Maine Board of Pesticides Control

Miscellaneous Pesticides Articles November 2012–January 2013

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

MOFGA Mourns The Death Of Russell Libby

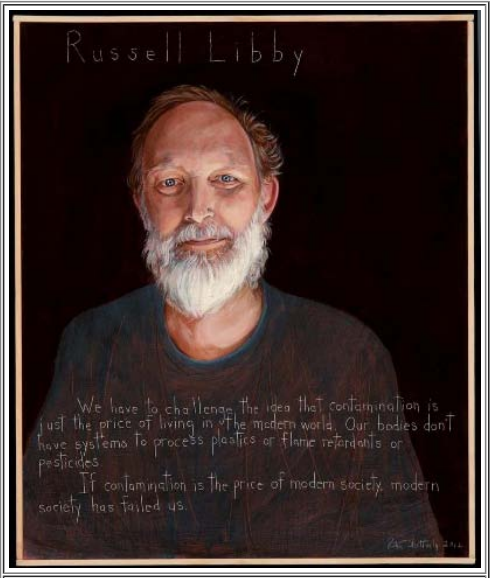
MOFGA Mourns The Death Of Russell Libby

The Maine Organic Farmers and Gardeners Association announces, with great sadness, the death of its beloved leader Russell Libby, following a long struggle with cancer. He passed away peacefully among his family at his home this morning in Mt. Vernon, Maine. He was 56.

Russell lent his extraordinary leadership skills to MOFGA for almost 30 years. He served on the Board of Directors for a decade before becoming its long-serving Executive Director in 1995. He held that position until November 2 of this year, when he assumed the title of Senior Policy Advisor. In that role he continued to guide the organization with his characteristic wisdom, compassion and dedication, even as his health failed. Prudently, he took many steps to ensure that MOFGA's course would remain steady in the time to come. A search for a new Executive Director is set to begin on January 1, 2013. MOFGA is currently under the guidance of Heather Spalding, who has worked closely with Russell at MOFGA since 1997.

"We are saddened beyond words by Russell's passing, but we are grateful for the legacy he has given us," said MOFGA Board President Barbara Damrosch. "MOFGA has always been a vibrant organization that, through educational and policy work, has advanced the cause of safe, healthful food in Maine and championed the farmers and gardeners who grow it. Russell nurtured MOFGA to the point where its membership now exceeds that of any other state organic group. New farmers look to Maine for encouragement and inspiration."

MOFGA will host a gathering in honor of Russell in the Exhibition Hall at the Common Ground Education in Unity. Date and time to be determined.



Portrait of Russell Libby by Robert Shetterly, from the *Americans Who Tell The Truth* collection.

Posted on 12/9/2012 (Archive on 12/30/2012)
Posted by hspalding Contributed by

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Russell Libby, Organic Farming Advocate, Dies at 56

By DENNIS HEVESI
Published: December 12, 2012

Russell Libby, one of the nation's leading advocates for organic farming, died on Sunday at his farm in Mount Vernon, Me. He was 56.

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Stacey Cramp for The New York Times
Russell Libby.

The cause was cancer, his wife, Mary Anne, said.

What began with his fourth-grade teacher handing out packets of vegetable seeds to her students in Sorrento, Me., nearly five decades ago, evolved into a lifelong passion for Mr. Libby and a deep concern about industrial farming and its use of chemical fertilizers and pesticides.

"We have to challenge the idea that contamination is just the price of living in the modern world," was a refrain in his many speeches.

For 17 years, until he stepped down last month, Mr. Libby was executive director of the Maine Organic Farmers and Gardeners Association, which he had built into one of the largest of the organic movement's state organizations.

Since Mr. Libby was named director in 1995, membership doubled, to more than 7,000, and the number of organic farmers and producers in the state increased to 420, from 85.

Under Mr. Libby, the organization moved from a single office in Augusta, Me., to a 400-acre complex of offices, exhibition halls, a library, a teaching kitchen and farmland in the town of Unity. The association distributes educational material throughout the country, places apprentices on farms in Maine and provides advice to local farmers on financing, marketing and food safety, as well as agricultural techniques.

Mr. Libby also held sway with public officials, playing a central role in lobbying Congress to amend the Food Safety Modernization Act of 2011 to protect organic farmers. The act vastly broadened the power of the Food and Drug Administration to regulate food production.

"The original legislation would have made it extremely difficult for small farmers to comply with the requirements," said Fred Kirschenmann, a fellow at the Leopold Center for Sustainable Agriculture at Iowa State University, adding that some requirements "really had nothing to do with the safety of food."

In a statement, Kathleen A. Merrigan, the deputy secretary of the Department of Agriculture, called Mr. Libby “a powerful voice for and leader of small family farmers.”

Russell Wayne Libby did not grow up on a farm; he planted those seeds from his teacher in the backyard. Born on Aug. 16, 1956, in Lincoln, Me. (the family later moved to Sorrento), he was the oldest of four children of Ronald and Sandra Libby. His father was a detective with the state police.

After graduating from Bowdoin College in 1978, Mr. Libby went on to earn a master’s degree in agricultural economics from the University of Maine. He became a researcher for the National Center for Economic Alternatives, a small nonprofit organization, and later for the Maine Department of Agriculture.

Besides his wife and parents, Mr. Libby is survived by three daughters, Anna, Margaret and Rosa; a brother, Chris; and two sisters, Pamela Fowley and Ronda Nichols. Beyond organic farming’s environmental and health benefits, Mr. Libby saw its value to local economies. In many speeches, he espoused a “Ten Dollars a Week” concept: the idea that communities could thrive if every household spent that amount on locally produced food, rather than buying from supermarket chains.

On his 65-acre Three Sisters Farm in Mount Vernon, he and his daughters tended to the apple, pear and cherry trees, and to sheep, hens and a pony. They sold eggs to people around town.

Portland Press Herald

PRINTTHIS

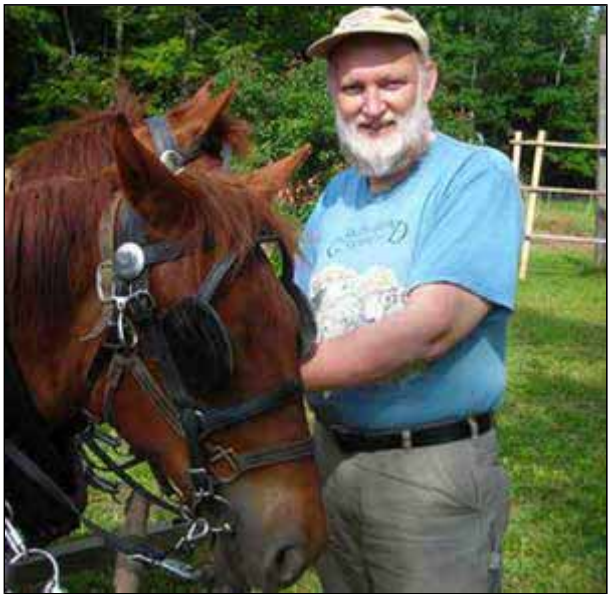
Posted: December 9
Updated: Today at 10:03 AM

Maine organic farming champion dies at 56

Russell Libby is known for leading MOFGA to become the nation's largest state-level organic association.

By Amy Calderacalder@mainetoday.com
Staff Writer

Russell Libby, who for more than 17 years was executive director of the Maine Organic Farmers and Gardeners Association, died Sunday. He was 56.



click image to enlarge

A memorial service for Russell Libby is scheduled for 11 a.m. Saturday at Mount Vernon Elementary School, with a potluck lunch to follow.

Libby, of Mount Vernon, resigned his post Nov. 2. He had been battling cancer for quite some time, according to Barbara Damrosch, president of MOFGA's board of directors.

