adult mosquito populations and public campaigns to raise awareness about personal protection measures.

"Unfortunately, we cannot predict the distribution or incidence of West Nile virus for the next year, let alone the next decade," Petersen and Fischer wrote. "However, our 80-year experience in the United States with St. Louis encephalitis virus suggests that West Nile virus will cause sporadic cases and unpredictable outbreaks big and small for decades to come."

Petersen and Fischer reported that they had no conflicts of interest.

Primary source: New England Journal of Medicine
Source reference:
Petersen L, Fischer M "Unpredictable and difficult to control -- The adolescence of West Nile virus" *N Engl J Med* 2012; DOI: 10.1056/NEJMp1210537.

Jury awards Severn woman $225,000 for bedbug infestation

Elkridge store Calidad Furniture found liable for insects in 6-year-olds' beds

March 09, 2012 | By Scott Dance, The Baltimore Sun

In July 2010, Adarien Jackson's 6-year-old son, Kaden, began complaining of itchy bumps on his ankles. They soon turned into a rash and spread to his back, behind his ear, and on his eyelid.

The child's pediatrician and dermatologists tried allergy drugs, diet changes, oils and oatmeal baths. But it wasn't until months later that Jackson discovered the cause of the problem. Kaden's twin brother, Kyler, began waking in the middle of the night, crying out, "Bugs are crawling on me!"

Jackson realized her sons' beds — which she had recently purchased from a furniture store in Elkridge — were teeming with bedbugs, according to a lawsuit she filed in Anne Arundel County in December 2010.

On Thursday, a jury ordered Calidad Furniture & Linen Inc., the store that sold Jackson a pair of wood-frame beds, to pay Jackson and her sons $225,000 for the ordeal. It is one of the largest bedbug liability judgments in the country.

Multimillion-dollar lawsuits over bedbugs have become increasingly common as infestations have spread across the country and victims seek to hold landlords, hotels and retailers responsible for their exterminator bills and mental anguish.

But a public judgment is rare in bedbug liability cases. Lawsuits seeking millions of dollars in damages have received publicity in recent years, such as several filed against the Waldorf-Astoria hotel in New York. But most fade away with confidential settlements.

Jackson had visited Calidad in June 2010, as she prepared to move into a home she had recently purchased from her mother in Severn, the lawsuit says. She picked out bunk beds, mattresses and bedding for her sons and had them delivered to the suburban two-story home.

Two men arrived at the house a week later, in a truck bearing the Calidad name. They assembled the beds side by side, according to the lawsuit. The mattresses were loosely wrapped in plastic, and Jackson asked the delivery men to leave the plastic on to protect the mattresses from the occasional bed-wetting incident, the lawsuit says.

Within weeks, Jackson took Kaden to a pediatrician, who didn't think the bumps and rashes on the child looked like insect bites. Concerned that it could be an allergic reaction from the plastic wrapping, Jackson removed it from the mattresses, the lawsuit says. The bumps began to spread up Kaden's legs and back, and he was given Benadryl and prednisone to treat what everyone thought was allergies.

Jackson once noticed a small brown insect on the floor of her sons' rooms while vacuuming but thought nothing of it. Once Kyler began complaining of crawling bugs, though, she became suspicious, the lawsuit says. She discovered the bugs at 2 a.m. one night in early October.

When Jackson and her mother later flipped the mattresses to inspect them, clumps of bedbugs were present on the underside and fell off, said Daniel Whitney, Jackson's lawyer.

Jackson could not be reached for comment Friday.

Calidad fought Jackson's claims, at first denying her a refund and then seeking to settle after the lawsuit had been filed, said Gary Huggins, a Frederick lawyer who previously represented Calidad.

After the store went out of business early this year, Huggins said, he and Calidad signed an agreement with Jackson, giving up any defense of the lawsuit and leaving the damages up to the jury. But last month, lawyers for Calidad's insurer moved onto the case.

