

Maine Board of Pesticides Control

Miscellaneous Pesticides Articles July 2013

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Posts Tagged 'spotted wing drosophila'

[Fruit Growers Alert: Spotted Wing Drosophila Has Been Found In Maine!](#)

Wednesday, July 10th, 2013



Male (left) and Female (right) Spotted Wing Drosophila, photo by Griffin Dill.
Actual size: 2-3 mm.

Fruit Growers Alert – July 9, 2013

For full page print version, please see link at the bottom. Click on photos to enlarge.

SPOTTED WING DROSOPHILA HAS BEEN FOUND IN MAINE!

David Handley, Vegetable & Small Fruit Specialist; James Dill, Pest Management Specialist; Frank Drummond, Professor of Insect Ecology/Entomology

Male spotted wing drosophila flies were captured in traps in **Dresden** and **Whitefield** on July 3rd in wild blueberry fields. On Saturday, July

6th, a male fly was caught in a **Winterport** blueberry field. We have traps set out in raspberry and highbush blueberry fields in southern and central Maine, but have not yet captured any spotted wing drosophila in those fields. However, the presence of spotted wing drosophila in the wild blueberry fields indicates that this insect is now becoming active in the state, slightly earlier than our first captures last year. Research and Extension staff in Connecticut, Massachusetts, New Hampshire and New York have all reported captures of spotted wing drosophila over the past two weeks, although in all cases the numbers have been low.



Photo by David Handley



Photo by James Dill

Raspberries before and after infestation, 48 hours at room temperature after picked.

Spotted wing drosophila (*Drosophila suzukii*) is a new pest which is a concern for raspberries blueberries and day neutral strawberries, as well as many other soft fruits. This insect is a small fruit fly, similar to the type that fly around the over-ripe bananas in your kitchen. However, this species will lay its eggs on fruit before it ripens, resulting in fruit that is contaminated with small white maggots just as it is ready to pick. As a result, the fruit quickly rots and has no shelf life. This insect first came into Maine in 2011, and caused significant losses in raspberry and blueberry plantings last year. Spotted wing drosophila can complete a generation in less than two weeks, with each adult female laying hundreds of eggs, so populations can explode rapidly when conditions are right. This makes them very difficult to control, and frequently repeated insecticide sprays (1 to 3 times per week) are often needed to prevent infestations once the insect is present in a field. It appears that spotted winged drosophila can successfully overwinter here, although it has not been able to build up to damaging levels until late summer. June-bearing strawberries and early ripening varieties of raspberries and blueberries may escape infestation, but later ripening varieties and everbearing types of strawberries and raspberries will likely become infested if they are not protected. Now that spotted wing drosophila has been confirmed in Maine, growers should be on the alert and look for fruit flies on their fruit and symptoms of premature fruit decay. Products that provide good control of drosophila on berries include Delegate®, Brigade®, Bifenture®, Danitol®, Mustang Max®, malathion and Assail®. Research carried out at the Connecticut Agricultural Experiment Station suggests that adding table sugar to group 4A insecticides such as Assail®, may improve their effectiveness. The recommended rate would be 1-2 lb. sugar per 100 gallons of spray. Please check product labels for rates, post-harvest intervals and safety precautions. Keeping the fields clean of over-ripe and rotten fruit can also help reduce the incidence of this insect. For information on identifying spotted wing drosophila and making your own monitoring traps, visit the [Michigan State University's Spotted Wing Drosophila](http://www.maizecrops.com/extension/2011/07/27/spotted-wing-drosophila/) website. There is also a good fact sheet series on management of spotted wing drosophila on the [Penn State Extension](http://www.pennstate.edu/extension/2011/07/27/spotted-wing-drosophila/) website.

David T. Handley
Vegetable & Small Fruit Specialist

Highmoor Farm	Pest Management Office
P.O. Box 179	491 College Avenue
Monmouth, ME 04259	Orono, ME 04473
207.933.2100	1.800.287.0279

IPM Web Pages:

<http://extension.umaine.edu/ipm/>

http://www.pestwatch.psu.edu/sweet_corn.htm

<http://www.umass.edu/umext/ipm/>

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Tags: [Maine Integrated Pest Management](#), [Maine spotted wing drosophila](#), [spotted wing drosophila](#), [SWD](#)
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[Press Herald Interviews Handley, Kirby on Garden Insects](#)

Monday, June 24th, 2013

Yesterday at 6:35 PM

[CMP gets flack for herbicide use on Oakland walking trail](#)

By Matt Hongoltz-Hetling mhhetling@mainetoday.com
Staff Writer

OAKLAND — Central Maine Power's use of herbicides near a popular walking trail in Oakland has some residents upset, but the company says killing the vegetation around its transmission lines helps keep the power on for Maine's homes and businesses.



[click image to enlarge](#)

Central Maine Power recently used herbicides near a walking trail in Oakland to clear vegetation around its transmission lines, but some residents are concerned about notification of the chemical's use.

Photo by Emily Shaw

[Select images available for purchase in the
Maine Today Photo Store](#)

Vegetation information

Central Maine Power officials say those interested in learning more about the Vegetation Management Program can call the company at 1-800-750-4000 to speak to the vegetation management department, or visit the company website at www.cmpco.com.

In recent years, the power company has been more aggressive in attacking vegetation that threatens its lines, pruning and chemically treating the growth every five years instead of less frequently.

On July 3, a contractor working for the power company sprayed herbicide beneath a stretch of power lines that coincides with the Messalonskee Stream Trail, which runs along the stream. The spraying generated complaints at the town office from residents who were unsettled by the sight of a large tract of dying vegetation.

Oakland resident Emily Shaw, who frequently uses the trail, said she didn't know the work was happening until she saw a worker from the company's contractor, Lucas Tree Experts, enter the area on an ATV loaded with tanks of liquid.

Shaw, who also teaches political science at Thomas College, said she was concerned because she uses the trail with her child and dog, and because she could see the herbicide entering the stream.

"That entire area went from being summery and green to large swaths of it being killed off, being ugly and brown," Shaw said.

Shaw said she isn't opposed to maintenance, but she would have preferred a chance to trim the vegetation herself with hedge clippers to avoid the chemical treatment.

"To me, the big issue is that I didn't know it was happening," Shaw said.

Notifying the public optional

The power company and the town disagree on how much notice was given before the spraying.

But under Maine law, the company isn't required to give any notice at all, according to John Bott, spokesman for the Maine Department of Agriculture, Conservation and Forestry, which oversees the Maine Board of Pesticides Control.

Neither the power company nor the division of Lucas Tree Experts that performs the work have any issues pending or on file with the board, Bott said.

"There is no public notification requirement on a public way," Bott said. "There is for lawns, and outdoor structures, and ornamental plants, and aerial spraying."

Gail Rice, a spokeswoman for Central Maine Power, said the company voluntarily notifies people to address potential concerns about herbicides and losing shade trees near their homes.

One way the company gets the word out is by sending annual mailings to each town, city and county in its service area, regardless of whether work is planned. Towns are given posters describing the program for display in the town office.

"Whenever we are going to do work in a municipality, we give that town notice," she said. Oakland Town Manager Peter Nielsen said he didn't get a notification of the work being done alongside the walking trail this year.

"I don't think there was a letter sent," Nielsen said. "I try to keep them, and I just checked in my folder."

Rice suggested that if Oakland didn't receive the letter, it could have been a problem with the postal delivery.

The power company's customers are also told about the program through annual notices in bill inserts, and through monthly bill messages, which mention the herbicides.

Advertisements in local newspapers do not generally mention herbicides. For instance, a May 29 ad in the Morning Sentinel and Kennebec Journal says tree pruning will happen in 2013 — with no mention of herbicide use — and says the pruning will occur in Gardiner, Pittston, Dresden, Richmond, Whitefield, Chelsea, Randolph, Readfield, Fayette, Mount Vernon, Chesterville, Vienna, Belgrade, Oakland, Mercer, New Sharon, Pittsfield and Rome.

Rice cited the ad as part of the public notification effort related to the company's vegetation work. Shaw, the Oakland resident concerned about the spraying, said the message may still not be heard, because the blanket notifications not tied to specific actions create a desensitizing effect.

"You have so much noise, the signal is lost," she said.

A giant on tiptoes

Central Maine Power's vegetation management program is a large-scale enterprise, a \$25 million effort covering 2,400 miles of transmission line corridors throughout Maine, enough to extend from Augusta all the way to Albuquerque, New Mexico.

Rice said every effort is made to improve customer service while being environmentally sensitive.

"We don't do it aerially, we do it from the ground," Rice said of herbicide use. "We take care to spray only the vegetation that we need to."

Every year, the company targets growth within 25 feet of about 20 percent of its lines. Rice said the five-year cycle was begun just five years ago, replacing a less aggressive approach of managing the vegetation every seven or eight years.

With fewer tree branches growing close to power lines, Rice said, there are fewer outages during storms — since 2008, the number of tree-caused outages has gone down by 34 percent because of the program, according to company estimates.

"It's important," Rice said. "You think of someone who relies on electricity to keep their medical equipment running or businesses that rely on it to keep their machines humming."

Rice said the spray is 95 percent water, and includes a mixture of three herbicide products sold under the brand names Rodeo, Arsenal and Milestone. Arsenal is marketed by BASF, a North Carolina-based chemical company, as a low-volume herbicide that is gentle on wildlife habitats, but effective against a wide variety of grasses, flowers and trees. Rodeo and Milestone, both sold by chemical company DowAgroSciences, are effective against a variety of grass, weeds and brush.

Rice said contractors must meet strict qualifications, including getting a license from the state, posting notices of their work and following all state and federal laws. They are also closely overseen by the company's licensed arborists, she said.

Rice acknowledged public concerns about pruning or herbicide use, particularly in highly visible areas. She said when the company began a similar five-year cycle of trimming trees in roadside areas, "there was a significant impact on visuals" that also drew concerns.

But over time, she said, the company has received positive feedback from customers who are happy about the increased reliability of their power.

Avoiding herbicides

Landowners who abut the power company's transmission line corridors can prevent herbicide spraying near their land if they are willing to sign a landowner maintenance agreement and take managing the vegetation themselves. Customers are regularly reminded of the opt out program in their billing statements.

She said the power company is willing to explore the idea of groups like Kennebec Messalonskee

Trails, which maintains the Messalonskee Stream Trail, taking over maintenance of areas like the one in Oakland, but only if the group owns the land. In some areas, the power company itself has an easement allowing it to run the lines over the land and someone else owns it, which, Rice said, does not allow the company to enter into such an agreement.

Rice said property tax maps in Oakland show CMP owns most, but not all, of the power lines that run along the stream.

Peter Garrett, president of the trails group, said its members have never talked about taking over the responsibility of keeping the vegetation away from the power lines. With the issue now raised, he said, it would consider the idea, possibly removing the need for future herbicide use.

*Matt Hongoltz-Hetling — 861-9287
mhhhetling@centralmaine.com*

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Ogunquit would be first to ban pesticides outright

Residents will decide Tuesday whether to prohibit chemical fertilizers, pesticides and herbicides on all local property.

Posted: June 08, 2013 11:32PM

Written by [Beth Quimby](#), Staff Writer

Ogunquit could become the first community in Maine to impose a total ban on chemical fertilizers, pesticides and herbicides.

Voters in the coastal community will decide at the polls Tuesday whether an existing ordinance that prohibits the use of chemical fertilizers, pesticides and herbicides on town-owned land should be extended to cover private property as well. If they approve it, Ogunquit would join just a handful of communities in the country that have taken such a step.

So far, there has been little opposition to the proposal, said Michael Horn, chairman of the Ogunquit Conservation Commission. He said the commission reached out to landscapers and lawn service operators to alert them to the proposed ban, but no one showed up to oppose the measure at any of the three public hearings on the matter.

While some in the pesticide and lawn care industry warn the idea may backfire, Horn said chemical companies didn't appear to oppose the possible ban, either.

"We are probably not big enough," said Horn.

The 4.5-square-mile town has 1,200 residents, although the number is closer to half that in the winter when the snowbirds have moved back to Florida.