The organization hosts the annual Common Ground Country Fair, which draws around 60,000 visitors to Unity each fall.

"He was an incredible man," Damrosch said Sunday from her home in Harborside. "I've known very few people as exemplary in leadership as Russell. He was a very strong leader, very wise. He had a lot of acumen about what do to at any given moment."

Under Libby's leadership, MOFGA became the country's largest state-level organic association, with more than 6,500 members, 418 certified organic farms and processing operations, and a 400-acre year-round

education center.

Libby became MOFGA's executive director in 1995 after more than 10 years on the organization's board of directors. In October, he announced that he would step down and that Heather Spalding, the deputy director, would become interim executive director.

Libby directed the development of MOFGA's Common Ground Education Center. He also supervised the expansion and growth of all program areas of the organization, including agricultural services; educational events and farmer training; the annual fair in Unity; organic certification; publications such as MOFGA's quarterly newspaper, The Maine Organic Farmer & Gardener; websites; social media outlets; and public policy initiatives.

Damrosch said Libby was involved in MOFGA just about until the end of his life -- advising the staff, sometimes from home and sometimes at the office. He had been quite open about his illness, but he died sooner than many expected, she said.

The last time Damrosch saw Libby was Nov. 11, when he gave the keynote address and then led a three-hour workshop at the Farmer to Farmer Conference at Point Lookout, in Northport.

He discussed the future of farming in Maine, policy issues and advancing the cause of organic farming and small farms, Damrosch said.

"He was wonderful. He was absolutely wonderful," she said.

In a statement, U.S. Rep. **Chellie Pingree** called Libby's passing a terrible loss for the state.

"I've had the privilege of knowing and working with Russell for many years -- first at MOFGA and more recently as Congress has worked on the latest reauthorization of the Farm Bill. Throughout, I have always looked up to Russell and relied on his wisdom and knowledge on everything from the operations of our farm to changing national policy," Pingree said.

"Maine's thriving farming community wouldn't be where it is today without Russell and his work at MOFGA."

John Bunker, a member of MOFGA's board of directors and a former board president, said Sunday that Libby was a close personal friend and colleague who will be missed.

He described Libby as a public person who also was capable of having deep, close and wonderful friendships. Libby never thought of himself as having an outgoing, gregarious personality, but hundreds who met him at conferences, MOFGA fundraisers and workshops said they had made a close connection with him, Bunker said.

On Sunday, a young woman told Bunker that through her relationship with Libby, she had gained the confidence to do things she never imagined she could do, he said.

"He was very inspiring, very, very humble but a very engaging person, in the best sense of the word," Bunker said. "He was very funny, too. We had really good times together. He loved to make fun of himself. He was somebody who could hobnob with the elite in Washington and hang out with pretty regular, everyday people in Maine, and I think he taught himself how to feel comfortable in all those different environments."

Damrosch said that during Libby's years with MOFGA, the membership grew to the point that it is the largest state organic organization in the country.

"There are more members in MOFGA than in all of the Northeast Organic Farmers' Associations combined," she said.

Damrosch said Libby ensured that the transition to new leadership would go smoothly. He left the organization on a good path, in strong financial health and with a great staff and an army of volunteers, she said.

"You're never prepared for the incredible sadness when you lose somebody who is this beloved," she said.

According to his obituary, Libby is survived by his wife, Mary Anne; his three daughters, Anna Libby of Orono, Margaret Libby of Mount Vernon, and Rosa Libby of Portland; and his parents, Ronald and Sandra Libby, of Sorrento.

A memorial service is scheduled for 11 a.m. Saturday at Mount Vernon Elementary School, with a potluck lunch to follow.

Correction: *This story was revised at 9:55 a.m., Dec. 10, 2012, to state that Point Lookout is in Northport.*

BDN MAINE Mid-Maine

Monday, Dec. 10, 2012 Last update: 11:36 a.m.

Previous story:
« Test turbine at UMaine could be a glimpse into Maine's offshore wind energy future

Next story:
Big knockout may set up Pacquiao-Marquez again »

Maine organic farmer's group director dies from cancer

By Tom Groening, BDN Staff
Posted Dec. 09, 2012, at 6:45 p.m.
Last modified Dec. 10, 2012, at 9:01 a.m.

Kevin Bennett | BDN
Russell Libby in Sept. 2009.

UNITY, Maine — Russell Libby, the longtime director of MOFGA, the Maine Organic Farmers and Gardeners Association, died Sunday after battling cancer for a year, a staff member confirmed. He was 56.

According to the organization's website, Libby became involved with MOFGA after attending the 1977 Common Ground Country Fair, the annual MOFGA public event.

Libby joined the MOFGA Board of Directors in 1983, serving as president for two years. He became executive director in 1995.

"He has led MOFGA's growth over the past decade as the organization moved to the new Common Ground Education Center in Unity, expanded the agricultural services and education programs, and created a subsidiary to run the certification program," according to MOFGA's website.

The organization moved to newly constructed buildings in Unity where it had enough land to also host the fair, which previously had been held in Windsor.

"He was really instrumental in that whole move," said Jean English, longtime editor of MOFGA's

newsletter. The organization had a solid base when Libby took over, she said, but "he ran with it and expanded its influence."

English said Libby, "had the brain of an economist," and could manage the organization, "and he had the heart of a poet," which let him relate to all sorts of people.

"I've had the privilege of knowing and working with Russell for many years — first at MOFGA and more recently as Congress has worked on the latest reauthorization of the Farm Bill," U.S. Rep. Chellie Pingree said in a statement Sunday night. "Throughout, I have always looked up to Russell and relied on his wisdom and knowledge on everything from the operations of our farm to changing national policy. He was one of a kind, and his passing is a terrible loss to the entire state."

On Libby's Facebook page, Ron Beard of the University of Maine Cooperative Extension wrote: "Russell Libby died as he lived ... growing to wisdom, sharing his heart, inspiring his friends and colleagues with his courage and his humor ... journey now to rest."

Libby also served for ten years as research director at the Maine Department of Agriculture. He also served on the boards of the Agricultural Council of Maine, the University of Maine Board of Agriculture, Maine Farmland Trust, Eat Local Foods Coalition, National Organic Coalition and FEDCO Seeds.

He held a degree in economics from Bowdoin College and a master's in resource economics from the University of Maine. With his wife, Mary Anne and three daughters, he operated Three Sisters Farm in Mount Vernon, where he served in town government and on the school board.

In 2007 Libby published a poetry collection, "Balance: A Late Pastoral."

A memorial service will be held at 11 a.m. Saturday, Dec. 15, at the Mt. Vernon Elementary School with a potluck meal immediately following.

Similar articles:

Russell Libby Remembered as Visionary Champion of Maine's Organic Farming Movement

12/10/2012 Reported By: Jay Field

Friends and colleagues are remembering Russell Libby today as a visonary champion of organic farming and local agriculture in Maine and beyond. Libby, the longtime head of the Maine Organic Farmers and Gardners Association - or MOFGA - died Sunday at the age of 56 from cancer. Under his leadership, MOFGA grew into what many say is the most influential organic group in the nation, and Libby became a key voice in the ongoing debates over agriculture policy in Augusta and Washington D.C. But even as he became a more public figure, friends say Libby remained the same generous, authentic person - equally comfortable chatting up lawmakers on Capitol Hill, visiting farms across Maine or spending an afternoon shingling a friend's house. Jay Field has this rememberance.

Related Media

Russell Libby Remembered as Visionary Champion of Listen *Duration: 3:51*

Around 20 years ago, John Bunker says he got a note from an especially enthusiastic customer. Bunker writes the tree catalogue at FEDCO, the Waterville-based seed company. The customer was Russell Libby.

"He wanted me to offer more unusual apple varieties," Bunker recalls. "He really liked it when I sort of picked out the rare historic ones."