They argued that the court filings Huggins and Calidad made admitting responsibility for the bedbugs were invalid, but a judge rejected the argument. Michael DeSantis, lawyer for the store's insurer, could not be reached for comment, nor could Salah Alaboura, president of Calidad.

A jury of six women deliberated for 30 minutes before finding in favor of Jackson.

Jackson had only sought $150,000 in damages. That an Anne Arundel County jury raised the stakes is rare, Whitney said. County juries are known for being conservative with damage awards, he said.

Jackson's award is the second-largest known to Whitney or Tom Campbell, an Alabama attorney who takes a large number of bedbug cases. In what is thought to be one of the largest judgments of bedbug liability, two siblings who sued a Motel 6 in Chicago were awarded $382,000 in 2002.

Campbell said he thinks part of the reason the bedbug "epidemic" persists is that few property owners, hoteliers and other targets of bedbug lawsuits are willing to spend the thousands of dollars it takes to eradicate the pests.

"They're more interested in getting rid of complainers than getting rid of bedbugs," Campbell said. "Until that attitude changes, those groups are just going to be spreading the problem rather than helping achieve a cure."

For their part, property owners and managers, schools, hospitals and retailers are being encouraged to be vigilant about bedbugs. The National Pest Management Association suggests retailers develop policies for regular inspections, and isolate and examine returned items, spokeswoman Missy Henriksen said.

In the meantime, the problem is creating plenty of business for lawyers like Whitney and Campbell.

"I'd rather see this problem cured than create an additional source of revenue for plaintiffs' lawyers like me," Campbell said.

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The Federal Trade Commission announced yesterday that it is taking law enforcement action against the manufacturers of two 25(b) bed bug products See the press release below for more information or visit the FTC website.

For Release: 09/10/2012

FTC Takes Action Against Companies Marketing Allegedly Unproven Natural Bed Bug and Head Lice Treatments

Cedar, Cinnamon, Lemon Grass, Peppermint, and Clove Oil? There's No Proof They Will Eradicate Bed Bugs, Agency Says

The Federal Trade Commission filed deceptive advertising charges against two marketers of remedies for bed bug infestations, who allegedly failed to back up overhyped claims that they could prevent and eliminate infestations using natural ingredients, such as cinnamon and cedar oil. One marketer also allegedly made misleading claims that its products were effective against head lice.

In one of the two cases, RMB Group, LLC and its principals have agreed to settle the charges relating to their "Rest Easy" bed bug products. In the case against Cedarcide Industries, Inc. and others, challenging their marketing of "Best Yet!" bed bug and head lice treatments, the defendants have not settled, and the FTC is beginning litigation against them.

Bed bugs have been a growing public health pest in recent years, according to the Environmental Protection Agency. Consumers plagued with bed bugs experience considerable stress, discomfort, and expense in attempting to rid themselves of these pests, and many are unaware of the complex measures needed to prevent and control them, according to the EPA.

Consumers concerned about bed bugs also should see the FTC publication, "Good Night, Sleep Tight, and Don't Let the Bed Bugs Bite . . . Your Wallet," which urges caution about advertisements that offer quick solutions, and provides advice to consumers for treating bed bug infestations.

Also, as children head back to school this fall, the FTC urges parents to carefully research products that claim to treat head lice infestations.

In both cases, the FTC charged the marketing companies – as well as the individuals behind them – with deceptive advertising for claiming that their products can stop and prevent bed bug infestations. The Cedarcide defendants also are charged with making deceptive claims that their product can stop and prevent head lice infestations, and that the federal government endorses and is affiliated with their product.

The Cedarcide Industries, Inc. defendants market BEST Yet!, a line of cedar-oil-based liquid products they claim will treat and prevent bed bug and head lice infestations. The defendants sell the product to consumers nationwide. They also sell it to hotels and other commercial establishments for treating bed bugs, and to school districts for treating head lice. Consumers can buy the product online,

by phone, at the Cedarcide website , and at Amazon.com. The cost of the products ranges from $29.95 for the quart-sized spray bottle to $3,394.95 for a hotel-motel bed bug eradication kit.