But some residents say the lack of opposition is due to the town's strong sense of



Gabe Souza/Staff Photographer The Meadowmere Resort in Ogunquit, pictured here Friday, uses environmentally friendly means to tend its gardens and pools. Ogunquit is considering an ordinance that would ban chemical pesticides, fertilizers and herbicides as a way to protect the town's natural resources.

environmentalism.

Ogunquit is one of only 25 communities in the state with a pesticide-control ordinance. It also has 11 restaurants and hotels certified as environmental leaders in the Department of Environmental Protection's Green Business Certification Program, more than any other community in the state. The town also has a high municipal recycling rate – 49 percent compared to the 38 percent state average.

“We are a green community,” said Karen Arel, president of the Ogunquit Chamber of Commerce.

Horn said the town's unusual demographic profile might be part of the reason it takes pride in being green.

“Our population is the oldest in the state and Maine is the oldest state in the country,” said Horn.

While health concerns are behind pesticide regulation in many communities, proponents in Ogunquit say the proposed ban is largely aimed at protecting the watershed and water quality in a town where tourism is the major economic sector. During a peak summer weekend, the town's population surges to as many as 40,000 people, most of whom descend on the town's 1.5-mile-long beach.

Allyson Cavaretta, director of sales and marketing for The Meadowmere Resort in Ogunquit, which won the Governor's Environment Excellence Award this year for generating 70 percent of its energy from solar panels and recycling all of its trash, said the business community is very supportive.

“It would be very hard to find anyone against it. We have a watershed, the beach and a lot of good things to take care of,” said Cavaretta.

Various exemptions and waivers would be allowed under the extended ban. Poison ivy control on the Marginal Way, a public footpath along the water, is exempt under the current ordinance.

Fines for violating the ordinance would range from \$100 to \$2,500.

However, Code Enforcement Officer Scott Heyland, on the job for a month, said he hasn't figured out how strictly the new ordinance would be enforced. “I don't think we are going to be out running and chasing people. It is all very new,” said Heyland.

Horn said he expects the enforcement will be a word-of-mouth process. “If you see a neighbor doing some spraying, you can say, ‘You know we got a law,’” said Horn.

Horn said if the ordinance passes, the conservation commission will try to spread the word to summer residents with mailings, messages on the town website and through articles in

newspapers and other media.

Outside the small seaside town, meanwhile, there are critics of the proposal. State and national pest management and landscape associations say banning all chemical pesticides, herbicides and fertilizers is not a good idea.

Gene Harrington, vice president of government affairs for the National Pest Management Association, said a total ban would be highly unusual and probably unenforceable.

“It will lead to neighbors snitching on neighbors as a result of years-long vendettas,” said Harrington.

He said the Maine Board of Pesticides Control already does a good job regulating pesticides in the state. “It is better left to the folks in the state that have the resources and expertise,” said Harrington.

Pesticides have already gone through a stringent regulatory process at the federal level, too, according to Harrington. He said people will resort to more desperate measures, which could be worse for the environment.

“It sounds poorly thought through,” said Harrington.

Don Sproul, executive director of the Maine Landscape and Nursery Association, which has 325 members across the state, said his group supports organic products and sustainable practices, but it does not support a total ban on chemical garden products.

“You need to keep your options open,” he said.

Sproul said one New Hampshire community that banned chemical applications on public property learned to regret it. He said the town ended up with a pest infestation on its high school athletic fields and had to shut them down for two years.

“They spent several hundred thousand dollars as a result,” said Sproul.

The Maine Organic Farmers and Growers Association lauded the proposed ban.

“It is bold for Ogunquit to be taking this on,” said Heather Spaulding, interim executive director.

Beth Quimby may be reached at 791-6363 or at:

bquimby@mainetoday.com

Ogunquit won't outlaw pesticides on private property

The measure was defeated by only 10 votes on Tuesday, 183-173

Posted: June 11, 2013 11:59PM

Written by [Randy Billings](#), Staff Writer

OGUNQUIT — Residents on Tuesday narrowly defeated a proposal to make the community the first in the state to ban the use of chemical fertilizers, pesticides and herbicides on private property.

The measure was defeated by only 10 votes, 183-173. Nineteen voters left the question blank.

Michael Horn, chairman of the conservation commission, was surprised by the result.

"It's kind of disappointing because we didn't get any negative feeling back," Horn said.

There was no organized opposition to the proposal heading into the election, though the Maine Landscape and Nursery Association and the National Pest Management Association weighed in against the ban when asked by a reporter. Residents attributed the lack of opposition to the town's environmental ethic.

Ogunquit is one of only 25 communities in the state with a pesticide-control ordinance that applies to public land. It also has 11 restaurants and hotels certified as environmental leaders in the Department of Environmental Protection's Green Business Certification Program, more than any other community in the state. The town also has a high municipal recycling rate – 49 percent compared to the 38 percent state average.

Only 375 of the town's 1,114 registered voters cast ballots at Dunaway Community Center in Ogunquit on Tuesday.



Gabe Souza/Staff Photographer The gardens and pools at Meadowmere Resort in Ogunquit, seen Friday, June 7, 2013, are environmentally friendly. Residents on Tuesday, June 11, 2013 narrowly defeated a proposal to make the community the first in the state to ban the use of chemical fertilizers, pesticides and herbicides on private property.

Voters seemed attracted to the environmental and health benefits of the ban, but concerned about private property rights.

Jim O'Connell, a 73-year-old retired electrical engineer, said he felt the ban was trying to accomplish something good, but that it reached too far and was a bit "like using a sledgehammer on a nail."

He was also concerned with how the ban would be enforced.

"I mean if somebody sneaks out in the middle of the night and spreads a bunch of pesticides, who's gonna catch them?" O'Connell asked.

While health concerns are behind pesticide regulation in many communities, proponents in Ogunquit say the proposed ban was largely aimed at protecting the watershed and water quality in a town where tourism is the major business.

During a peak summer weekend, the town's population surges to as many as 40,000 people, most of whom descend on the town's 1.5-mile-long beach.

Various exemptions and waivers would have been allowed under the extended ban. Also, emergency waivers could have been requested if a pest situation presented an immediate threat to public health or substantial property damage.

Fines for violating the ordinance would have ranged from \$100 to \$2,500.

The town's code officer was not immediately sure how the ban would have been enforced. But the conservation commission had planned to spread the word to summer residents with mailings, messages on the town website and through articles in newspapers and other media.

Now it appears the commission will regroup and focus its efforts on more educational outreach about the pitfalls of chemical pesticides, in hopes of one day re-introducing the ban.

"It's feasible. I guess it's going to take a measure and a half of educating the people and I think we will continue to do it," Horn said.

Karen Antonacci contributed to this story.

Randy Billings can be contacted at 791-6346, or at:

rbillings@mainetoday.com

Scarborough Leader

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2013-05-17 / In the Know

In the Know

Town leads on organic lawn care policy

It's the time of year again to think about lawn care. Scarborough is one of the few towns in Maine, and in the nation, to have adopted an organic grounds care policy for town and school properties.

The Scarborough Pest Management Policy was adopted by the Town Council in September 2011 and can be found on the town's Community Services website on the Community Information webpage.

The policy was primarily created to protect human health and our children's health, above all, but it also protects our watershed, including Scarborough's signature marsh and beaches; our shellfish economy; our wildlife, including our vast array of migratory birds; beneficial insects and pollinators such as bees; as well as pets.

The policy charges Town Manager, Tom Hall, with implementation of the policy, and further establishes a citizen's Pest Management Advisory Committee (PMAC). The Committee holds televised Community Channel 3 meetings, typically once a month, with its meetings open to the public, and minutes recorded on the Community Services website.

The PMAC acts in an advisory and problem-solving capacity, particularly during the transition period from conventional to organic grounds, a process of about three years. With only one year of experience with this new approach, the PMAC continues to monitor the effectiveness of the program, both in turf management success and cost, providing an important advisory role to the Town.

Go Green Landscaping of Scarborough currently serves as the town's major contractor with staff who are accredited organic lawn care professionals (AOLCPs), some of only a few such credentialed professionals in the state.

All of the documentation of the company's field scouting reports and photos, soil biology tests, care schedules, applications, and material data safety sheets regarding products used is available on the town's website.

The town's Community Services staff joins Go Green on the front lines of this transition, balancing never-ending sports field, playground, school grounds, and park use with organic cultural practices such as mowing, aerating, and watering.

The PMAC is further charged with encouraging the reduction of pesticide use on residential and commercial properties.

The social and cultural challenge involves shifting expectations from artificial perfection, chemical dependency, and soil depletion to a new paradigm of restorative soil health, horticultural science, living soil food webs, and an aesthetic that no longer comes at a price to human or environmental health.

The goal of an organic approach is to create a living soil, where a small number of weeds and pests are horticulturally acceptable and can be held in check with the natural predators, exchanges, and cycles of a biologically-diverse system.

Organic practices include: Soil testing; aerating; topdressing; overseeding with hardier blends of grass seed; amending soil with compost, compost teas, and grass clippings; wiser mowing practices (higher and when grass is not stressed or wet) and watering practices (deeply and infrequently); special organic pest management strategies or applications when pests or weeds get out of balance; and reduction of lawn area in favor of low maintenance ground covers or food production.

Once soil health is restored, such practices should save time, effort and money in the long run.

The PMAC collaborated with the town's Conservation Commission in January 2013 to host an educational forum about the policy, its history and purpose, its transition from conventional to organic practices, and successes and challenges in implementation.

A tape of the forum is available through Community Services. Nationally-recognized organic sports field expert, Chip Osborne, was present to speak from a sports field and horticultural science perspective. The PMAC also hosted an educational booth at Summerfest and hopes to participate in future events.

Additional information for home and business owners considering an organic transition may be found at NOFA's website at www.organiclandcare.net.

Cumberland County Soil and Water District's Yardscaper website, through your local AOLCP, and through workshops offered through Scarborough's adult education program.

Column contributed by the Scarborough Pest Management Advisory Committee.

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Yesterday at 1:04 AM

Pest-killer, Maine law collide

Mainers find dragonflies useful for controlling mosquitoes, but some sellers aren't getting the permits required to import them.

By [Eric Russellerussell@pressherald.com](mailto:Eric.Russellerussell@pressherald.com)
Staff Writer

Mosquitoes, those pesky bloodsuckers that put a damper on summer barbecues and camping trips, have long been a problem for some Maine communities.



[click image to enlarge](#)

A dragonfly rests in a sunny spot last month in Scarborough. The town buys the insects and sells them to local customers for mosquito control, although it doesn't have a permit to import dragonflies from out of state.

Derek Davis/Staff Photographer

[click image to enlarge](#)



There are more than 150 dragonfly and damselfly species present in Maine, but more than 450 species nationwide.

Staff file photo

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BRINGING IN DRAGONFLIES

- The Department of Inland Fisheries and Wildlife wants both a Wildlife Importation form and a Wildlife Possession form filled out for any wildlife brought into the state.

- The fee is \$27 for each permit.

Insect-slaying pesticides fell out of favor decades ago, but there is a mosquito control option that at first blush seems like the perfect alternative: dragonflies.

Some municipalities and business groups sell dragonfly nymphs in the spring directly to anyone who wishes to set them free.

The catch? If the dragonflies are coming from out of state, the practice is illegal.

Phillip deMaynadier, a wildlife biologist with the Maine Department of Inland Fisheries and Wildlife, said any introductions of non-native species into Maine from another state require a permit. It doesn't matter if it's a giraffe or a cockroach – the department wants to know about it. It's not that there is an acute risk with importing new species; it's just the effects are rarely studied before it's far too late.

However, few of the nymph sellers actually apply for a permit. Any individual or business that knowingly imports or possesses a restricted exotic species is subject to a fine of \$50 for each day the individual or business is in violation.

DeMaynadier acknowledged that the state has been less focused on enforcement and more on making people aware of the permitting process. He said non-permitted dragonflies are among the most common offenses.