Bunker says it was the first time he realized that someone actually cared about the work he did. "That, all of a sudden, inspired me to want to do more with what I call my own fruit exploration."

The two men began comparing notes on the mysterious fruit trees they found on their travels around Maine. A friendship developed. It deepened later, as two began crisscrossing the state together to attend fundraisers for **MOFGA** - Bunker in his role as president of the group's board and Libby as its executive director.

Back in June, Libby reflected on the increasing availability of locally-grown, organic food during an appearance on MPBN's Maine Calling.

"In 1971, there was only one farmers' market in Maine," he said. "There was one natural food store. Most people, if you wanted whole wheat flour, drove to Boston. Obviously, the food system has transformed greatly in the last 40 years."

The system Libby envisoned for Maine and New England has its roots in his home town of Mt. Vernon. While working for the Maine Department of Agriculture, Libby calculated what would happen to the local economy if Mt. Vernon residents committed to spending at least $10 a week on locally-produced food and goods. "Ten Dollars a Week" became a rally cry for Libby, one he continued to push when he took over as MOFGA's executive director in 1995.

"He really was the right person, for the right job, at the right moment," says Heather Spalding, MOFGA's interim leader. Spaulding says the organization was at a crossroads when Libby took the reigns. It had a solid core of supporters. But it needed a leader with real vision, someone who could take the organization to the next level.

Spalding says Libby stepped in and "launched a really extensive search for farmland that could be used to host the Common Ground Country Fair each year, but also to have a year round education center and a permanent home."

Libby and MOFGA found this new home in Unity, and built the Common Ground Education Center. Barbara Damrosch, the current head of the group's board, says the move unleased a wave of new growth at MOFGA under Libby's watch. Education programs expanded. So did the organization's farm apprenticeship program.

"We have the largest membership of any state level argriculture organization in the country, which is pretty amazing in a state with not much over a million people in it," Damrosch says.

As MOFGA grew, policymakers sought out Libby's vast store of knowledge about agriculture, economics and food systems.

"He had a great sense of humor. Self-effacing. Just incredibly likeable, kind and smart," says Congresswoman Chellie Pingree. Pingree says she came to depend on Libby's advice in negotiations over the most recent farm bill in Congress,

"He made several trips to Washington throughout periods of being ill," Pingree says. "He sent us morning clips of important agricultural food and economic news we should be reading almost until his last day. So I feel like we've been in touch and had him advising us till the last moment that he could."

A memorial service in Russell Libby's honor will be held at the Mt. Vernon Elementary School this coming Saturday at 11 a.m.

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EDITORIALS

'Enough for everyone, always': What Maine learned from Russell Libby

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Posted Dec. 10, 2012, at 2:51 p.m.
Last modified Dec. 10, 2012, at 3:09 p.m.

Russell Libby, a symbol of sustainable agriculture in Maine, died on Sunday at his home in Mount Vernon at the age of 56. His life inspired others to focus on how they, too, could protect the Earth. We can learn from his commitment to leave the state better than he found it.

Kevin Bennett | BDN
Russell Libby *Buy Photo*

Through several organizations, Libby helped grow Maine's organic farming industry by educating many here and elsewhere — primarily about how farmers can make best use of their resources and expand their reach. He made organic farming cool and at the same time provided much-needed pragmatism.

He became involved with the Maine Organic Farmers and Gardeners Association after attending the 1977 Common Ground Country Fair. He joined the board in 1983 and became executive director in 1995. Through his years, he pushed for healthy living conditions for people and the planet.

In 1970 there was one farmers' market, in Portland, Libby said at a TedXDirigo event in 2011. At

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that time, the nearest supermarket selling whole wheat flour was in Boston. No chefs featured local food.

Now, organic farming is a small but vital part of Maine's economy. In 2008, the state had the 12th-highest number of organic farms in the country. Now, locally produced food is a selling point for restaurants, and new ideas are springing up, such as community-supported fisheries.

Libby taught this state many lessons. Here are just a few that Mainers can continue to learn from:

1. Tell your story. Telling the story of the food you are eating or growing helps people remember and appreciate it. Libby enjoyed talking about the Black Oxford apples he grew at his home. The type of apple tree originated in Paris, Maine, around 1790 and is known for its ability to stay crisp through the winter months if stored properly.

2. Make a commitment. Consider spending just $10 per week on products from local farmers or craftsmen. Supporting your neighbors' operations helps them employ workers and expand the local economy.

3. Take personal responsibility. Stop supporting practices you don't believe in. If you don't like the idea of farms raising chickens in cramped cages, don't buy their eggs.

4. Care for the Earth. Even if you're just growing a few vegetables in your backyard, you can limit fertilizers. You can reuse resources, such as by putting down compost.

5. Keep learning; keep an open mind. There are always opportunities to learn new practices or techniques, as is apparent with the annual courses offered by the Common Ground Education Center. Topics touch on energy efficiency, orchards, woodlots, greenhouses, blacksmithing.

6. Think big. "I'm really not interested in standing over here in the local and organic corner for the rest of my life and waving, 'Hi, we're having fun over here.' I'm really interested in this kind of food being available to everybody under the basic principle: enough for everyone, always," Libby said at the TedXDirigo talk.

7. Be kind. "That one tree might make / three thousand feet of boards / if our hearts could stand / the sound of its fall," Libby wrote in his poem "Applied Geometry," published by the Poetry Foundation.

Libby reminds us of the positive influence one person dedicated to a cause can have. He helped nurture the next generation of farmers and advocated for a more thoughtful approach to the environment. He will be missed, but his teachings will continue. As he knew well, all it takes is one well-cared-for seed to grow and spread.

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MOFGA leader Libby eulogized Sunday as friendly, driven visionary

Service for Russel Libby, 56, who died Dec. 9 from cancer, draws more than 200 attendees

By Kaitlin Schroeder kschroeder@centralmaine.com
Staff Writer

Organic farmers and friends remembered Russell Libby, a state leader in the organic farming movement, as a wise, driven leader during a memorial event Sunday hosted by the Maine Organic Farmers and Gardeners Association.

click image to enlarge

Beedy Parker was one of many people who spoke on Sunday, during a memorial service for Russell Libby, who was the executive director of the Maine Organic Farmers and Gardeners Association in Unity for 17 years. Libby, 56, died from cancer on Dec. 9.

Staff photo by David Leaming

click image to enlarge

Maine Organic Farmers and Gardeners Association interim executive director Heather Spalding, right, accepts a Native American basket from Theresa Secord, of Waterville, during a memorial celebration for Russell Libby, in Unity on Sunday.

Staff photo by David Leaming

Libby, who died at age 56 from cancer, was the association's executive director for 17 years, and is credited with building the group into the nation's largest state-level organic growers association.

Barbara Damrosch, the association's board president, told the 200-person crowd that Maine's organic farming movement owes thanks to Libby's leadership for its success.

"He steered the ship like a sailor who knew every tide," she said. "The ship is still on course, thanks to Russell."

Heather Spalding, who took over as interim director when Libby died, said he could be counted on for guidance.

"And when he had to give us some difficult feedback, he always did it with such grace," she said.

Those in attendance at the memorial event, held at the association's Common Ground Education Center, also were given a chance to speak to the crowd and share memories of Libby.

Libby was remembered by those who knew him as a great leader who had a sense of purpose. People said he was known for his laugh. Others remembered how much he loved children. A few people said they remembered him as a competitive person by nature who liked having the last word in every discussion.

Toward the end of board meetings, association members said, he would push to finish quickly and start the potluck meal they always held at the end of meetings.

The association has set up an endowment for people to donate to as a memorial to Libby. Spalding said

the endowment already has received $30,000 and will help the group continue to function with less reliance on grants.

Theresa Secord, executive director of Maine Indian Basket Makers Alliance, presented Spalding with a basket as a memorial to Libby.