One radio advertisement for the product stated:

"In light of the recent bed bug media frenzy that has all of us nervous, you need to know that bed bug prevention and eradication relief are available. So let's not all freak out. All you need is Best Yet from CedarCide.com. . . . Best Yet was developed at the request of the USDA for our military, as a solution for killing sand fleas. But guess what, it's equally deadly to bed bugs, larvae and eggs."

The FTC complaint charges that the Cedarcide defendants make:

- unsupported claims that Best Yet!is effective at stopping and preventing bed bug infestations and that it is more effective than synthetic pesticides at doing so;
- false claims that scientific studies prove Best Yet!is effective at stopping and preventing bed bug infestations, and that it is more effective than synthetic pesticides at doing so;
- a false claim that the Environmental Protection Agency has warned consumers to avoid all synthetic pesticides for treating bed bug infestations;
- unsupported claims that Best Yet!is effective in stopping and preventing head lice infestations, killing head lice eggs, dissolving the glue that binds head lice eggs (known as nits) to hair, and killing head lice and their eggs in a single treatment; and
- false claims that scientific studies prove Best Yet! is effective in stopping and preventing head lice infestations.
- false claims that Best Yet!was invented for the U.S. Army at the request of the U.S. Department of Agriculture, and that the USDA has acknowledged the product as the number one choice of bio-based pesticides.

The Cedarcide complaint names Dave Glassel and several companies he controls: Springtech 77376, LLC; Cedarcide Industries, Inc.; Chemical Free Solutions, LLC; and Cedar Oil Technologies Corp.

RMB Group, LLC marketed Rest Easy, a liquid solution containing cinnamon, lemongrass, peppermint, and clove oils. The company sold it to retail chains Bed Bath & Beyond, Walgreens, and Big Lots, which in turn sold it to consumers primarily for use when staying in hotel rooms. The product was sold in a 16-ounce spray bottle, which cost $6.99 to $9.99, and a 2-ounce twin pack, which retailed for $5.99 to $7.77. It also was sold in a gallon jug for approximately $50.

A video ad appearing on a company-sponsored website stated:

"Did you Know ... Bed bugs can survive up to 10 months without feeding. They can lay between 5 and 12 eggs per day ... per bug! Why take a chance on being their next meal when you travel? Or having your business shut down because somebody unwittingly brought them in? Rest Easy ... is a real GREEN All-Natural, Non-Pesticide, designed as a preventative for just these potential problems. Rest Easy And rest assured, bed bugs no more!"

The FTC complaint charges that the RMB Group defendants make unsupported claims that Rest Easy kills and repels bed bugs, and that a consumer can create a barrier against them by spraying the product around a bed.

Under the settlement, the defendants are barred from:

- representing that Rest Easy or any other pesticide kills or repels bed bugs or creates a barrier against them, and
- making any claims about the performance of such a product,

unless the representations are true and backed by competent and reliable scientific evidence.

The settlement imposes a $264,976 judgment against the Stuart, Florida-based RMB Group, LLC, and its owners, Howard and Bruce Brenner. The judgment is suspended because of the defendants' inability to pay.

The Commission vote authorizing the staff to file the complaint against the RMB Group LLC defendants and approving the proposed consent decree was 4-1, with Commissioner J. Thomas Rosch voting no. The Commission vote authorizing the staff to file the

complaint against the Cedarcide defendants was 5-0. The FTC filed both complaints and the proposed settlement order for the RMB defendants in the U.S. District Court for the Northern District of California on September 5, 2012. The proposed settlement order is subject to court approval.

NOTE: The Commission files a complaint when it has "reason to believe" that the law has been or is being violated and it appears to the Commission that a proceeding is in the public interest. The complaint is not a finding or ruling that the defendant has actually violated the law. The stipulated order is for settlement purposes only and does not constitute an admission by the defendant that the law has been violated. Stipulated orders have the force of law when approved and signed by the District Court judge.