The Wells Chamber of Commerce has been ordering dragonfly nymphs from a private dealer for more than 35 years, said Executive Director Eleanor Vadenais. This year, more than 13,000 nymphs were sold.

"Our dragonfly program has been a great success, otherwise we probably wouldn't continue to do it," she said.

The Wells program works like this: The chamber sends out applications to residents or businesses that want to purchase a group of dragonfly nymphs. Once the orders are taken, the chamber arranges to have the insects delivered in two shipments to be picked up by the person or business that ordered it.

The town of Scarborough, much of which is located in marshy areas, also buys dragonflies in bulk for resale. This year, 2,500 groups of insects were sold, said Steve Kramer, a scheduler in the town's community services department.

Gail Atkins, a property manager with Portland-based Dirigo Management Co., purchased dragonfly larvae from the town of Scarborough last year on behalf of Cider Hill Village, a 173-unit condominium complex she manages in Old Orchard Beach.

"The feedback among the condo association members was great. They said there were no mosquitoes and they enjoyed having the dragonflies around," Atkins said. "Who doesn't love dragonflies?"

Atkins said she would like to use dragonflies at other properties she manages, but the conditions have to be right.

"You really need standing water for the dragonflies to prosper," she said.

Even though the dragonflies appear to be a hit, neither the Wells chamber nor the town of Scarborough has requested a permit through the state. Scarborough purchases its dragonflies from Berkshire Biological, a Massachusetts company, Kramer said. Representatives of that company did not return calls for comment about what species it sends to Maine or how often it gets requests.

Vadenais would not say where the Wells Chamber of Commerce gets its nymphs. DeMaynadier said he's spoken with officials at the Wells chamber who told him they get their larvae from a commercial biological supply company. He knows of no such supplier in Maine.

Even if residents didn't buy from the town of Scarborough or the Wells chamber, there is nothing to stop someone from online purchases.

DeMaynadier said that's a problem. There are more than 150 dragonfly and damselfly species present in Maine, but more than 450 species nationwide. He said that's why people are supposed to get permits from the state, because otherwise it's not possible to tell whether any of the species being brought in are native to Maine.

Alysa Remsburg, an ecologist at Unity College whose research includes dragonflies and damselflies, agreed with the state biologist that importing new species into Maine could be a problem, but said she doesn't know if the actual impact of bringing in non-native dragonflies has been studied.

A permit is also required for the commercial collection of any species, meaning anyone who is collecting or breeding dragonflies for sale would need approval from the state. DeMaynadier said he is not aware of any state permits granted for insect collection.

Both deMaynadier and Remsburg questioned the efficacy of using dragonflies to control mosquitoes.

"We know dragonflies are voracious predators, but they will eat any kind of insect, usually whatever is most abundant," Remsburg said. "I don't know of any documented studies that says they are an effective control."

She said dragonflies undoubtedly help with mosquito control, but they are "not the silver bullet."

DeMaynadier said an influx of dragonflies in some areas could increase the competition and predation of other aquatic organisms. In some cases, that could lead to further endangerment of some insect species.

There also is no guarantee that transplanted dragonflies will adapt to a new ecosystem, he said.

The best option for handling mosquitoes, deMaynadier said, is to either use repellents to keep them at bay or just accept them as a part of life here.

"Learning to accept mosquitoes as an important, albeit annoying, component of our natural ecosystems is, hands down, the least risky alternative of all," he said.

Eric Russell can be contacted at 791-6344 or at:

erussell@pressherald.com

Twitter: @PPHEricRussell

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Maine

Hired bees play major role in Maine blueberry industry



Tom Walsh, Bangor Daily News

[Maine](#) | Sunday, May 26, 2013 at 9:25 pm

DEBLOIS — The continuing stretch of cold and wet weather has left billions of honeybees trucked into Down East Maine to pollinate the wild blueberry crop hunkered down in their hives for warmth instead of jump-starting the growing season.

Some 14,000 bee hives were recently placed across the thousands of acres of wild blueberry barrens owned in Washington County by Jasper Wyman & Son, the largest of Maine's commercial growers that collectively tend more than 60,000 acres statewide. Those growers are anxiously awaiting warmer temperatures and sunshine, as the bees they've rented won't forage in rain, winds above 20 miles per hour or temperatures under 53 degrees.

While Maine has more than 50 species of naturally occurring bees known to work the barrens, the level of pollination needed to convert blooms to fruit each spring requires the Down East and midcoast blueberry industry to import billions of bees "from away." Hives that can contain as many as 60,000 honeybees are trucked in from commercial bee operations located as far away as California, Florida and Texas.

"It's pretty likely that bees trucked into Maine from the West Coast to pollinate wild blueberries were pollinating California almond groves three months ago," said Frank Drummond, an entomologist and blueberry pollination expert who teaches within the University of Maine's Orono-based Graduate Program in Ecology and Environmental Science. "Almond pollination in California requires 1.4 million colonies, and there are only something like 2.6 million colonies in the whole country."

In recent years, Maine growers have imported about 55,000 hives, each home to a population of 30,000 to 60,000 bees, depending on hive quality. But hive numbers were up significantly last year and could go up again this year. State Apiarist Anthony Jadczyk, who serves as Maine's bee inspector, said the state is on track to exceed 70,000 imported hives this spring, which will provide mid-May to mid-June field housing for as many as 3 billion bees.

At a cost this year of at least \$105 per hive, bee hive rental represents a hefty industry-wide expense. At 70,000 hives, that cost could amount to nearly \$7.4 million.

“The most expensive production cost for growers is bringing in hives,” Drummond said. “The big growers will get volume discounts and also are willing to pay a 20 percent premium for quality hives with 60,000 bees. The smaller growers might pay \$150 for a quality hive or may be willing to pay less for a lesser-quality hive.”

Milbridge-based Wyman’s of Maine is paying about \$5 more per hive this spring than it did last year, according to Homer Woodward, the company’s vice president of operations. He’s not surprised.

“The commercial beekeepers are having a hard time keeping things going,” he said.

Since the fall of 2006, commercial beekeepers have been dealing with what’s been termed “colony collapse disorder,” or CCD. For reasons that remain largely unexplained, CCD has been killing off huge percentages of managed bee colonies. Preliminary results of a study recently released by the U.S. Department of Agriculture and industry groups show that 31.1 percent of managed honey bee colonies in the United States were lost during the 2012-13 winter. That represents a 42 percent increase in loss compared to the previous winter. The new loss figures are slightly higher than the six-year average total loss of 30.5 percent.

The USDA last fall convened a three-day “honeybee stakeholders conference” that attracted 175 public- and private-sector experts in the field from as far away as Europe. A USDA analysis of that conference said, in effect, there remain more questions than answers about colony collapse disorder and a “complex set of stresses and pathogens” may be at work, including parasitic mites, multiple viruses and bacterial diseases and pesticide exposure.

Despite what the USDA describes as a “remarkably intensive level of research efforts,” the report notes that “overall losses continue to be high and pose a serious threat to meeting the pollination service demands for several commercial crops.”

According to the American Beekeeping Federation, an estimated one-third of all food and beverages are made possible because of pollination, mainly by honey bees. In the United States, pollination contributes to crop production worth \$20-\$30 billion in agricultural production annually, the group said.

In Maine, Jadczyk said, such crops extend beyond the blueberry barrens to cranberry bogs, apple orchards and areas of Aroostook County that support canola and squash crops. After making their rounds in Maine, he said, these managed hives will be trucked to Wisconsin, Massachusetts and New Jersey

to work those states' cranberry crops.

Jadczak said he does spot checks on commercial hives, looking for bacterial diseases and parasitic Varroa mites that not only feed on honey bees but can infect bees with viral diseases, much like mosquitoes spread malaria.

"Things are coming in pretty clean," he said. "They all come into Maine with certificates of health issued at their points of origin. And it's in the best interest of the commercial beekeepers to make sure they are healthy."

Drummond was recently awarded a \$3.5 million federal grant to study Maine's native bee population at 16 blueberry growing operations in Washington and Hancock counties. His research supports a field management strategy that utilizes four hives per acre to maximize fruit production. Field studies done in Washington County and elsewhere in Maine have shown that blueberry yields can be increased by as much as 1,000 pounds an acre for each hive servicing that acre, up to five hives per acre. Those results presume good weather, adequate soil moisture and good fertilization and pest management.

Yields can range from under 1,000 pounds per acre to more than 15,000 pounds per acre, depending on a number of variables, including pollination, fruit set, weather and pests. Some Down East barrens consistently yield 10,000 pounds per acre.

Drummond said some growers find four hives per acre cost-prohibitive, while others will introduce as many as 10 hives per acre to ensure good pollination despite Down East Maine's changeable spring weather.

"You might bring in four hives and then have a week or more of cold and wet weather, like we're seeing now, when the bees won't forage and will stay in their hives to stay warm," Drummond said last week. "When there finally is ideal weather — with sun, temperatures above 50 and winds under 20 miles per hour — if you have eight hives working, instead of four, it can make up for the time lost to bad weather. It's a matter of capitalization and risk aversion."

Maine's 2012 wild blueberry crop was a good one, according to the USDA's post-harvest calculations. The department's National Agricultural Statistic Service put the total yield at 91.1 million pounds, well above Maine's five-year average of 84 million pounds. The 2011 yield weighed in at 79.9 million pounds. Valued at 76 cents per pound, the 2012 crop was worth \$69.1 million.

David Yarborough, the University of Maine Cooperative Extension Service's wild blueberry specialist, said growers are coming off a winter that provided plenty of snow cover and relatively mild temperatures, both limiting winter kill.

"The bloom looks good, but we're only 5 to 10 percent into it," Yarborough said. "We'll know more next week and the week after that."

Woodward said he likes what he's seen in Wyman & Son fields, some of which have been cleared of large rocks since last year's harvest to allow more mechanical harvesting this year.

"The cool spring will likely postpone the bloom, but the blossoms will get by the frost," he said. "We had frost here as late as last week."

Although Maine has 60,000 acres of blueberry barrens, only half of those acres are in production each year, given a two-year cultivation cycle. Jasper Wyman & Son is the largest of the six companies in Maine that process, freeze and package wild blueberries. There's also one fresh-pack cooperative in Maine. An estimated 99 percent of all the berries harvested in Maine are frozen for use as food ingredients.

Maine hives indicate big die-off not to be

The state's bees are mostly healthy and pollinating crops, avoiding the U.S. colony collapse epidemic.

Posted: June 03, 2013 12:16AM

Last modified: June 03, 2013 1:24AM

- By NORTH CAIRN

Staff Writer

A recent federal report has pinpointed some of the causes of rapid die-off of bee populations from colony collapse disorder, but Maine beekeepers say hives here are flourishing.

They credit healthy management by commercial beekeepers and the diversity of Maine's agricultural base with helping to avoid the threats posed by the disorder in many other states.

"We're in very good shape," said Tony Jadczak, state apiarist for the Department of Agriculture, Conservation and Forestry. "We have good bees, good bloom. Now we just need some (good) weather."

It will take more than good weather to counter the impacts of colony collapse disorder on bee populations elsewhere in the nation and across the globe, based on current trends.

According to a recent joint report of the U.S. Environmental Protection Agency and the U.S. Department of Agriculture, honeybee populations have been decimated by the disorder, a cluster of symptoms culminating in adult male bees suddenly fleeing the colony and dying elsewhere, causing the overall decline or total die-off of the hive.

Colony collapse disorder has killed millions of bees globally and devastated commercial beekeeping in many parts of the world.

Jadczak, who has been involved with bees and keepers for 40 years, said he believes the



Gregory Rec/Staff Photographer Peggy Pride holds a frame of beehive that had been abandoned by many of the bees at a farm in Lebanon. The bees leave in search of a new home when the hive becomes overcrowded.

origin of the collapse lies much further back than its apparent first occurrence in 2006 and its reported spread within a year to 24 states. He traces the problem back to 1985, when the first infestation by two species of mites affected the state's bee populations.

The mites carry immuno-suppressors in their saliva, reducing the disease-fighting capacity of bees. In addition, they serve as vectors of viruses that typically remain latent until the bees are weakened and the viruses surge forward, overwhelming affected hives.