She said about 10 years ago, her group tried to quit attending the Common Ground Country Fair, run by the association, but Libby persuaded her not to.

"He personally came to our office and encouraged us not to quit," she said.

Bennet Konesni, of Belfast, told the crowd that he didn't know Libby as well as others at the event, but he said he remembered Libby as a person who could look to the future but keep the past in mind.

"It makes sense, in this community, that he would be a leader." he said.

Kaitlin Schroeder -- 861-9252
kschroeder@mainetoday.com

New Report Says Children Across Maine at Risk from Toxic Pesticide Spraying

More than Half of Maine Public Schools Surveyed Use Pesticides

Read the full report here. (http://toxicsactionorg.live.pubintnet-dev.org/sites/default/files/SafeSchoolGroundsReport.pdf)

(Scarborough) It has been over 10 years since the State of Maine has issued a comprehensive survey of pesticide use on schools in Maine. Today, the public health and environmental non-profit, Toxics Action Center, released a new report "A Call for Safer School Grounds: A Survey of Pesticide Use on K-12 Public School Grounds in Maine," that surveyed public schools across the state on their pesticide use and pushes for policy to curb spraying.

"Maine children are at risk from pesticide spraying in schools," said Tracie Konopinski, Community Organizer with Toxics Action Center, "Just this month, the American Academy of Pediatrics (AAP) published a report calling for reduced pesticide exposure for children. There are numerous studies cited within the AAP's report that link chronic pesticide exposure to pediatric cancers and neurobehavioral and cognitive deficits like autism, attention disorders, and hyperactivity. Our report shows that despite policies aimed at reducing pesticide spraying, more than half of K-12 public schools polled in our report still have their finger on the pesticide trigger."

The Toxics Action Center report is based on a survey of 209 Maine public schools and shows that 51% of schools surveyed spray pesticides, including Weed and Feed and Roundup. The chemicals in these pesticides have been linked to human health impacts, including kidney disease and links to non-Hodgkin's Lymphoma. The report also states that the state's Integrated Pest Management Policy (IPM) is inadequate at regulating pesticide application and informing the public on pesticide practices. Although IPM policies and records of pesticide

applications are required to be kept by schools under Maine law, 32% of schools surveyed reported that they do not keep records. IPM records were received from 9% of schools surveyed.

In Scarborough, the town has adopted their own Organic Pest Management Policy, surpassing what is required by the state, and restricts the use of chemical pesticides on town-owned land, including sports fields. Dave Malevsky, of Go Green Organics, began servicing the town's land and playing fields in May.

Mary Nelson, Representative from Falmouth, stated, "We need strong action that puts us on a faster track to reducing human exposure to pesticides. I call on my colleagues in the Maine House and Senate to follow the lead of communities like Scarborough and limit the use of pesticides at schools and day care centers in order to protect children's health and promote safe schools."

More than 100 teachers, school administrators and coaches have signed on to support Toxics Action Center's Safe School Grounds Campaign, pledging support for a statewide policy to ban pesticide spraying in Maine public school grounds.

Terri Eddy, who works at Scarborough High School, joined the other speakers at the event. "This is an education issue. Schools should be safe and healthy environments where children can learn and grow," said Eddy, "Children face enough challenges in the classroom to have to face chemicals toying with their health and behavior."

The full report, available at www.toxicsaction.org (http://toxicsactionorg.live.pubintnet-dev.org/sites/default/files/SafeSchoolGroundsReport.pdf) gives the following recommendations:

1) Keep our Children Safe. The Maine state legislature should ban the use of pesticides on public school grounds. There is considerable scientific evidence that the human brain is not fully formed until the age of 12, and childhood exposure to some of the most common pesticides on the market may greatly impact the development of the central nervous system.

2) The Maine State Legislature should ban the use of pesticides for solely aesthetic reasons. Using pesticides for aesthetic reasons is an unnecessary risk to children's health. Athletic fields and playgrounds are commonly treated for aesthetic reasons, leaving students at the greatest risk of exposure.

3) The Maine State Legislature and the Maine Department of Education should ban the use of broad-based pesticides such as Weed and Feed and Roundup on public school grounds. Broad-based pesticides, which are designed to kill a number of unwanted weeds and pests, are among the most harmful types of pesticides. Weed and Feed and Roundup are made from glyphosate and 2,4-D, two of the most toxic chemicals used in any pesticides. Our survey results show Weed and Feed and Roundup to be the two most commonly used pesticides on school grounds in Maine.

4) Schools must prepare more specific Integrated Pest Management (IPM) policies to alert parents about pesticide applications when necessary. Because pesticides are toxic, IPM policies and records need to be available online so that parents can see what is being applied at their children's schools and take proper precautions.

5) The Maine Department of Education should promote organic turf management practices. Schools that manage their grounds exclusively through organic lawn care are very rare. Only 9 schools reported the use of organics. Despite this, there is a wide body of evidence demonstrating that organic lawn maintenance can save money and protect children's health.

The report is available at www.toxicsaction.org (http://toxicsactionorg.live.pubintnet-dev.org/sites/default/files/SafeSchoolGroundsReport.pdf).

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Toxics Action Center is a New England-wide environmental and public health organization that

works side by side with residents to clean up and prevent toxic threats in their communities.

TOXICS ACTION CENTER

A CALL FOR SAFER SCHOOL GROUNDS:

A Survey of Pesticide Use on K-12 Public School Grounds in Maine

Author
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PREFACE

This report was prepared by Toxics Action Center and Toxics Action Center Campaigns, our 501c(4) sister organization. This report is part of our ongoing work with community groups around the state to reduce childhood exposure to pesticides. At Toxics Action Center, we believe everyone has the right to breather clean air, drink clean water, that our communities should be sustainable, and that our government should operate responsibly and democratically. Our children should be able to grow up free of exposure to dangerous chemicals, and with every opportunity to thrive.

We are grateful for support from the Broad Reach Fund and Maine Initiatives for funding the research that led to this report.

ABOUT TOXICS ACTION CENTER

Toxics Action Center provides assistance to residents working to prevent and clean up toxic hazards in their communities. Since 1987, Toxics Action Center has helped more than 700 communities clean up hazardous waste sites, decrease industrial pollution, curb pesticide spraying, and oppose the siting of dangerous waste, energy and industrial facilities. When government won't take action, and a company denies there is a problem, Toxics Action Center is a resource for residents concerned about toxic hazards in their communities. We provide residents with information about environmental laws, strategies for organizing, a network of activists throughout the state, and access to legal and technical experts. Toxics Action Center is funded by donations from concerned citizens and grants from private foundations. The financial support enables us to provide our services free of charge to communities facing the threat of toxic pollution. Find out more at www.toxicsaction.org.

ABOUT THE SAFE SCHOOL GROUNDS COALITION

The Safe School Grounds Coalition was created out of local efforts throughout Maine to reduce pesticides on town-owned land. Between 2008 and 2010, Toxics Action Center provided organizing assistance to 11 groups working on pesticide related issues in Maine, including Brooksville, Camden, Cumberland, Falmouth, Gorham, Hiram, Kennebunkport, Ogunquit, Scarborough, South Portland and Yarmouth. Recognizing the momentum, in November 2010 our staff brought together more than 60 local leaders from 25 communities for the Maine Pesticide Summit, where activists learned from each other and strategized on how to support each other's work and how to pool efforts to make a bigger impact. In an afternoon strategy session at the summit, about 30 core community leaders decided to launch a statewide legislative effort to ban pesticides on public school lawns, playgrounds and athletic fields. Thus began the Safe School Grounds Coalition.