The Federal Trade Commission works for consumers to prevent fraudulent, deceptive, and unfair business practices and to provide information to help spot, stop, and avoid them. To file a complaint in English or Spanish, visit the FTC's online Complaint Assistant or call 1-877-FTC-HELP (1-877-382-4357). The FTC enters complaints into Consumer Sentinel, a secure, online database available to more than 2,000 civil and criminal law enforcement agencies in the U.S. and abroad. The FTC's website provides free information on a variety of consumer topics. Like the FTC on Facebook, follow us on Twitter, and subscribe to press releases for the latest FTC news and resources.

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October 19, 2012

HUFF POST GREEN

Pesticide Protest: Soccer Moms Play It Safe, Keep Kids Off Fields Over Chemical Concerns

Posted: 10/12/2012 6:27 pm Updated: 10/12/2012 6:28 pm

Cedar McGourty-Batchelor won't be playing soccer this Saturday. Neither will his first-grade teammates from Riverview Elementary School -- nor, for that matter, any other kids in Durango, Colo.

Concerns from local soccer moms and dads who learned a synthetic weed killer containing at least two possible carcinogens would be applied to fields one day before their children would be running, kicking and most likely rolling around on the grass, pushed the city to postpone all youth soccer games scheduled for Saturday.

"I believe these chemicals are harmful, and it's best for my son not to be exposed to them," said Sheryl McGourty, Cedar's mom, who wrote to Durango Parks and Recreation with her concerns.

Scott Sallee, owner of Scott's Pro-Lawn, referred to the "fuss" mounting nationwide over lawn pesticides as "much ado about nothing." He is contracted to spray herbicides on Durango's grass fields every spring and fall, and said he scheduled this Friday's treatment of the Riverview Athletic Complex to ensure no kids would be around during or immediately after his work.

"It dries in four hours," Sallee said. "By Saturday morning, it would've been perfectly safe for anyone to play soccer on."

Brian Horgan, a turfgrass specialist at the University of Minnesota, agreed that there should be no concerns about kids playing on the grass the next day, assuming the application was made according to the product's label.

The chemical concoction that Sallee said he applies according to the label -- at just 1.2 ounces per 1000-square-feet -- is Vessel, a mix of the herbicides "2,4-D," dicamba and mecoprop-p, plus some additives. The product's toxicity, Sallee added, is "less than caffeine or aspirin." Meanwhile, the product is extremely toxic to weeds, which he argues helps maintain a playable surface for the kids.

"Almost all of the uproar about spraying is fear-driven and it's not based on facts," he added.

Many parents and environmental health experts, however, beg to differ.

Alex Lu of the Harvard School of Public Health said there are not a lot of facts to go on. "There is essentially no data on the safety of pesticide mixtures. The use of three herbicides mixed in the same formulation is a bold move considering the unknown synergistic effects," said Lu, who likened application of the product to a doctor prescribing three different painkillers to a patient.

Fifty years ago, Rachel Carson wrote of a pesticide combination that resulted in health risks "up to 50 times as severe as would be predicted on the basis of adding together the toxicities of the two."

The safety of each chemical alone also remains up for debate, for much the same reason: a lack of scientific research.

Studies have implicated dicamba with reproductive and developmental problems, while 2,4-D and mecoprop-p are both listed as "possible" carcinogens. However, it's only been in the last few years that researchers have discovered the potency of some of these chemicals at very low doses.

Warren Porter, a toxicologist at the University of Wisconsin, Madison, noted that while the focus has long been on a chemical's acute toxicity or potential to cause cancer, how a chemical can mimic and disrupt hormones -- and therefore damage the brain, reproductive system and just about any other function of the body -- is perhaps more critical. His research has shown effects of Sallee's triple herbicide combination down to the level of parts per billion.

"We know hormones work in parts per trillion," he said.