Over the next 20 years, other stresses were heaped on honeybees, including a widespread intestinal parasite and extensive use of pesticides designed to kill the mites. But mites are difficult to eliminate, Jadczak said, because they quite quickly become immune to pesticides.

These factors have combined to drive honeybees to a tipping point, Jadczak said.

The potential losses from the disorder are enormous. An estimated one-third of all food and beverages -- worth \$20 billion to \$30 billion each year in crop production -- are made possible by pollination, mainly by honeybees, the federal report found.

In the last seven years, the disorder has caused the populations of an estimated 10 million beehives, valued at about \$200 each, to be wiped out, costing beekeepers roughly \$2 billion.

Compared with the nation's roughly 6 million honeybee colonies a half century ago, only 2.5 million remain, raising serious questions about whether U.S. farm crops will receive adequate pollination, the report said.

Erin Forbes, past president of the Maine State Beekeepers Association, said there's little doubt that pesticides play a significant role in damaging bee populations, partly because the toxic chemicals they contain blend with other pesticides in the environment.

"It's what humans are putting into the agricultural system," Forbes said. "It's like mixing bleach with ammonia. These chemicals are in soil, plants, groundwater."

Providing sufficient acreage for safe foraging and pasture for bees is critical to their survival, she said.

In Europe, several countries recently joined forces to enact a two-year ban on certain pesticides, in hopes of sidelining one of the presumed key factors in the bees' collapse.

But the federal report, issued in early May, did not single out one specific cause. Rather than calling for a ban on any pesticide, it called for more study into bees' exposure to toxic chemicals and their effects. The agencies and organizations contributing to the report determined the disorder to be the result of a combination of conditions -- biological, chemical, entomological and agricultural.

"It's multiple factors," Jadczyk said. "There's no single smoking gun."

In the past five years, the disorder has wiped out nearly a third of hives in U.S. commercial beekeeping operations, 30 percent on average in the last year alone, said David Bell, executive director of the Wild Blueberry Commission of Maine. That's nearly twice the normal mortality rate.

"We're very concerned about pollinators," said Bell. "Actually, all human beings should be concerned about pollinators."

Prospects have been considerably brighter for well-managed enterprises among Down East blueberry growers and beekeepers, said Bell. Their reported losses ran about 11 percent last year -- far below the national average under the stresses of the disorder.

"The bees look fantastic; the colonies look fantastic," said Forbes.

Open communication between growers and beekeepers, coupled with attentive management, has ensured that no great economic loss hit the approximately 60,000 acres of wild blueberries in Maine, Bell said.

"There's a huge range in the skill of farmers," said Bell. "There's also a huge range in the skill of commercial beekeepers."

Paul Dumont, a commercial migratory beekeeper from Windsor, said poor management of hives can contribute to colony collapse disorder. "Part of the problem with these bees is ... not letting them rest ... to regroup their energies," he said.

Bees carted from place to place to do their work demand proper management, including enough food, water and time off. Without proper care, Dumont said, colonies become more susceptible to disease, parasites and other hardships.

In the course of a year, bees from Dumont's 1,800 hives travel from Florida to California, then on to Maine, New York and Massachusetts in truckloads of pallets spread out over fields and bogs.

That's not unusual in Maine, where the largest population of bees are migrants -- more than 70,000 hives, each carrying 35,000-40,000 bees, trucked in annually to pollinate 60,000 acres of the state's blueberry, raspberry, cranberry, canola, pumpkin and squash crops, as well as apple and other orchards.

"The health of bees is a definite concern," said Margie Hansel, president of the Maine State Pomological Society. Growers of the state's approximately 2,000 acres of apple orchards have experienced some problems associated with the disorder, but none has reported the entire cluster of symptoms that characterizes the problem.

The state's relatively colder climate and harsh winters may serve as a natural protection,

preventing the conditions under which some of the symptoms of the disorder become more virulent, Hansel said.

In addition to migrant bees, Maine has 12,000 to 18,000 resident hives, tended mostly by amateur beekeepers or hobbyists, said Jadczyk.

And more keep coming.

Incorporating bees into the backyard has become so popular in the last five years that the Cumberland County Beekeepers Association alone has grown to 225 members.

Forbes said as many as 300-400 new beekeepers begin operations each year in Maine, reinvigorating depleted bee colonies with backyard hives. Honey is selling for \$8 to \$20 a pound.

Peggy Pride of Lebanon started backyard beekeeping six years ago in hopes of getting better yields from a variety of homegrown food crops.

"We wanted better pollination of our fruit trees," she said, adding that she has been surprised at how great a boon the bees were, enhancing production in the apple orchard, as well as in raspberries, pears and peaches.

The Prides have experienced losses higher than 25 percent some years in their more than 30 hives; 20 percent just over the past winter. But the bees do rebound, she said.

"Every year is different when you're working with Mother Nature," she said. "You have to take what you get. With Mother Nature, you never know."

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

ncairn@pressherald.com

Oregon bumblebee die-off surpasses 50,000

Published: June 22, 2013 at 8:08 PM

WILSONVILLE, Ore., June 22 (UPI) --

WILSONVILLE, Ore., June 22 (UPI) -- A mass die-off of bumblebees in Wilsonville, Ore., blamed on pesticides, has reached 50,000 of the insects, say scientists who are investigating the deaths.

The (Portland) Oregonian reported Saturday a second city, Hillsboro, has discovered hundreds of dead bumblebees following the die-off in a Target parking lot in Wilsonville in recent days.

"We take it seriously," Hillsboro spokesman Patrick Preston said, Saturday. "We recognize the importance of bees."

Preston confirmed that trees in downtown Hillsboro were sprayed in March with the same pesticide, Safari, that was used in Wilsonville to kill aphids. State agricultural officials say the pesticide caused the bumblebee deaths in Wilsonville, where spraying took place June 15.

The Xerces Society, an invertebrate conservation group that has been investigating the bumblebee die-off, said it is likely the bees were members of more than 300 wild colonies, KGW-TV, Portland, reported.

"Each of those colonies could have produced multiple new queens that would have gone on to establish new colonies next year. This makes the event particularly catastrophic," Xerces Society biologist Rich Hatfield said in a release.

Efforts were under way to place bee-proof netting over trees that had been sprayed in an attempt to prevent more bees from dying, the TV station said.

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Insecticide temporarily banned by Oregon Department of Agriculture after 50,000 bumblebees die in Wilsonville

25,000 bumblebees killed in Wilsonville

WILSONVILLE, OREGON -- June 18, 2013 -- A bumblebee dies after falling off a Landen tree at Town Loop Shopping Center parking lot. An estimated 25,000 bumblebees were found dead beginning Saturday, the largest known incident in the United States. *(Motoya Nakamura)*

Elizabeth Case, The Oregonian By **Elizabeth Case, The Oregonian**

Email the author | Follow on Twitter

on June 27, 2013 at 4:05 PM, updated June 28, 2013 at 7:04 AM

In response to a **massive bumblebee die-off blamed on pesticides**, the Oregon Department of Agriculture **issued a temporary restriction** Thursday on 18 insecticides with the active ingredient dinotefuran.

An estimated 50,000 bees and other insects died in a Wilsonville shopping center parking lot last week. A landscaper sprayed 55 flowering European linden trees with Safari pesticide on June 15. State officials confirmed the dinotefuran insecticide was responsible for the deaths. **Hundreds of dead bees in Hillsboro** are also being investigated.

"We're not trying to get it off the shelves, or trying to tell people to dispose of it, we're just telling people not to use it," said Bruce Pokarney, a spokesperson for the department of agriculture.

While Pokarney acknowledged it would be difficult to cite individual homeowners, he said licensed pesticide applicators would be violating Oregon regulations if they use dinotefuran-based insecticides on plants in the next 180 days.

The temporary ban only affects pesticide use that might harm pollinators, like bumblebees. Safari is one of the insecticides restricted by the Agriculture Department. Most of the restricted insecticides are used primarily for ornamental, not agricultural, pest control.

Dinotefuran use in flea collars, and ant and roach control will still be allowed.

The Department of Agriculture will reassess the temporary restriction after officials finish their investigation into the pesticide applications in Wilsonville and Hillsboro. These inquiries could take up to four months.

The Valent U.S.A. Corporation, which distributes Safari, could not be reached for comment, but the company **released a statement** earlier this week about the bee deaths.

"We are actively conducting outreach with our customers and industry partners to reinforce the importance of responsible use according to label guidelines," the statement said.

Dinotefuran is a member of a type of insecticides called neonicotinoids. Neonicotinoids can be broken down into two groups: the nitro-group and the cyano-group. Dinotefuran is a member of the nitro-group, which has been shown to be more poisonous to pollinators. The European Union **issued a temporarily ban** earlier this year on three other nitro-group neonicotinoids, which goes into effect this December.

The Washington state Department of Agriculture decided **against banning the ornamental use of neonicotinoids** earlier this month. Instead, the Washington department will "urge the U.S. Environmental Protection Agency to consider whether additional use restrictions are needed when the products are applied to ornamental plants."

The EPA is **currently reviewing the effects of neonicotinoids** on pollinators, since research and beekills incidents highlight "the potential direct and/or indirect effects of neonicotinic pesticides," its website said.

The Portland-based Xerces Society, who originally reported the Wilsonville bee deaths to the Department of Agriculture, is working with a congressional office on legislation about pollinators and pesticide use, said Scott Black, Xerces' executive director.

"We hope that this is just the start, that now we can take a look at this entire class of pesticides called neonicotinoids and really scrutinize them for their potential impact on these beneficial insects," Black said.

--Elizabeth Case

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FOR IMMEDIATE RELEASE: July 10, 2013

CONTACT:

Vermont Department of Health
Communication Office
802-863-7281

Vermont Agency of Agriculture, Food & Markets
Alison Kosakowski
802-272-4547

State Investigates Misuse of Pesticide for Bed Bug Control

Agriculture Agency and Health Department Working to Contact Customers

The Agency of Agriculture, Food & Markets has summarily suspended the license of a pesticide applicator, Cary Buck of AAA Accredited Pest Control of North Clarendon, for misuse of a pesticide in treating a residence for bed bugs.

This action was taken after the Agency discovered that the company had wrongfully applied an organophosphate insecticide called chlorpyrifos to a home in the Rutland area. All indoor uses of this pesticide were cancelled by the U.S. EPA in 2001.

The Health Department is working together with the Agency of Agriculture to individually contact customers of this company who may have had their residence treated with this pesticide in 2012 or 2013, and is offering laboratory testing at no cost to determine if the pesticide is present. The Agency has collected a number of samples already, and will continue to sample in the coming weeks.

According to records obtained from the company, an estimated 50 or more residences may be affected, although the extent to which this pesticide was used in any application by the company, which operated in the greater Rutland region, is not presently known. Test results will indicate the presence of chlorpyrifos and any detected levels will determine the advice given by the Health Department for further action.

“The discovery of misuse of chlorpyrifos by an applicator in Vermont is troubling, and we are working quickly to identify any customers who may have been exposed through this company’s action,” said Secretary of Agriculture Chuck Ross.

“We are concerned about possible health effects,” said Health Commissioner Harry Chen, MD. “This pesticide can persist in the indoor environment, and exposure to high enough levels can affect the central nervous system and can be especially harmful to pregnant women and

children. While we don't have any indication at this time that health effects from such exposure caused by this company have been widespread, we do recommend testing the residence of any customer identified so that we can take proper steps in the event we discover chlorpyrifos in the environment."

Nationally, over the past 20 years, there has been a significant increase in the number of homes, hotels, schools and other settings that have been affected by bed bugs. From 2006 to 2010, the National Pesticide Information Center received reports of pesticides being misused to treat bed bugs that resulted in 129 mild or serious health effects, including one death.

The Agriculture Agency and Health Department recommend that any treatment plan for bed bugs includes non-chemical methods such as cleaning, laundering and heat treatments to reduce the need for chemical pesticides. Pesticides labeled for outside use only should never be used inside the home.