EXECUTIVE SUMMARY

Schools should be safe and healthy environments where children can learn and grow. Concern has been growing among health experts and the public over the health impacts on children exposed to pesticides. Pesticides are toxic by nature, and have been linked to learning disabilities and other serious health effects. Of the 36 most commonly used lawn pesticides: 14 are probably or possible carcinogens, 15 are linked with birth defects, 21 with reproductive effects, 24 with neurotoxicity, 22 with liver or kidney damage, and 34 are sensitizers and/or irritants.[i] Children face higher risks than adults from lawn-chemical exposure because of their small size and developing organ systems.[ii]

The Maine state legislature requires that all Maine public and private schools adopt Integrated Pest Management (IPM) practices and appoint an Integrated Pest Management coordinator to minimize the use of pesticides in schools and on school grounds. Several Maine communities, including Camden and Scarborough have taken further action and passed policies on the municipal level to curb the use of synthetic pesticides on town-owned land.

It has been over ten years since the State of Maine has issued a comprehensive survey of pesticide use by schools in Maine, so Toxics Action Center conducted a survey of Maine public schools to get a sense of how these IPM policies are working, what pesticides children are most exposed to, and what schools can be used as models for non-toxic pest management practices. We set out to administer 169 surveys via phone and email that covered 584 Maine public schools, 229 school administrative units and 492 municipalities. We received data for 53 surveys with results from 209 schools and 98 municipalities. Depending on the administrative structure of the school, we were often able to get information on a whole district, department, union, or an alternative organizational structure (AOS).

SUMMARY OF FINDINGS

More than half of Maine public schools surveyed spray pesticides: Among the surveys gathered (n=53 which encompasses 209 schools and 98 municipalities) 51% replied that they used pesticides outdoors. This is an increase from the number reported by the Maine Department of Agriculture in 2000. In a 2000 survey of Maine Schools and their Integrated Pest Management practices, almost one-third of schools that responded to the survey said that herbicides or fertilizer-plus-herbicide products are used outdoors[iii].

Toxic chemicals are applied on school grounds: Weed and Feed and Roundup were the most commonly reported pesticides used on school grounds. The chemicals in these products, including 2,4-D and glyphosate have known human health impacts, including links in scientific studies to kidney disease and non-Hodgkin lymphoma.

Pesticides are applied for largely cosmetic reasons: The most common reason schools reported the need to spray pesticides was not to reduce pests (such as grubs and bugs). Rather,

schools cited aesthetic reasons, such as needing to get rid of dandelions and brush on athletic fields, reducing broad-leaf weeds around the edges of school buildings and playgrounds, and the reduction of weeds in school gardens.

The state's IPM policy is inadequate at regulating pesticide application and informing the public on pesticide practices: Although IPM policies and records of pesticide applications are required to be kept by schools under Maine law, the state has largely failed to implement this part of the policy. Sixty percent of schools surveyed reported that they keep IPM records, while 32% reported that they don't. Eight percent of IPM records are held by outside contractors. In conducting this survey, we received IPM records from only 9% of schools surveyed. Of the survey respondents that reported using pesticides on school grounds, 43% did not have knowledge of the products used.

RECOMMENDATIONS

1) **Keep our children safe. The Maine state legislature should ban the use of pesticides on public school grounds.** There is considerable scientific evidence that the human brain is not fully formed until age twelve, and childhood exposure to some of the most common pesticides on the market may greatly impact the development of the central nervous system. We should limit children's exposure to toxic pesticides whenever possible.

2) **The Maine State Legislature should ban the use of pesticides for solely aesthetic reasons.** Using pesticides for aesthetic reasons is an unnecessary risk to children's health. Athletic fields and playgrounds are commonly treated for aesthetic reasons, leaving students at greatest risk of exposure.

3) **The Maine state legislature and the Maine Department of Education should ban the use of broad-based pesticides such as Weed and Feed and Roundup on public school grounds.** Broad-based pesticides, which are designed to kill a number of unwanted weeds and pests, are among the most harmful types of pesticides. Weed and Feed and Roundup are made from glyphosate and 2,4-D, two of the most toxic chemicals used in any pesticides. Our survey results show Weed and Feed and Roundup to be the two most commonly used pesticides on school grounds in Maine.

4) **Schools must prepare more specific Integrated Pest Management (IPM) policies to alert parents about pesticide applications when necessary.** Because pesticides are toxic, IPM policies and records need to be available online so that parents can see what is being applied at their children's schools and take proper precautions.

5) **The Maine Department of Education should promote organic turf management practices.** Schools that manage their grounds exclusively through organic lawn care are very rare. Only nine schools reported the use of organics. Despite this, there is a wide body of evidence

demonstrating that organic lawn maintenance can save money and protect children's health.

INTRODUCTION: PESTICIDES ARE PERVASIVE IN SOCIETY

Pesticides are the only toxic substances released intentionally into our environment to kill living things. Pesticides include substances that kill weeds (herbicides), insects (insecticides), fungus (fungicides), rodents (rodenticides), and others.

The use of toxic pesticides to manage pest problems has become a common practice around the world. Pesticides are used almost everywhere -- not only in agricultural fields, but also in homes, parks, schools, buildings, forests, and roads. It is difficult to find somewhere where pesticides aren't used -- from the can of bug spray under the kitchen sink to the airplane crop dusting acres of farmland, our world is filled with pesticides. In addition, pesticides can be found in the air we breathe, the food we eat, and the water we drink.

When Rachel Carson wrote Silent Spring in 1962, she raised public awareness about the effects of pesticide use on our health and our environment. However, fifty years after Carson drew attention to the health and environmental impacts of DDT, use of equally hazardous pesticides has only increased. More evidence has surfaced that human exposure to pesticides is linked to health problems. For example, in May 2010, scientists from the University of Montreal and Harvard University released a study that found that exposure to pesticide residues on vegetables and fruit may double a child's risk of attention deficit hyperactivity disorder (ADHD), a condition that can cause inattention, hyperactivity, and impulsivity in children.[iv] Just recently in November 2012, the American Academy of Pediatrics published a report regarding childhood exposure to pesticides, and stated that "beyond acute poisoning, the influences of low-level exposures [of pesticides] on child health are of increasing concern." The report cited epidemiologic studies that linked chronic pesticide exposure to adverse birth outcomes including preterm birth, low birth weight and congenital anomalies, pediatric cancers, neurobehavioral and cognitive deficits, and asthma.[v]

Pesticides are used in our parks and public lands. Pesticides are sprayed on agricultural fields and wood lots. Pesticides can be found in our air, our food, our soil, our water and even in our breast milk. Most alarmingly, pesticides are frequently used in schools, even though children are the most susceptible to pesticides.

PESTICIDES THREATEN CHILDREN'S HEALTH

Pesticides are toxic by design and can affect more than their intended targets – in fact, these toxins have strong effects on people. Pesticides have been linked to a wide range of human health hazards. Of the 36 most commonly used lawn pesticides: 14 are probably or possible carcinogens, 15 are linked with birth defects, 21 with reproductive effects, 24 with

neurotoxicity, 22 with liver or kidney damage, and 34 are sensitizers and/or irritants.[vi] Studies on lawn product formulations show effects on learning ability, aggressiveness, memory, motor skills and immune system function.[vii] Lawn products containing herbicides and fertilizers (such as "weed and feed" products) tested on mice show increased risk of infertility, miscarriage, and birth defects at very low dosages.[viii]

Children are at higher risk from herbicides and insecticides used on lawns. Children face higher risks than adults from lawn-chemical exposure because of their small size and developing organ systems, their greater intake of air relative to body weight, and their typical behavior of playing on or near the ground and putting their hands close to their faces.[ix] Children ages 6-11 nationwide have significantly higher levels of pesticide residues in their bodies than all other age categories.[x] The National Academy of Sciences reports that children are more susceptible to chemicals than adults and estimates that 50% of lifetime pesticide exposure occurs during the first five years of life.[xi] There is also considerable scientific evidence that the human brain is not fully formed until the age of twelve, and childhood exposure to some of the most common pesticides on the market may greatly impact the development of the central nervous system. Children have not developed their immune systems, nervous systems, or detoxifying mechanisms completely, leaving them less capable of fighting the introduction of toxic pesticides into their systems.