This emerging understanding was highlighted in a report released this week by the advocacy group Pesticide Action Network North America (PANNA), which evaluated more than 200 recent studies on a range of children's health concerns, including autism, asthma and diabetes.

"A lot of these health harms have gone up, some quite dramatically in the last 10 to 20 years," said Kristin Schafer, a scientist with PANNA and author of the report. "The evidence is getting stronger and stronger that pesticides are a contributing factor."

"The risks posed by pesticides on playing fields come on top of exposures through food, at home and in schools," Schafer added. "It's a mix of pesticides that kids are exposed to every day."

As for the exposures on the field, Porter added that the chemicals may actually be "more dangerous after they've dried." He suggested that herbicides can go right through the skin of young soccer players, thanks to surfactants and solvents included in the product's mixture -- bonus ingredients that don't have to be disclosed by the manufacturer or registered by the EPA. These additives, which also promote the herbicide's lethal infiltration across the surface of a weed, "work better when there's no water in the way," he said.

The concerns aren't confined to the western town of Durango. Most athletic fields across the U.S. are likely treated with at least one of the 20,000-odd pesticides registered with the Environmental Protection Agency.

Earlier this year, Rep. Rush Holt (D-N.J.) introduced the federal School Environmental Protection Act, which advocates hope could significantly reduce this use.

Some states and cities are imposing their own rules in the meantime. Connecticut has banned pesticides on the grounds of elementary and middle schools, as The Huffington Post has reported, and Durango is in the process of hiring a consultant to facilitate a transition of all their parks to organic lawn care.

"People are becoming more aware of the relationship between their health and environment, particularly regarding children and babies -- all of whom can be on soccer fields," Jennifer Sass, a senior scientist with the non-profit Natural Resources Defense Council, noting how younger siblings often play on the sidelines.

"Good for these parents," she added. "They have a right to be concerned. Kids shouldn't be playing on pesticides."

Durango's Brookside Park was recently designated chemical-free and, depending on who you ask, its turf is either "deteriorating quickly" or "looks great."

Pesticide Induced Rashes Leave Delaware Students Angered

WEDNESDAY, 17 OCTOBER 2012 14:45 **PAUL TUKEY** SCIENCE AND ENVIRONMENTAL

(0 Votes)

The Green at the University of Delaware was recently sprayed with weed killers that reportedly caused students' rashes.

Lack Of Posting Law Leaves Students Unaware Of Pesticide Dangers

MAINE--(ENEWSPF)--October 17, 2012. The Mall. The Green. The Common. The Great Lawn. Whatever the name, almost all state colleges have one. And however one feels about all that mown grass requiring all that water, gas and fertilizer to maintain, there's no denying the aesthetic and function of a large, regal gathering place at the center of a campus.

It's perhaps the quintessential landscape feature of higher education, a place where youth is served, where innocence is celebrated . . . and sometimes lost.

"You just never imagine your own university would put known poisons down where we all go to sit and study or just relax," said Kayla Iuliano, an undergraduate student at University of Delaware. "When you first hear about this it's almost impossible to believe. It is not OK. It's disgusting."

Kayla Iuliano

Iuliano, from Racine, Wisc., said she first learned that her university sprayed pesticides on the grass from a friend, Kelsey Crane, who experienced a rash-like sensation after sitting on what Delaware students call “The Green.” She soon encountered other friends with similar stories of painful rashes and ultimately confronted one of the school’s pesticide applicators to ask him about the products he was using. That led to further talks with a reluctant administration.

Iuliano, an environmental science major, instantly became a journalist, publishing an **Oct. 9 article** in the school newspaper that called the college’s practice of spraying synthetic chemical weed killers into question.

“It was an incredible eye-opener for me,” she said. “Right away you knew something was up when you started asking questions. They didn’t want to answer. If they were using something super eco-friendly you’d think they would have been eager to share the information, but they weren’t.”