If you think you have been overexposed to a pesticide, or feel sick after a pesticide has been used in your home, call your doctor or the poison control center: 800-222-1222.

If you have questions, dial 2-1-1 to call Vermont 2-1-1, United Ways of Vermont.

For more information on chlorpyrifos: <http://npic.orst.edu/factsheets/chlorpgen.html>

For more information for homeowners on treating bed bugs:
<http://healthvermont.gov/prevent/bedbugs/>

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Article published Jun 2, 2013

Mosquito spraying fuels debate

By Donna Boynton TELEGRAM & GAZETTE STAFF

dboynton@telegram.com

This weekend brings the warm breath of summer — the heavy, humid air, the sizzle of backyard barbecues. It's not just summerlike weather; it's mosquito season.

Amid all there is to enjoy about summer, there is ear-piercing buzz and the itchy welts left by winged vampires. Break out the bug spray, or fire up the mosquito magnet.

Membership in the Central Massachusetts Mosquito Control Project is sanctioned, in most communities, by a town meeting vote. When communities join they are assessed a membership fee, which varies according to a Department of Revenue formula and is based mostly on size. The cost ranges from \$25,000 to \$80,000.

Not every region in the state is covered by a mosquito control program — Hampden, Hampshire and Franklin counties are not — and not every town within a district has signed on for the service.

For example, Bolton, Mendon and Upton voters declined joining the program this year. Bolton proposed a Proposition 2-1/2 override to fund the \$41,000 annual cost of joining, but it was met with much resistance from residents who were either concerned about the cost or the use of pesticides. Joining the CMMCP was rejected by 10 votes.

On the other hand, Uxbridge voted not to end its five-year relationship with CMMCP.

CMMCP was created by the state Legislature in 1973, after an outbreak of Eastern Equine Encephalitis, and it includes communities in both Worcester and Middlesex counties.

Timothy D. Deschamps, executive director of the CMMCP, located in Northboro, said a few municipalities have declined membership, but overall he said it is a "fairly rare occurrence."

"It's unfortunate," Mr. Deschamps said of Bolton's decision. "We did identify EEE in mosquitoes in Berlin, about a mile from the Bolton town line. In 2010, public health detected EEE in mammal-biting mosquitoes. We had a horse die in Lancaster that same time."

Mr. Deschamps said at that time, even though Bolton wasn't a member, CMMCP did spray in town. CMMCP didn't ask for monetary support; only that the town put an article before town meeting in 2011, which failed.

"We felt that the need of the public health outweighed any monetary consideration," Mr. Deschamps said. "We're a public health agency. We are always going to put that first."

Mr. Deschamps said Mendon and Upton each declined to join, even though EEE and West Nile Virus were found in every community that surrounds those two towns.

"We're about to come into a heat wave now," Mr. Deschamps said, adding that it is too early to predict what mosquito season will be like this year. "We're hoping we do not see West Nile Virus or EEE early."

For some, it has little to do with finances and more to do with the pesticides used by CMMCP and its overall impact beyond the insect it targets.

David Lewcon of Uxbridge, a member of the Conservation Commission and a local beekeeper, said the cost is not worth the

damage it does to the environment.

“Birds eat mosquitoes. Now, with no mosquitoes or anything resembling them, birds are not coming back to the area. Their food is not there and the habitat has been altered,” Mr. Lewcon said.

Mr. Lewcon, a member of the Worcester Beekeepers Association, said there is also concern about the effect spraying has on hives. Mr. Lewcon said every year there is a pesticide kill on local colonies associated with mosquito spraying.

CMMCP’s spraying is targeted and done at night, when bees are not expected to be out and about. But on nights as warm as recent ones, bees are outside the hive, using their wings to direct air into the hives to cool it. If sprayed pesticides find their way near a hive, it too gets fanned into the hive.

Another concern is that the CMMCP supersedes the Wetlands Protection Act, and this sometimes puts it at odds with the mission of Conservation Commissions, especially when it comes to CMMCP’s wetlands restoration service. While CMMCP aims to increase water flow and prevent stagnation, it is not work that jibes with local Conservation Commissions, at least not in Uxbridge.

“They can do whatever they want to the wetlands without regard to us,” Mr. Lewcon said. “They alter the course or path of streams and when they do that they prevent water from percolating in an aquifer. ... We protect the wetlands, and they come in and push aside all the hard work we have done. I know of a couple of cases where waterways, streams or brooks are flowing faster and flooding downstream properties.”

While humans can — and have, locally — contracted mosquito-borne illness, the threat is minimal, at least compared to other regions, and not nearly as formidable as Lyme disease, which Mr. Lewcon argues does not get nearly as much aggressive preventive treatments.

“I don’t know too many people who like mosquitoes,” Mr. Lewcon said. “You can’t discount the fact that there is potential harm from mosquitoes, but be careful how you treat them. You can’t just randomly spray because you don’t like bugs.”

In Mendon, residents Shirley Smith and Ann Mazar spoke against joining the CMMCP at town meeting, saying mosquito-borne diseases are rare and that for the cost — \$38,200 per year — the town can do some of the same things as CMMCP, such as cleaning culverts, and treating standing water to kill mosquito larvae.

Ms. Smith said in an email that it is possible for a group of towns to form their own district under Massachusetts General Laws.

In the meantime, Ms. Smith said she is working with a representative from Mass Audubon to update the 40-year-old laws and is attending a meeting June 5 with the State Reclamation and Mosquito Control Board to start that process.

“I think we have to learn to live with the mosquitoes as we do the snow, rain and other environmental conditions,” Mr. Lewcon said, adding that there are more organic means of fighting the mosquito by using things such as peppermint extract or garlic.

“There are things that are more benign than chemical warfare.”

Contact Donna Boynton at dboynton@telegram.com or follow her on Twitter @DonnaBoyntonTG. Reporter Elaine Thompson contributed to this report.

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NEWS | June 27, 2013

Aerial mosquito spraying study finds no immediate public health risks

UC Davis researchers say emergency room visits remained stable during the last big Sacramento area-wide sprayings for West Nile virus

Editor's note:

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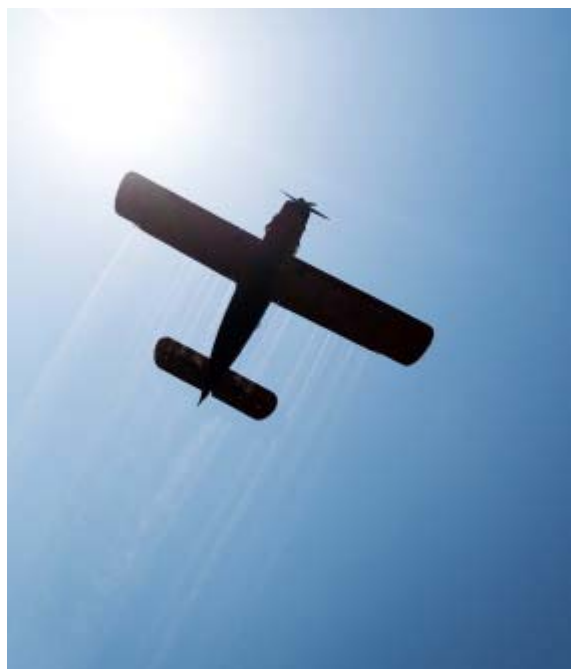
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In what researchers say is the first public health study of the aerial mosquito spraying method to prevent West Nile virus, a UC Davis study analyzed emergency department records from Sacramento area hospitals during and immediately after aerial sprayings in the summer of 2005. Physicians and scientists from the university and from the [California Department of Public Health](#) found no increase in specific diagnoses that are considered most likely to be associated with pesticide exposure, including respiratory, gastrointestinal, skin, eye and neurological conditions.



The study evaluated emergency room visits in Sacramento County hospitals on days that pesticides were sprayed as well as the three days following spraying.

The study appears in the [May-June 2013 issue of *Public Health Reports*](#).

This week, mosquito control officials said the region's recent rainstorms and warming temperatures have increased stagnant water and favorable conditions for mosquitoes, which will likely magnify the incidence West Nile virus and the risks of human transmission. The mosquito-borne disease first appeared in the state about 10 years ago. It already has been detected in dead birds and mosquitoes in at least 10 counties in recent weeks, including Sacramento and Yolo. However, the adult mosquito population has yet to increase to levels that require aerial spraying over heavily urbanized areas as was done in the Sacramento region in previous years.

“Unfortunately, West Nile virus is endemic in California and the United States, and the controversy of mosquito management will likely arise every summer,” said [Estella Geraghty](#), associate professor of clinical internal medicine at UC Davis and lead author of the study. “Findings from studies such as this one help public health and mosquito control agencies better understand the risks and benefits of their practices.”

West Nile virus has become an increasingly serious problem throughout the United States and may become more of a threat as the climate warms. According to the [Centers for Disease Control and Prevention](#), West Nile virus is the leading cause of viral encephalitis in the United States. The virus is transmitted to humans and animals through the bite of an infected mosquito. Mosquitoes become infected with the virus when they feed on infected birds.

In California around the time of the study — 2004 and 2005 — hundreds of people were sickened by West Nile virus and 48 died. Most people exposed to the disease do not have symptoms, but in about

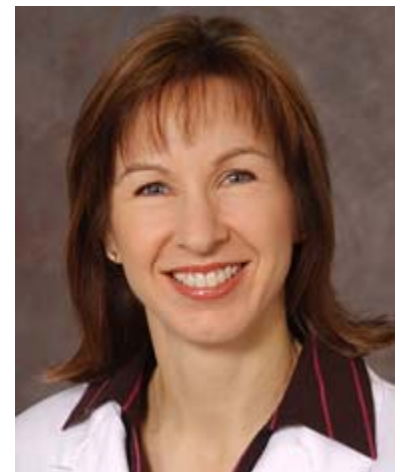
1-in-150 people it can be fatal or result in permanent neurological effects.

The study evaluated emergency room visits in Sacramento County hospitals on days that pesticides were sprayed as well as the three days following spraying. Spraying was done in north Sacramento over three nights, and in south Sacramento over four nights in August 2005. Data were compared with emergency room visits on other days during the same period as well as from nearby areas that were not exposed to aerial spraying.

“Findings from studies such as this one help public health and mosquito control agencies better understand the risks and benefits of their practices.”

— Estelle Geraghty

Emergency room visits were classified by specific diagnostic categories, including respiratory, gastrointestinal, skin, eye and neurologic diseases. Importantly, they found that exposure to aerial spraying was not associated with increased rates of emergency department visits for any of these conditions.



Estelle Geraghty

More than 250,000 emergency room visits were analyzed and stratified by 785 diagnostic codes. According to Geraghty, because there were so many data points, statisticians predicted that by chance alone, two conditions would appear to have occurred too frequently or too infrequently. In fact, a type of abdominal hernia was found to occur more often than the background rate during the time of spraying, and death and disease due to unusual causes was found to occur less frequently. The authors concluded that because these conditions have no known plausible biological connection with aerial spraying, the results related to these conditions are indeed likely to have occurred by chance.

Integrated mosquito management — a method to control mosquitoes through targeted interventions based on mosquito biology that includes surveillance of mosquito activity, reducing breeding sites such as neglected swimming pools, and the killing of larval and adult mosquitoes — are all used in California to control the spread of mosquito-borne diseases such as West Nile virus. When local methods prove inadequate, aerial spraying is used to rapidly reduce large, adult mosquito populations.

During the time of the study, ultra-low volume of pyrethrin insecticide was used for spraying; the chemical is derived from an African chrysanthemum and acts by blocking chemical signals at nerve junctions in insects. It is the same pesticide used to treat head lice in children and to kill fleas and ticks in pets.

Exposure to the pesticide has been reported to pose risks to human health, including skin and eye irritation, respiratory and gastrointestinal disturbances, lethargy, fatigue and dizziness. According to the UC Davis researchers, the exposure to pyrethrin during the urban aerial sprayings in 2005 was minimal due to the use of ultra low volume technology. Coverage required only about three-quarters of an ounce or less of the chemical per acre.