It is a commonly held belief that pesticides break down rapidly in the environment and therefore children are unlikely to be exposed, even a short time after application. The reality is that nearly anywhere pesticides are used, unavoidable contamination occurs. Pesticide residues persist in both indoor and outdoor environments.[xii] When pesticides are used in school buildings or on school grounds, children and other school occupants face unavoidable exposures. Toxic residue from pesticides can transfer easily from surface to surface, most commonly from clothing or shoes to an indoor area where the chemicals take much longer to break down.

POTENTIAL HEALTH IMPACTS OF PESTICIDES COMMONLY USED ON MAINE SCHOOL GROUNDS

According to survey results, Roundup and Weed and Feed are two of the most commonly used pesticides on Maine school grounds and athletic fields.

Glyphosate, the active chemical in Roundup has been linked to a range of human health impacts. According to the U.S. Environmental Protection Agency (EPA), glyphosate can cause kidney damage and reproductive disorders in humans and the American Cancer Society links glyphosate to non-Hodgkins lymphoma. Glyphosate damages human embryonic cells and placental cells in concentrations well below those recommended for agricultural use. Exposure to glyphosate-based herbicides, even at very low doses may result in reproductive and hormonal problems, miscarriages, low birth weights, birth defects, and various cancers.[xiii]

The main ingredient in Weed and Feed, 2,4-D, is an herbicide that has been registered in the United States since 1948, making it one of the oldest pesticides still legally on the market. It is the third most widely used pesticide in North America. The U.S Geological Survey's national water quality monitoring program found 2,4-D in about half of all surface water samples across the United States and has been detected in groundwater in at least five states and Canada.[xiv] 2,4-D is in the same class of herbicides that was combined to make Agent Orange during the Vietnam War. 2,4-D has been shown to have extensive hormone-disrupting activity, including anti-thyroid, androgenic, and estrogenic effects.[xv]

These pesticides should not be not be used on school grounds, especially not on playing fields, where kids have direct contact with the grass. Schools should be safe environments where children can learn and grow.

RECENT HISTORY OF PESTICIDE REGULATION IN MAINE SCHOOLS: MAINE'S REGULATORY FRAMEWORK

In 2003, the Maine state legislature passed a bill requiring all Maine schools, both public and private, to adopt Integrated Pest Management (IPM) practices and appoint an IPM coordinator. IPM has been an approach used since the 1960s as a framework for pesticide application.
The Maine Department of Agriculture, Food & Rural Resources outlines the Board of Pesticides Control's requirements for all schools regarding pesticide use in Code of Maine Rules (CMR) 01-026 Chapter 27: Standards for Pesticide Applications and Public Notification in Schools.

Specifically, it outlines in Section 2:

> A. All public and private schools in the State of Maine shall adopt and implement a written policy for the application of Integrated Pest Management techniques in school buildings and on school grounds.
> B. Each school shall appoint an IPM Coordinator who shall act as the lead person in implementing the school's Integrated Pest Management policy. The IPM Coordinator shall be responsible for coordinating pest monitoring and pesticide applications, and making sure all notice requirements as set forth in this chapter are met. In addition, the IPM Coordinator shall maintain and make available to parents, guardians and staff upon request:
> (1) the school's IPM Policy,
> (2) a copy of Code of Maine Rules (CMF) 01-026 Chapter 27: Standards for Pesticide Applications and Public Notification in Schools
> (3) records of all pesticide applications as required under CMR 01-026 Chapter 50 - Record Keeping and Reporting Requirements,
> (4) copies of labels and material data safety sheets for all products applied, and
> (5) when pesticides not exempt under Section 3 are applied, records of the IPM steps taken as described in Section 5.B. of this chapter.
> C. Each school shall provide an annual notice to parents or guardians and school employees. This notice must be provided within two weeks of the start of the school

year regardless of whether there are plans to have pesticides applied in the coming year.

In 2011, a bill was introduced in the Maine state legislature to ban pesticides on school grounds. Ultimately, the bill was gutted and amended to continue to rely on IPM and instead require development of Best Management Practices (BMPs) and direct the Maine Board of Pesticides Control to assess compliance with current IPM regulations. In February of 2012, these Best Management Practices were adopted by the Board of Pesticides Control with a goal of minimizing human exposure to pesticides, and:

- Minimize pesticide use
- Maintain healthy plants
- Choose pest resistant plant varieties
- Apply spot treatments whenever possible
- Choose products proven to be effective at low application rates
- Choose products that leave little or no residue
- Apply when school is not in session or over extended vacations
- Keep people off treated areas for as long as possible
- Check product label for minimum reentry time

MAINE'S CURRENT REGULATORY SYSTEM FAILS TO PROTECT PUBLIC HEALTH

Unfortunately, the implementation of IPM and BPM by Maine schools often falls short of what Maine law requires. On paper, these policies should reduce human exposure to pesticides. In practice, they rarely live up to their intent. In reality, these policies and practices delay exposure but do not significantly reduce exposure. Within the policies, there is no streamlined evaluation and regulation of these rules by the Maine Board of Pesticides Control. For example, although schools are required to keep IPM policies and records on file, schools are not required to submit them to the Board of Pesticides Control, who in name should be administering the requirements of the law.

There is a whole other set of problems within BPM. Within BPM, there is no recommended timeline for testing safer organic and alternative methods before turning to synthetic pesticides. Therefore the recommendation to 'think first spray last' doesn't require that much thinking before resorting to pesticides. Also, BPM separates school ground turf fields into four 'Grounds Maintenance Priority Levels,' which correspond to the intensity of use and aesthetic importance of each area. For example, high impact varsity athletic fields are often categorized into Level 1 or Level 2 priority levels, therefore requiring more maintenance and often times receiving a recommended synthetic pesticide treatment. BPM emphasizes aesthetics as the most important factor to consider when thinking about reducing pesticide use on such fields. If the real intent of BPM is to reduce human exposure to pesticides, alternative methods would outnumber synthetic recommendations for fields that receive the most amount of human play.

In addition to the problems with implementation, evaluation, and regulation, IPM policies and BPM often fall short of protecting human health and the environment, mainly because the broader regulatory system for pesticides is inadequate.

Even if scientific studies point to serious health and environmental impacts from pesticide exposure, including cancer and genetic damage, pesticides may still be allowed for use. The EPA may determine that a cancer-causing chemical may be used despite its public health hazard if its "economic, social or environmental" benefits are deemed greater than its risk. According to the EPA, more than 70 active ingredients known to cause cancer in animal tests are allowed for use. In addition, although industry tests for a wide range of environmental and health impacts, the vast majority of pesticides currently on the market have not been fully tested, particularly for their impacts on humans.

Pesticides often contain inert ingredients in addition to the active ingredients designed to kill the target pest. Unfortunately, the public is not provided information about what inert ingredients are included in pesticides in most cases. Instead inert ingredients are protected as 'trade secrets' and companies are not required to disclose them.

At least 382 of the chemicals EPA lists as inert ingredients were once or are currently also registered as pesticide active ingredients. This means that the public is kept in the dark about potentially hazardous contents of pesticide products. Among the chemical compounds listed as both inert and active ingredients are chloropicrin, which has been linked to asthma and pulmonary edema, and chlorothanonil, a probable human carcinogen.

ALTERNATIVES EXIST TO PESTICIDE USE ON SCHOOL GROUNDS AND MANY SCHOOLS AND STATES ARE LEADING THE WAY

Because the broader regulatory system for pesticides is inadequate, many states and schools are leading the way for pesticide reform. In Maine, the towns of Camden, Ogunquit, and Scarborough have all passed municipal-wide bans for toxic pesticide use on town–owned land. Citizens in Camden has gone a step further in getting schools and daycare centers on board with kid-friendly lawn care, and committing business and apartment managers and local residents to go organic.