DON’T ASK, DON’T TELL . . . DON’T POST

In most states across the country the University of Delaware’s pesticide applicators would have been breaking a law and facing fines by not posting “Keep off the Grass” signs after spraying with two synthetic chemical weed-killing products known as Basagran T/O and PowerZone. In abutting New Jersey, in fact, the signs would have been required to remain in place for 72 hours, but Delaware doesn’t require so much as a four-hour flag.

“Why don’t we? That’s a good question,” said Dave Pyne, the state’s pesticide compliance administrator. “No one’s ever asked us to write that regulation. I’m not sure how effective how posting little signs is in keeping people off large areas anyway.”

Steve Carter, a former pesticide inspector with the Delaware Department of Agriculture, said some pesticide companies do post recently sprayed areas “as a courtesy to the customer and to protect themselves,” but admitted most probably did not.

That leaves students like sophomore Dylan Lecce completely vulnerable and without warning. He told Iuliano he was ”exercising on The Green approximately two weeks ago with a group of people” when he came in contact with the grass.

He also told her that, minutes after contact, “he and a majority of the group noticed their faces were irritated. Lecce said his eyes were burning as well.”

“My skin was pretty much on fire,” Lecce said.

SAFETY ASSUMPTIONS VS. LABEL REALITY

Those types of symptoms read directly off the Material Safety Data Sheets and product labels for PowerZone, a commonly used cocktail of four different weed-killing products in one. Among the ingredients are known and suspected carcinogens, endocrine disruptors, as well as eye and skin irritants.

At the University of Colorado at Boulder, where the lawn is maintained with organic protocols, students are not put at risk from synthetic chemical pesticides.

“Symptoms of exposure to (one of the ingredients, mecoprop) include burning skin and eyes, nausea, dizziness, and headaches,” reads a report from **The Journal of Pesticide Reform**. “In laboratory tests, mecoprop has inhibited the synthesis of DNA (the molecules that contain genetic information), interfered with blood clotting, and inhibited the production of important components of the immune system.”

Other symptoms tied to the weed-killing products used at the University of Delaware include a reduction in fertility, increased risk of non-Hodgkin's lymphoma and neurological impairment.

"Students are just out there in the grass completely unaware of all these risks that the university is exposing us to," said Iuliano. "The university advertises itself as being an eco-friendly campus. But if The Green's not green, that's obviously not true."

She said she was given the standard pesticide party line by the university's director of communications.

"University Spokesman John Brennan stated in an email message that workers are not required to post signs when areas are sprayed because the chemicals are not harmful when used properly, and personnel are trained in how to apply them," she wrote in her article. "He said the sprays are commonly-used commercial products and are registered for use with the Environmental Protection Agency. They are recognized in the industry as safe when applied as directed."

Even the synthetic chemical pesticide industry, however, would recommend that Delaware students stay off the grass at least until the pesticide products are dry and there's no indication that is happening on a campus that doesn't require even minimal posting. The students, and their tuition-paying parents, have every right to feel betrayed by an irresponsible pesticide policy.

This is clearly a situation where the university — and an entire state — need to take action.

Paul Tukey - An international leader of the green movement, Mr. Tukey is a journalist, author, filmmaker, TV host, activist and award-winning public speaker, who is widely recognized as North America's leading advocate for landscape sustainability and toxic pesticide reduction strategies.

Source: **http://www.safelawns.org**

School Worker Sues Rocky Hill; Says Her Work With Pesticides Caused Her Cancer

September 10, 2012 | By DAVID DRURY, Special to the Courant, The Hartford Courant

ROCKY HILL — — A school district employee has filed a lawsuit against her job supervisor and the town, claiming that she developed colon cancer from prolonged exposure to pesticides she was illegally using in the high school greenhouses.

The multicount complaint, filed in Superior Court in Hartford in July, charges that the pesticide use violated provisions of state law, which restrict their use to licensed applicators and forbid their application on school grounds during school hours.