Potential long-term effects of aerial spraying to combat mosquito-borne West Nile virus were not addressed in this UC Davis study.

Geraghty cautioned that potential long-term effects of aerial spraying were not addressed in the study and would be extremely difficult to investigate on human populations. She said it would be worthwhile to reproduce the study for other pesticides and spraying techniques.

The article is titled “Correlation between aerial insecticide spraying to interrupt West Nile virus transmission and emergency department visits in Sacramento County, California.” Other authors are Peter Franks and Helene Margolis of the UC Davis Center for Healthcare Policy and Research, Anne Kjemtrup of the California Department of Public Health, William Reisen of the UC Davis School of Veterinary Medicine.

The study was supported in part by a UC Davis, Clinical and Translational Science Center K12 Career Development Award (grant #UL1 RR024146) from the National Center for Research Resources of the National Institutes of Health to the lead author, Geraghty.

The Sacramento-Yolo Mosquito and Vector Control District provided the aerial spraying data.

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HEALTH

2012 Texas West Nile Outbreak Linked to Mild Winter

Lessons learned in deadly resurgence may point the way to prevention, expert says

July 16, 2013



By Amy Norton

HealthDay Reporter

TUESDAY, July 16 (HealthDay News) -- An unusually mild winter and an early appearance of infected mosquitoes may have fueled a deadly outbreak of West Nile virus in Texas last summer, a new study finds.

Mosquitoes transmit West Nile virus to humans, and while most infections cause no serious problems, a small number of people suffer potentially fatal inflammation around the brain or spinal cord.

After several years of laying low, the West Nile virus resurged last summer in the United States, killing 286 people -- the most in one year since 1999. Texas accounted for one-third of all confirmed infections, with the Dallas area, where 19 people died, the hardest hit.

In the new study, published July 17 in the *Journal of the American Medical Association*, researchers tried to figure out why.

Using local weather data for the past decade, they found that the winters before the 2012 outbreak, and before a smaller 2006 outbreak, were unusually mild.

"Those two winters really stuck out," said senior researcher Dr. Robert Haley, of the University of Texas Southwestern Medical Center at Dallas.

Following those mild winters, West Nile infections in mosquitoes cropped up earlier in the year, and shot up at a faster rate. (Haley's team was able to track that pattern because the Dallas area has government surveillance programs that trap and test mosquitoes for the virus.)

"When you put it all together," Haley said, "you have a warmer winter and earlier spring, and more infected mosquitoes by June and July."

In 2012, the first infected mosquitoes were detected in late May, the study found. And by June and July, the number of infected mosquitoes caught in traps each night was substantially higher than in non-epidemic years.

Researchers call the average number trapped the "vector index." Until now, Haley said, it wasn't clear whether the vector index was a good predictor of a potential West Nile epidemic.

But based on what his team found, Haley said, "we're really convinced that it is."

The two epidemic years, 2006 and 2012, were the only years in which the vector index passed 0.5. In 2012, the index soared that high by the last week of June -- at which point the first 19 people with West Nile infections affecting the brain or spinal cord were already falling ill. Ultimately, 173 people contracted those serious infections.

Haley said the findings highlights the need for mosquito-testing programs, and for acting sooner rather than later when the vector index rises at an unusually fast pace.

West Nile may have slipped from many people's memories since it first hit North America in 1999, said Dr. Stephen Ostroff, a former official with the U.S. Centers for Disease Control and Prevention.

"But the 2012 outbreak shows us West Nile is not a 'has-been,'" said Ostroff, who wrote an editorial published with the study.

While the new findings are based on the situation in Dallas, the lessons can likely be applied elsewhere, Ostroff said. "If you've just had a mild winter, you may need to do more earlier in the year," he said.

That means an earlier start to mosquito-control measures, such as limiting mosquito breeding grounds -- including areas of stagnant water -- and spraying pesticides at ground level, said Ostroff. By the time the Dallas outbreak became apparent last year, officials had to use airplanes to spray pesticides on a wide scale.

Health officials say the amount of pesticide released during those aerial assaults is safe for humans. But some residents and environmental health advocates worried about the exposures. And from a budget standpoint, avoiding aerial spraying would be a good thing, Ostroff noted.

"If we act earlier," he said, "we may be able to avoid aerial application of pesticides."

In 2012, Dallas County spent an estimated \$1.6 million on aerial pesticide spraying. And the cost of treating West Nile infections reached about \$8 million, Haley's team noted.

That, Ostroff said, suggests that investing in local mosquito surveillance programs could end up saving money.

Haley agreed, and said that if global warming leads to more mild winters, West Nile epidemics could potentially become more common. "This is a serious disease that is going to be with us for a while," he said. "And it could get worse."

More information

The U.S. Centers for Disease Control and Prevention has more on [West Nile virus](#).

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Tags: [infections](#), [safety](#)

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May 24, 2013



Marijuana Pesticide Contamination Becomes Health Concern As Legalization Spreads

Posted: 05/24/2013 7:44 am EDT

BELFAIR, Wash. -- Other than a skunky aroma, the waiting room at the Cannabis Care Foundation in Belfair, Wash., resembles your typical pharmacy. Chairs line walls next to stacks of magazines -- in this case, issues of Rolling Stone -- and a steady stream of patients step up to the counter with doctor's notes.

One by one, salesman Adam Dempsey leads them to the back of the shop, where they can choose from an [extensive weed menu](#) -- products with names such as Frankenstein, Garbage, Snoops Dream and Sour Diesel.

"I take it every day myself," said Dempsey, sporting a black hat with a green embroidered marijuana leaf and a plain white T-shirt over his tattooed arms. He works security and customer service at the non-profit store, which through a cooperative arrangement gets much of its cannabis crop from patients themselves.

Marijuana's primary mind-bending ingredient, tetrahydrocannabinol (THC), Dempsey suggested, helps tame his attention deficit disorder.

But experts warn that unwelcome chemicals, including pesticides, may be tagging along with the THC and threatening the health of marijuana users.

"There's a pretty considerable amount of contaminated cannabis," said Jeff Raber of [The Werc Shop](#), a Pasadena, Calif.-based lab that tests products primarily for California dispensaries.

"There are no application standards," he added. "Since we're not telling growers that they're allowed to use anything, they often use whatever they can get their hands on. And that's a lot of bad things."

Many of the chemicals applied to pot plants are intended only for [lawns](#) and other non-edibles. Medical cannabis samples collected in Los Angeles have been found to contain pesticide residues at levels 1600 times the legal digestible amount.

Because the product is generally inhaled rather than eaten, any toxins it carries have an even more direct route into the lungs and blood stream. Raber noted the situation is all the more concerning for patients smoking medical cannabis, whose health problems could make them more vulnerable to the risks pesticide exposure brings -- especially if they suffer from a liver disease.

Still illegal in the eyes of the federal government, marijuana use is [condoned by a growing number of states](#). Eighteen states and the District of Columbia now allow the medical use of cannabis, and Colorado and Washington recently approved pot for recreational use. Many of the states where some form of marijuana use is legal, including Washington, have begun [drafting regulations](#) that would require independent labs to test products before they are sold.

While efforts to legalize both medical and recreational cannabis could lead to "a greater awareness of and demand for clean, pesticide-free marijuana," said Raber, the burgeoning market remains troublesome.

Raber published a [study](#) this month that attempted to answer some lingering questions about pot and pesticide exposure. He and his colleagues investigated pesticides they'd commonly detected on marijuana products in their lab -- bifenthrin, diazinon, and permethrin -- as well as a plant growth regulator called paclobutrazol. One concern was whether those pesticides could actually get into a user's body.

The short answer: yes. However, amounts varied depending on how the pot was



smoked.

The researchers determined that as much as 60.3 percent to 69.5 percent of chemical residues would be inhaled with a hand-held glass pipe, but as little as 0.08 percent to 10.9 percent got through with a filtered water pipe.

"When you filter, you see a dramatic reduction in the amount of pesticides," said Raber.

Not all cannabis is the same, of course. Each strain comes with its own unique combination of chemical compounds, and scientists have yet to get a handle on how any of the chemicals applied to the plant might interact with those natural chemicals, especially when burned and inhaled together. Then there are all of the other forms in which cannabis is consumed -- from oils to teas to candies.

"This raises a lot of questions on how to set up better structures to provide clean, regulated supplies," Raber said.

Public health experts interviewed by The Huffington Post lamented the dearth of data on the subject. Some research has been done on pesticides and smoking tobacco, but since tobacco is not a food crop, the U.S. Environmental Protection Agency has not set tolerances on pesticide residue levels.

Tobacco is also generally smoked through filtered cigarettes, and for the most part not targeted for use by already unhealthy adults, as medical marijuana is.

"If the pesticide is inhaled, then this is quite worrisome," said Dr. Beate Ritz, an environmental health epidemiologist at the University of California, Los Angeles School of Public Health. "And these patients might be much more vulnerable."

"Pesticides affect the nervous systems of insects. Our nervous systems are similar to theirs," added Ritz, noting that for patients with terminal illnesses, the benefits of smoking marijuana might outweigh long-term risks of pesticide exposure, such as cancer and heart disease. But acute risks such as flu-like illnesses and respiratory problems, she said, would still be a serious concern.

Given all this, it seems reasonable to ask whether [pesticides are even necessary](#) to grow marijuana plants. The answer depends on whom you ask.

James Dill, a pest management specialist with the University of Maine's Cooperative Extension, explained that pests create difficulties in managing the crop. Too much moisture and growers face a fungus or mildew problem; too much dryness and spider mites can take over.

"All of the sudden you could be smoking a mold," said Dill. "That's not meant to be ingested."

It can be easy to see why growers motivated to fend off these foes, and by constraints on time and space to grow plants faster and taller, might resort to chemical help.

There are some alternatives.

"If they're smart, they use companion planting like garlic and onion chives to provide a natural barrier," said Dempsey, the Washington marijuana dispensary salesman.

Still, he admitted that his suppliers, many of whom are also his customers, are still just "learning how to grow."

The Cannabis Care Foundation doesn't have any special testing equipment, nor does it send marijuana out to a lab for analysis. But Dempsey suggested that he and his coworkers can "tell pesticides right away" by smell, taste, touch or by using a microscope. He added that they reject a good amount of cannabis due to mold, pests or pesticide contamination.

But Raber expressed doubt that such surface-level analysis would be sufficient.

"There is no way they could detect pesticide molecules inside of the plant that were put there through the roots," he said. "Nor could they smell the tens to hundreds of compounds you'd like to look for that could potentially be put on there by a cultivator."

Pesticides can be dangerous even at levels far lower than someone would be able to see with a microscope, he added. But he also emphasized that most dispensaries and cultivators want to provide a clean, safe product. In many cases, both seller and grower are unaware that a crop has become contaminated.

"Cannabis is well known to pull up a lot of crap out of the ground," he said.

Evan Mascagni stumbled across the issue of contaminated cannabis while filming his upcoming documentary, ["Toxic Profits,"](#) which highlights the [global sale of pesticides banned in the U.S.](#) He noted concern among many in California that because marijuana remains illegal under federal law, the U.S. Department of Agriculture doesn't allow any organic certification for its products.

Some independent efforts such as [Clean Green Certified](#) have sprouted, but even crops from growers who think they are complying with organic standards sometimes [test positive for pesticides.](#)

"You can only imagine the pesticides that are being used on marijuana grown elsewhere by profit-driven farmers" who may not care about the health of consumers or the environment, Mascagni told HuffPost in an email.



A medical marijuana dispensary outside of Seattle sells an array of cannabis products, generally grown by co-op members. (Lynne Peeples)

Pot-smokers aren't the only ones at risk from the application of pesticides on marijuana crops. Also potentially in danger are the people spraying the chemicals -- especially if the practice takes place indoors -- and others that may eat, drink or [breathe](#) downwind.

Dempsey maintained that growers can produce cannabis without using pesticides.