There are a number of states with strict pesticide policies that restrict pesticide use on public school grounds including Connecticut and New York. The Child-Safe Playing Fields Act, which went into full effect in New York in May of 2011, prevents all K-12 schools and daycare facilities from using pesticides on their properties. The results have been positive and while having eliminated toxic pesticide use, schools are reporting effective pest management and significant long-term financial savings.

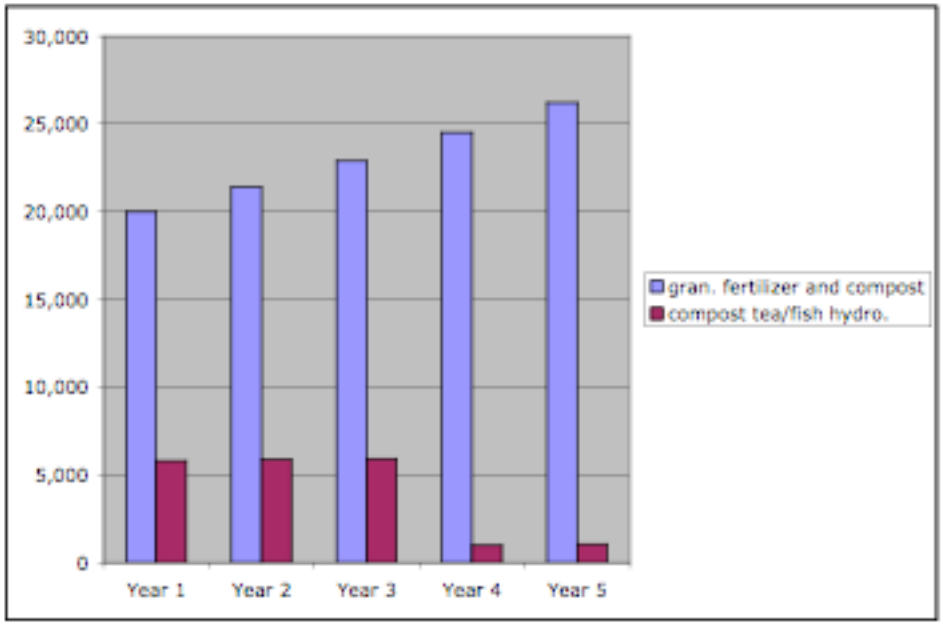
There are safe solutions to some of the most common lawn pest problems and phasing out pesticide use on school grounds is cost competitive. There is a wide body of evidence

demonstrating that organic lawn maintenance can save money and protect children's health. Chip Osborne's report, *A Cost Comparison of Conventional (Chemical) Turf Management and Natural (Organic) Turf Management for School Athletic Fields* indicates that after three to four years, organics will save schools and municipalities money.[xvi]

Some Common Lawn Pest Problems and Solutions

Problem	Chemical Solutions	Safe Solutions
White grubs, sod webworms, chinch bugs, etc.	insecticide application (ex: Merit, Dylox, Talstar, Acephate)	apply beneficial nematodes, watering lawn before and after application
Japanese beetle grubs Weeds	insecticide application (ex: Merit, Orthene, Dylox)	apply Milky Spore powder-can provide years of protection
Fungal turf diseases	herbicide application (ex: Trimec, Trimec Super, Balan, Tupersan, 2,4-D products)	using a spreader, apply a corn gluten product each spring to control crab grass and dandelions
	fungicide application (Ex: Daconil, Bayleton, Banner, Compass)	pull weeds by hand for large patches in lawn and fill bare spots with compost and grass seed

Product Cost Benefits of Switching to an Organic Nutrient Spray Program



Cost comparison on granular fertilizer and compost compared to spraying compost tea and fish hydrolysates in Marblehead, MA[xvii]

SURVEY METHODS

To evaluate the success of IPM programs in Maine at reducing pesticides on school grounds, we conducted a survey of schools across Maine. We developed a set of questions and compiled a list of Maine public schools from the Maine Department of Education website, reaching out to them via phone or e-mail. We asked to talk to the IPM coordinator, or if the IPM coordinator was unavailable, an athletic director, maintenance director, or custodian.

SURVEY RESPONSES

There are 623 public schools in Maine that fall into 229 school administrative units and serve 492 municipalities. Based on the administrative structure of these schools, we were able to administer 169 surveys to various districts, departments, unions, and alternative organizational structures (AOS). We received data from 53 surveys with results from 209 schools and 98 municipalities. This is a 31% survey response rate that covers 34% of public schools in Maine and 20% of Maine's municipalities.

Among the 209 schools surveyed, 51% of schools replied that they used pesticides outdoors. This is an increase from the number reported by the Maine Department of Agriculture in 2000. In a 2000 survey of Maine Schools and their Integrated Pest Management practices, only one-third of schools that responded to the survey said that herbicides or fertilizer-plus-herbicide products are used outdoors[xviii].

Regardless of best practices outlined in IPM, schools are still applying toxic chemicals to school grounds. Weed and Feed and Roundup are among the most commonly applied pesticides on school grounds in Maine. These chemicals in these products, including 2,4-D and glyphosate have been linked to human health impacts including kidney disease and non-Hodgkin lymphoma. Merit and Trimex are other pesticides that are being used on school grounds to address grub problems. Merit is a moderately toxic insecticide. Trimex contains 2,4-D and several other possible carcinogens and toxic ingredients. Safer, cost-effective organic alternatives exist that can be used instead of these toxic chemicals.

The surveys also identified that schools are not fully educated about pesticide products they use. Of the schools that reported using pesticides on school grounds, 43% did not have knowledge of the products used. There is also a large gap in reporting among schools. Sixty percent of schools surveyed reported that they keep IPM records, while 32% reported that they don't. Eight percent of school records are held by outside contractors. It was difficult to obtain these IPM records, reports, and notifications of pesticide spraying. Only 9% of schools surveyed sent us IPM records. IPM policies should hold schools accountable to report on the use of pesticides, but there is a lack of regulation of these policies on the statewide level. Maine state

policy is largely inadequate in successfully reducing exposure to pesticides, especially on school grounds.

Fortunately, municipalities, school districts, individual schools and other states have chosen to adopt policies limiting the use of toxic pesticides, and instead turn to affordable non-toxic alternatives. There is clearly momentum for Maine state policy makers to take stronger action to protect children from pesticides.

SURVEY CHALLENGES

The person assigned as the IPM coordinator varied largely within districts, departments, unions, and AOS. This made it difficult to find the right person that could answer the survey questions and it required quite a bit of follow up. However, depending on the administrative structure of the school, we were often able to get information on a whole district, department, union, or an alternative organizational structure (AOS).

IPM policies also vary widely from school to school and within districts, which created gaps in information gathering, especially when it came to reporting. While some schools indicated that pesticides were being used, the quality of the reporting affected the quality of the data we received.

How a school system manages its lawns and athletic fields varies widely as well. Many schools have a district-wide field maintenance team that deals with all the schools in that system. A number of systems relied on the town for maintenance. A number of districts contract out their lawn maintenance. Again, the quality of the reporting affected the quality of the data we received.

Survey

1. Are you the **Integrated Pest Management coordinator** for the school/district and what is your job title for the school/district?

2. In **general**, what does the school do to care for the lawns and athletic fields?

    a. What **products** do you use to treat the lawns/fields? (according to the table below)

	School Lawns	Athletic Fields	Playgrounds	Other Grounds (specify)
Fertilizers				
Pesticides				
Other Products (organics?)				