Town Attorney Morris Borea has moved to dismiss the lawsuit on procedural grounds. A separate complaint, filed on behalf of the town by its insurance carrier, argues that the employee's claim to benefits falls under the Workers' Compensation Act, not the civil court system.

The plaintiff, Cynthia Lefebvre, 60, a full-time teaching assistant at Rocky Hill High School, says in the lawsuit that she worked for the school science department for 10 years.

She assisted with the botany program and her regular duties included applying industrial pesticides to flowering plants raised in four greenhouses. The plants are cultivated by students and sold to the public during annual plant sales, with the proceeds used to offset program costs.

Lefebvre claims that she applied restricted-use pesticides, identified in the lawsuit as imidacloprid and disulfoton, and used no precautions except vinyl gloves. Disulfoton was withdrawn from the market by the manufacturer in 2009.

Label instructions specified that applicators use a respirator, wear protective clothing, protective eyewear and chemically resistant gloves. Lefebvre says she initially notified her supervisor, botany teacher Kimberly Antol, of the label instructions and asked that she be provided an applicator and protective clothing. Antol told her such precautions "were unnecessary and that the Plaintiff could use gloves already in possession of the botany department," according to the lawsuit.

"Therefore, beginning in approximately 2000, Plaintiff applied the insecticides to all of the plants in the botany department on a daily basis and continued to do so until February 2011," the lawsuit states.

Neither Lefebvre, nor Antol, were licensed to use the insecticides, as is required under the Connecticut Pesticide Control Act. Moreover, state law strictly prohibits the use of pesticides during school hours, and limits their application only to licensed individuals, according to the suit.

Noxious odors from the pesticides, Lefebvre says, caused her to develop respiratory problems and also ate away at her gloves. She said she brought her concerns about the safety of the pesticides, and the manner they were being applied, to Antol who became upset and told it was her job to continue using them.

In January 2010, she began to experience abdominal discomfort. A malignancy was discovered and subsequent surgery resulted in the removal of all but 2 feet of her colon. Following surgery, she underwent months of chemotherapy.

She returned to work in Feb. 2011, while still under chemotherapy, and was ordered to resume her greenhouse duties. At that point, the suit says, she brought her concerns about the pesticides to school Principal Mario Almeida.

According to the lawsuit, Almeida at first refused to accept Lefebvre's claim that she had been using pesticides in the greenhouses for more than 10 years. She then brought him a canister of the insecticide and convinced him otherwise. The pesticides, which were stored in large quantities on school grounds, were ordered removed from the botany department, the suit says.

Almeida declined comment on the complaint, but said that when it became known that Lefebvre had become ill, it was a shock to the entire school.

"It is such a small school. When any staff member goes through something horrific like that, my heart goes out," he said.

Antol and Lefebvre both continue to work at the high school. Antol remains in her position in science department. Lefebvre now is assigned to work with special education students, Almeida said.

The lawsuit claims that Lefebvre's colon cancer "was directly and approximately caused by the improper use of, and resultant exposure to the insecticides" over 10 years. It charges that Antol's actions constituted negligence and recklessness, and that the town was negligent in its supervision of Antol and should be held liable for Lefebvre's injuries.

"Her doctor has orally told her he suspects this was the cause," said Michael J. Reilly, Lefebvre's attorney."We're waiting to get a formal opinion."

He said the town's motion to dismiss the suit "was a technical thing" that would be corrected. Reilly declined to discuss the merits of the case further. "I think the lawsuit speaks for itself."

Antol declined comment Monday and referred questions to the town attorney.

Borea, who represents the town in the civil lawsuit, said Lefebvre could face a tough task in persuading the Workmers' Compensation Commission that her illness was the result of chemical exposure.

"These causative issues can be very difficult," he said.

Lefebvre declined comment on the suit. She said she is currently cancer-free. Her claim for workers' compensation benefits was initially denied in July.

Lefebvre, who earns $19,000 a year, has worked as a paraprofessional in the district for 23 years. Before going to the high school, she worked at Moser and Stevens elementary schools.