"This is a pharmacy," he said. "We need something that helps a patient get healthier, not something that kills them."

by Taboola



the salt

As Biotech Seed Falter, Insecticide Use Surges In Corn Belt

by DAN CHARLES

July 09, 2013 3:39 AM

Listen to the Story

Morning Edition

4 min 46 sec



Dan Charles/NPR

Across the Midwestern corn belt, a familiar battle has resumed, hidden in the soil. On one side are tiny, white larvae of the corn rootworm. On the other side are farmers and the insect-killing arsenal of modern agriculture.

We've reported on earlier phases of this battle: The discovery of rootworms resistant to one type of genetically engineered corn, and an appeal from scientists for the government to limit the use of this new corn to preserve the effectiveness of its protection against rootworm.

It appears that farmers have gotten part of the message:

Biotechnology alone will not solve their rootworm problems. But instead of shifting away from those corn hybrids, or from corn altogether, many are doubling down on insect-fighting technology, deploying more chemical pesticides than before. Companies like Syngenta or AMVAC Chemical that sell soil insecticides for use in corn fields are reporting huge increases in sales: 50 or even 100 percent over the past two years.

This is a return to the old days, before biotech seeds came along, when farmers relied heavily on pesticides. For Dan Steiner, an independent crop consultant in northeastern Nebraska, it brings back bad memories. "We used to get sick [from the chemicals]," he says. "Because we'd always dig [in the soil] to see how the corn's coming along. We didn't wear the gloves and everything, and we'd kind of puke in the middle of the day. Well, I think we were low-dosing poison on ourselves!"

For a while, biotechnology came to his rescue. Biotech companies such as Monsanto spent many millions of dollars creating and inserting genes that would make corn plants poisonous to the corn rootworm but harmless to other creatures.

The first corn hybrids containing such a gene went on sale in 2003. They were hugely popular, especially in places like northeastern Nebraska, where the rootworm has been a major problem. Sales of soil insecticides fell. "Ever since then, I'm like, hey, we feel good every spring!" says Steiner.

But all along, scientists wondered how long the good times would last. Some argued that these genes — a gift of nature — were being misused. (For a longer explanation, read my post from two years ago.)

Those inserted genes, derived from genes in a strain of the bacterial *Bacillus thuringiensis*, worked well for a while. In fact, the Bt genes remain a rock-solid defense against one pest, the European corn borer.

In parts of Illinois, Iowa, Minnesota and Nebraska, though, farmers are running into increasing problems with corn rootworms.

"You never really know for sure, until that big rain event with the strong wind, and then the next morning the phone starts ringing

[and people ask]: 'What's going on out there?' " says Steiner.

Entire hillsides of corn, with no support from their eaten-away roots, may be blown flat.

Monsanto has downplayed such reports, blaming extraordinary circumstances. But in a half-dozen universities around the Midwest, scientists are now trying to figure out whether, in fact, the Bt genes have lost their power.



Dan Charles/NPR

At the University of Nebraska, entomologist Lance Meinke is turning colonies of rootworms loose on potted corn plants that contain different versions of the anti-rootworm gene, to see how well they survive.

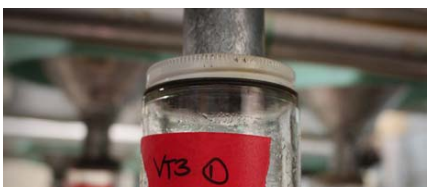
The larvae get to feed on the corn roots for about two weeks. The soil from each pot then is dumped into a kind of steel container. If the larvae are still alive, a bright light will drive them into little glass jars filled with alcohol. "They try to escape from the heat," says David Wangila, a graduate student who is managing this experiment.

If the rootworm-fighting genes in the corn are working well, no larvae should emerge.

But some have. Wangila points to one of the little glass jars. Inside, there are three nice plump corn rootworm larvae.

This is not good. Those insects, originally collected from a cornfield in Nebraska, were feeding on corn that contained the first rootworm-fighting gene that Monsanto introduced ten years ago. Technically, it's known as the Cry 3Bb gene.

Meinke and Wangila will compare the survival rate of these rootworms with others that have never been exposed to Bt. They're looking for signs that rootworms in the corn fields of Nebraska have evolved resistance to genetically engineered crops.



An identical experiment in Iowa, carried out more than a year ago, found corn rootworms resistant to the Cry 3Bb gene.



Dan Charles/NPR

Nobody knows how widely those insects have spread, but farmers aren't waiting to find out. Some are switching to other versions of biotech corn, containing anti-rootworm genes that do still work. Others are going back to pesticides.

Steiner, the Nebraska crop consultant, usually argues for another strategy: Starve the rootworms, he tells his clients. Just switch that field to another crop. "One rotation can do a lot of good," he says. "Go to beans, wheat, oats. It's the No. 1 right thing to do."

Insect experts say it's also likely to work better in the long run.

Meinke, who's been studying the corn rootworm for decades, tells farmers that if they plant just corn, year after year, rootworms are likely to overwhelm any weapon someday.

The problem, Meinke says, is that farmers are thinking about the money they can make today. "I think economics are driving everything," he says. "Corn prices have been so high the last three years, everybody is trying to protect every kernel. People are just really going for it right now, to be as profitable as they can."

As a result, they may just keep growing corn, fighting rootworms with insecticides — and there's a possibility that those chemicals will eventually stop working, too.

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USDA: Unapproved modified wheat in Oregon field

AP By NIGEL DUARA and MARY CLARE JALONICK | Associated Press – Thu, May 30, 2013

PORTLAND, Ore. (AP) — Field workers at an Eastern Oregon wheat farm were clearing acres for the bare offseason when they came across a patch of wheat that didn't belong.

The workers sprayed it and sprayed it, but the wheat wouldn't die. Their confused boss grabbed a few stalks and sent it to a university lab in early May.

A few weeks later, Oregon State wheat scientists made a startling discovery: The wheat was genetically modified, in clear violation of U.S. law, although there's no evidence that modified wheat entered the marketplace.

They contacted federal authorities, who ran more tests and confirmed their discovery.

"It looked like regular wheat," said Bob Zemetra, Oregon State's wheat breeder.

No genetically engineered wheat has been approved for U.S. farming. U.S. Department of Agriculture officials said the wheat is the same strain as a genetically modified wheat that was legally tested by seed giant Monsanto a decade ago but never approved. Monsanto stopped testing that product in Oregon and several other states in 2005.

How the modified wheat made it from a private company's testing grounds to the Eastern Oregon commercial wheat field is a question investigators are trying to unravel in a mystery that could have global implications on the wheat trade in the U.S. and abroad.

Many countries around the world will not accept imports of genetically modified foods, and the United States exports about half of its wheat crop. Zemetra said the presence of the modified crop shows the need for testing.

"We'll need to develop or implement a method for testing some of the grain to see for the first year or two," Zemetra said.

An Oregon State wheat scientist and a graduate student did the first tests and discovered the likely presence of a gene that made the wheat resistant to herbicide.

The genetically-modified wheat grew on land that was supposed to be rotated, said Mark Flowers, Cereal Specialist at Oregon State University Extension. The field was in an off-year and in May 2013, it was supposed to be fallow and bare. Workers expected to kill off the few rogue plants that poked out of the ground.

But those plants resistant to the herbicide caught their attention.

"That's when this was noticed," Flowers said. "Some of the wheat did not die."

USDA officials declined to speculate whether the modified seeds blew into the field from a testing site or if they were somehow planted or taken there, and they would not identify the farmer or the farm's location.

The discovery also could have implications for organic companies, which by law cannot use genetically engineered ingredients in foods. Organic farmers have frequently expressed concern that genetically modified seed will blow into organic farms and contaminate their products.

U.S. consumers have shown increasing interest in avoiding genetically modified foods. There has been little evidence to show that modified foods are less safe than their conventional counterparts, but several state legislatures are considering bills that would require them to be labeled so consumers know what they are eating.

While most of the corn and soybeans grown in the United States are already modified, the country's wheat crop is not.

The tests confirmed that the plants were a strain developed by Monsanto to resist its Roundup Ready herbicides and were

tested between 1998 and 2005. At the time Monsanto had applied to USDA for permission to develop the engineered wheat, but the company later pulled its application.

The Agriculture Department said that during that seven-year period, it authorized more than 100 field tests with the same glyphosate-resistant wheat variety. Tests were conducted in in Arizona, California, Colorado, Florida, Hawaii, Idaho, Illinois, Kansas, Minnesota, Montana, Nebraska, North Dakota, Oregon, South Dakota, Washington and Wyoming.

During that testing and application process, the Food and Drug Administration reviewed the variety found in Oregon and said it was as safe as conventional varieties of wheat.

In a statement issued Wednesday, Monsanto noted that this is the first report since its program was discontinued.

"While USDA's results are unexpected, there is considerable reason to believe that the presence of the Roundup Ready trait in wheat, if determined to be valid, is very limited," the company said.

USDA officials confirmed they have received no other reports of discoveries of genetically modified wheat. Michael Firko of the Agriculture Department's Animal and Plant Health Inspection Service and Acting Deputy Secretary of Agriculture Michael T. Scuse said they have already been in touch with international trading partners to try and assuage any concerns.

"Hopefully our trading partners will be understanding that this is not a food or feed safety issue," Scuse said.

Tim Fought in Portland, Ore., contributed to this report.

Follow Mary Clare Jalonick on Twitter at <http://twitter.com/mcjalonic>

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WRAPUP 1-US genetically modified wheat stokes fears, Japan cancels tender

Thu, May 30 2013

* Japan cancels tender to purchase U.S. wheat

* Asian consumers jittery about gene-altered food imports

* Importers to seek details from U.S. government (Recasts with details, quotes)

By Naveen Thukral and Risa Maeda

SINGAPORE/TOKYO, May 30 (Reuters) - A strain of genetically modified wheat found in the United States fuelled concerns over food supplies across Asia on Thursday, with major importer Japan cancelling a tender offer to buy U.S. grain.

Other top Asian wheat importers South Korea, China and the Philippines said they were closely monitoring the situation after the U.S. government found genetically engineered wheat sprouting on a farm in the state of Oregon.

The strain was never approved for sale or consumption.

Asian consumers are keenly sensitive to gene-altered food, with few countries allowing imports of such cereals for human consumption. However, most of the corn and soybean shipped from the U.S. and South America for animal feed is genetically modified.

"We will refrain from buying western white and feed wheat effective today," Toru Hisadome, a Japanese farm ministry official in charge of wheat trading, told Reuters.

The U.S. Department of Agriculture on Wednesday said the wheat variety was developed years ago by biotechnology giant Monsanto Co. It was never put into use because of worldwide opposition to genetically engineered wheat.

Wheat, long known as the staff of life, is the world's largest traded food commodity and it is used in making breads, pastries, cookies, breakfast cereal and noodles.

Asia imports more than 40 million tonnes of wheat annually, almost a third of the global trade of 140-150 million tonnes. The bulk of the region's supplies come from the United States, the world's biggest exporter, and Australia, the No. 2 supplier.

The USDA said there was no sign that genetically engineered wheat had entered the commercial market, but grain traders warned the discovery could hurt export prospects for U.S. wheat.

"Asian consumers are jittery about genetically modified food," said Abah Ofon, an analyst at Standard Chartered Bank in Singapore. "This is adding to concerns that already exist on quality and availability of food wheat globally."

In 2006, a large part of the U.S. long-grain rice crop was contaminated by an experimental strain from Bayer CropScience, prompting import bans in Europe and Japan and sharply lowering market prices. The company agreed in court in 2011 to pay \$750 million to growers as compensation.

BUYERS CAUTIOUS, SEEK DETAILS

A major flour miller in China, which has been stocking U.S. wheat in recent months, said importers will tread carefully.

China has emerged as a key buyer of U.S. wheat this year, taking around 1.5 million tonnes in the past two months. Chinese purchases in the year to June 2014 are estimated to rise 21 percent to 3.5 million tonnes, according to the USDA, with most shipments coming from the United States, Australia and Canada.

Japan's Hisadome said the government has asked U.S. authorities to provide more details of their investigation and Japan will stop buying the wheat concerned, at least until a test kit is developed to identify genetically modified produce.

There is no U.S.-approved test kit to identify genetically engineered wheat. The USDA has said it is working on a "rapid test" kit.

The Philippines, which buys about 4 million tonnes of wheat a year and relies mainly on U.S. supplies, is waiting for more details from the USDA before acting, an industry official in Manila said.

An agriculture ministry source in South Korea said the government is reviewing the discovery, adding the country thoroughly inspects products from the United States as part of safety checks.

"I won't be surprised if other countries start cancelling or reducing their purchases of U.S. wheat, particularly Asian countries, putting pressure on wheat demand," said Joyce Liu, an investment analyst at Phillip Futures in Singapore.

The benchmark Chicago Board of Trade wheat futures eased half a percent on Thursday after rallying in the previous session.

Genetically modified crops cannot be grown legally in the United States unless the government approves them after a review to ensure they pose no threat to the environment or to people.

Monsanto entered four strains of glyphosate-resistant wheat for U.S. approval in the 1990s but there was no final decision by regulators because the company decided there was no market.

The St. Louis-based firm downplayed the incident in a statement posted on its website. "While USDA's results are unexpected, there is considerable reason to believe that the presence of the Roundup Ready trait in wheat, if determined to be valid, is very limited," it said.

Still, importers are not in a position to shun wheat from the United States, which accounts for about a fifth of the global supplies, analysts and industry officials said. (Additional reporting by Karl Plume in CHICAGO, Niu Shuping in Beijing, Erik dela Cruz in MANILA, Jane Chung in SEOUL and Yayat Supriatna in JAKARTA; Editing by Amran Abocar and Richard Pullin)

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Fire officials: Bug bombs caused NY building blast

By COLLEEN LONG, Associated Press
Updated 10:44 am, Friday, July 12, 2013

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NEW YORK (AP) — Two dozen bug bombs may have been set off at once inside a Chinatown beauty salon, leading to an explosion and fire that injured a dozen people, fire officials said Friday.

Three people remained hospitalized in serious condition Friday. Nine others suffered burns and smoke inhalation in the Thursday blaze, including four firefighters.

Fire investigators received reports that 24 pesticide cans, which release gas to kill bugs, were deployed at once in the first-floor beauty salon of the five-story brick building. The poisonous flammable fumes ignited, possibly from a pilot light or a spark from an electrical appliance. Fire officials were still investigating the blaze but believe it was accidental, spokesman James Long said.

Bug bombs, also known as foggers, are considered so poisonous and dangerous that New York City health officials have tried — so far unsuccessfully — to put restrictions in place so that only professional exterminators use the devices.

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The devices cause between four and eight explosions every year in New York City, and about 300 nationally, according to the California Department of Pesticide Regulation and a 2009 letter to the U.S. Environmental Protection Agency from the city's director of poison control urging tighter restrictions on the pesticides.

"Failure to read, understand or follow label instructions is widespread," according to the letter. "The use of foggers results in regular catastrophic events."

Last year, the EPA made changes to bug bomb labeling that included pictures showing that multiple canisters shouldn't be used in a room, that ignition sources should be unplugged or turned off and that no pilot lights should be on.

In the explosion at 17 Pike St., fire officials believe "improper use" of the cans caused the blast that blew out a wall and caused the building to partially collapse. The fire broke out about 12:45 p.m. Thursday, with the explosion shattering windows on the first three floors. Officials did not say who they believe may have set the canisters off.

Tszkan Cheung, who had been in his fourth-floor apartment above the salon eating lunch at the time, described what he heard as "boom, like a bombing, like an earthquake."

He made it out of the building on his own but saw firefighters carrying out a woman with a severely injured leg.

Jinjoo Yang, who lives next door, said, "I heard a big sound. It sounded like something big fell from the next floor. I felt the whole floor shaking."

The department of buildings issued a vacate order for the building in part because of the fire, but also because of illegal partitioning on some of the floors. It wasn't clear how many people were living there but is not uncommon in New York to partition walls to make extra rooms, though owners are required to get permits to do so. Buildings investigators also found illegal plumbing and electrical work, said spokeswoman Kelly Magee.

The building owner Mary Shiu was issued a violation. She did not answer a call to her New Jersey home Friday.

The owners were last cited in 2009 for working without permits and failure to maintain the building, according to department of buildings records.

Building inspectors evacuated the structure for two months starting in January that year after it was found to be unsafe. Also in 2009, floors were rotted and in danger of collapsing and there were no fire-stopping materials. They paid \$2,000 in fines and the complaints were resolved in March.

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The New York Times

May 28, 2013

Wal-Mart Is Fined \$82 Million Over Mishandling of Hazardous Wastes

By **STEPHANIE CLIFFORD**

Wal-Mart Stores pleaded guilty Tuesday to improperly dumping hazardous waste in California and Missouri, agreeing to pay almost \$82 million in fines.

The retailer was charged with six counts of violating the Clean Water Act in California and one count of violating a federal law related to pesticide disposal in Missouri.

The guilty plea on all counts brings to an end years of investigations and legal wrangling that pitted the nation's largest retailer against government authorities over charges that employees were throwing hazardous products in the trash and into sewage systems.

While the legal issues have not made a significant dent in the retail giant's finances, they have prompted Wal-Mart to revamp its procedures. The company has added training on proper waste disposal for its store employees and created a compliance office consisting of former officials with the Environmental Protection Agency, among other people.

The problems stem from incidents beginning in 2003. At the time, Wal-Mart workers tossed products, like bleach and fertilizer, into the trash or the local sewer system, rather than dealing with them as hazardous waste, according to authorities.

"Retailers like Wal-Mart that generate hazardous waste have a duty to legally and safely dispose of that hazardous waste, and dumping it down the sink was neither legal nor safe," André Birotte Jr., the United States attorney for the Central District of California, said. In Missouri, the company was routing damaged items that its customers had returned, including pesticides, to a facility where the items were processed for resale without proper permits. "Regulated pesticides were mixed together and offered for sale to customers without the required registration, ingredients, or use information," the Justice Department said in a statement.

Wal-Mart "put the public and the environment at risk and gained an unfair economic advantage over other companies," Ignacia S. Moreno, assistant attorney general for the Justice Department's Environment and Natural Resources Division, said in a statement.

Wal-Mart noted in a statement that it had not been accused of any specific environmental damage as a result of the improper handling.

After the allegations of improper dumping came to light, the company in 2006 put into place a

program telling employees how to handle the waste and created a compliance office. For instance, an employee must now put returned or damaged items that are classified as hazardous into a special chemical bag.

The employee must then label the bag's contents, put the bag in a bucket liner, seal the liner, and place the liner into a color-coded bucket — red for nail polish, blue for aerosols. A hazardous-waste hauler takes the bucket from the store to a treatment center, along with documentation.

“Once we learned of these allegations, we looked into it, investigated it, and decided to put this program in place,” said Wal-Mart spokeswoman Brooke Buchanan, “so they know if something is determined as hazardous waste.”

The guilty plea comes after settlements that Wal-Mart reached with California and Missouri in 2010 and 2012 on the same charges. Tuesday's fines include \$60 million for violations of the Clean Water Act in California; \$14 million for a violation of the Federal Insecticide, Fungicide and Rodenticide Act in Missouri; and a \$7.6 million civil penalty to the E.P.A.

In total, Wal-Mart will have paid more than \$110 million to resolve all these related cases. Wal-Mart, which had \$128 billion in revenues last year, said the payments should not have a material effect on its business.

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Guilty of Pesticide Crimes, Wal-Mart Fined \$81 Million

Posted by [News Editor](#) in [Biz/Sports](#), [Latest News](#), [RSS](#), [Toxics](#) on May 28, 2013 9:57 pm / [no comments](#)

An orange banner advertisement for Orangedrop. On the left, it says "Recycle your batteries" in large white text, followed by "Click here to find a drop-off location near you" in smaller white text. On the right, there is a white circular logo with a stylized orange drop and the word "ORANGEDROP" in white capital letters below it.

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WASHINGTON, DC, May 28, 2013 (ENS) – Retail giant Wal-Mart Stores today pleaded guilty to illegally handling and disposing of hazardous pesticides at its retail stores across the United States.

Hazardous wastes and pesticides returned to stores by customers were put into municipal trash bins or, if liquid, poured into local sewer systems, according to U.S. Justice Department and Environmental Protection Agency officials.

Wal-Mart transported tons of these hazardous materials without proper safety documentation to one of six product return centers located throughout the United States.



Wal-Mart store (Photo by [Grant Bierman](#))

Wal-Mart Stores Inc. pleaded guilty in cases filed by federal prosecutors in Los Angeles and San Francisco to six counts of violating the Clean Water Act by illegally handling and disposing of hazardous pesticides at its retail stores.

“Retailers like Wal-Mart that generate hazardous waste have a duty to legally and safely dispose of that hazardous waste, and dumping it down the sink was neither legal nor safe,” said André Birotte Jr., the U.S. attorney for the Central District of California.

As part of a plea agreement filed in California, Wal-Mart was sentenced to pay a \$40 million criminal fine. An additional \$20 million fine will fund community service projects, including a new \$6 million Retail Compliance Assistance Center that will help retail stores across the nation learn how to properly handle hazardous waste.

Wal-Mart also pleaded guilty in Kansas City, Missouri to failing to properly handle pesticides that had been returned by customers at its stores across the country, in violation of the Federal Insecticide, Fungicide and Rodenticide Act, FIFRA.

Starting in 2006, Wal-Mart began sending damaged household products, including regulated solid and liquid pesticides, from its six return centers to Greenleaf LLC, a recycling facility located in Neosho, Missouri, where the products were processed for reuse and resale.

Because Wal-Mart employees failed to provide adequate oversight of the pesticides sent to Greenleaf, regulated pesticides were mixed together and offered for sale to customers without the required registration, ingredients, or use information, in violation of FIFRA.

Between July 2006 and February 2008, Wal-Mart trucked more than two million pounds of regulated pesticides and other household products from its various return centers to Greenleaf. In November 2008, Greenleaf was convicted of a FIFRA violation and fined \$200,000.

As a result of the three criminal cases brought against Wal-Mart by the Justice Department, as well as a related civil case filed by the U.S. EPA, Wal-Mart will pay \$81.6 million in penalties.

Coupled with previous actions brought by the states of California and Missouri for the same conduct, Wal-Mart will pay a combined total of more than \$110 million to resolve cases alleging violations of federal and state environmental laws.

“Truckloads of hazardous products, including more than two million pounds of pesticides, were improperly handled under Wal-Mart’s contract,” said Tammy Dickinson, U.S. attorney for the Western District of Missouri.

“This tough financial penalty holds Wal-Mart accountable for its reckless and illegal business practices that threatened both the public and the environment,” she said. “Today’s criminal fine should send a message to companies of all sizes that they will be held accountable to follow federal environmental laws.”

Cynthia Giles, assistant administrator for EPA’s Office of Enforcement and Compliance Assurance, said, “Today Wal-Mart is taking responsibility for violating laws that protect people from hazardous wastes and chemicals. Walmart is committing to safe handling of hazardous wastes at all of its facilities nationwide, and action that will benefit communities across the country.”

Wal-Mart owns more than 4,000 stores nationwide that sell thousands of products which are flammable, corrosive, reactive, toxic or otherwise hazardous under federal law. The products containing hazardous materials include pesticides, solvents, detergents, paints, aerosols and cleaners. Once discarded, these products are considered hazardous waste under federal law.

In conjunction with today’s guilty pleas in the three criminal cases, Wal-Mart has agreed to pay a \$7.628 million civil penalty that will resolve civil violations of FIFRA and Resource Conservation and Recovery Act.

In addition to the civil penalties, Wal-Mart must implement a comprehensive, nationwide environmental compliance agreement to manage hazardous waste generated at its stores. The agreement requires personnel training at all levels of the company in identification and management of hazardous wastes and establishment of Environmental Management Systems at Wal-Mart stores and return centers. Compliance with this agreement is a condition of probation in the criminal cases.

These cases are the result of investigations conducted by the FBI and the EPA, with assistance from the California Department of Substance and Toxics Control and the Missouri Department of Natural Resources.

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