3. What **pests** are your school/district concerned about for which you apply these products?

4. **Who** does the treatment? a school/district employee, a town employee or a contracted company?
    a. If you use a contracted company, please provide their contact information

5. What **time** of the day/year are the products applied?

6. Are any special **precautions** taken (signs, parental notifications)?

7. Has there been any movement to use **organics**?

8. Overall, we are interested in how each school/district is applying their IPM policy. Are you the person in charge of maintaining the **IPM policy and records** for the lawns and grounds?
    a. If so, are you able to ***email*** me a copy of your exterior chemical application records?
        i. **When** will I be able to expect those records to be sent?

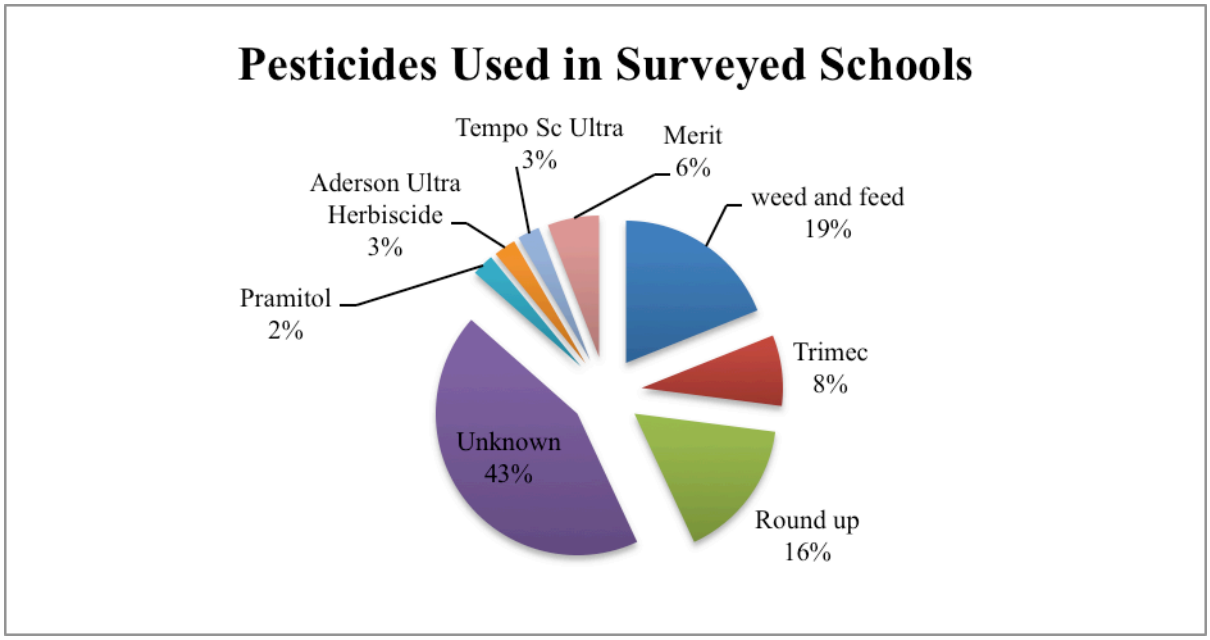
SURVEY RESULTS

KEY FINDINGS OF THE SURVEY:

1) 51% of schools surveyed reporting using pesticides.
2) Weed and Feed and Roundup are the most widely-used pesticides in schools surveyed.
3) 43% of schools surveyed could not tell us what pesticides are used.
4) 18% of schools surveyed do not have a required IPM policy in place.
5) 32% of schools surveyed do not keep required pesticide application records.
6) 3% of schools surveyed use organic lawn care practice.

MOST WIDELY USED PESTICIDES:

Figure 1: Results of Pesticides Used in Surveyed Schools



Weed and Feed and Roundup are the most-widely used products reported by schools. Forty-three percent of schools surveyed reported not knowing what pesticides were used on school grounds.

IPM INCONSISTENCY:

Figure 2: % of Survey Respondents with or without IPM policies

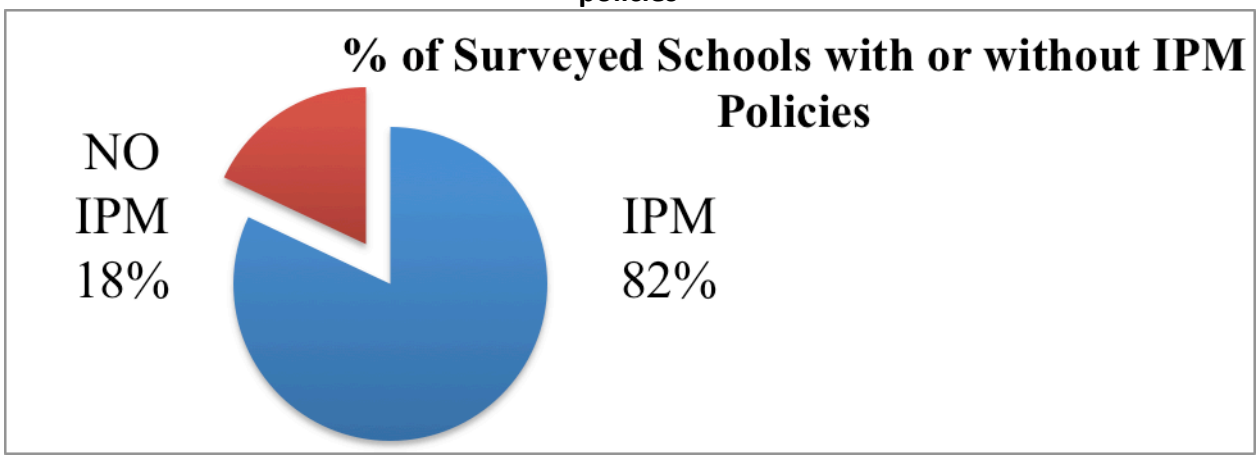


Figure 3: % of Surveyed Respondents Record Keeping Practices

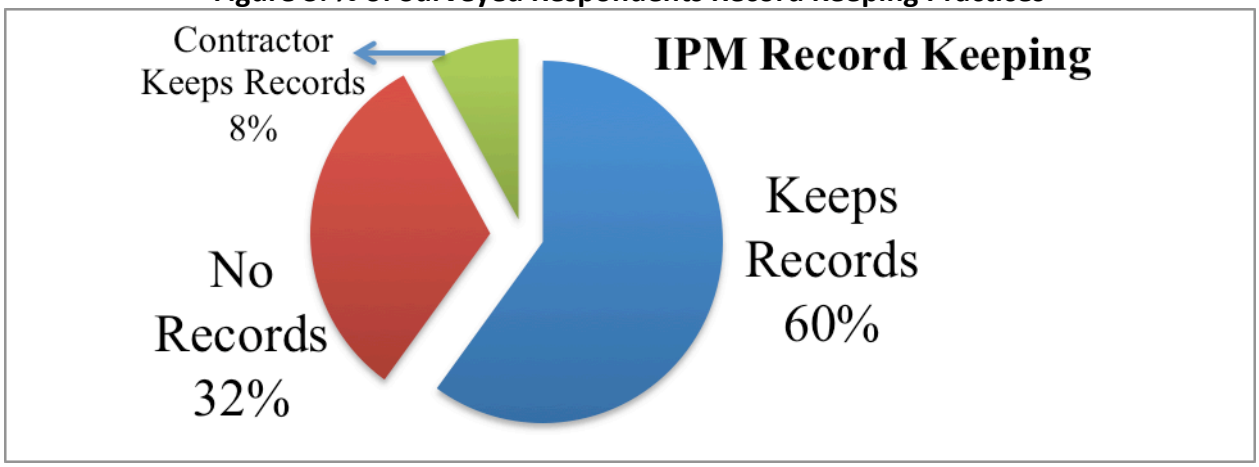
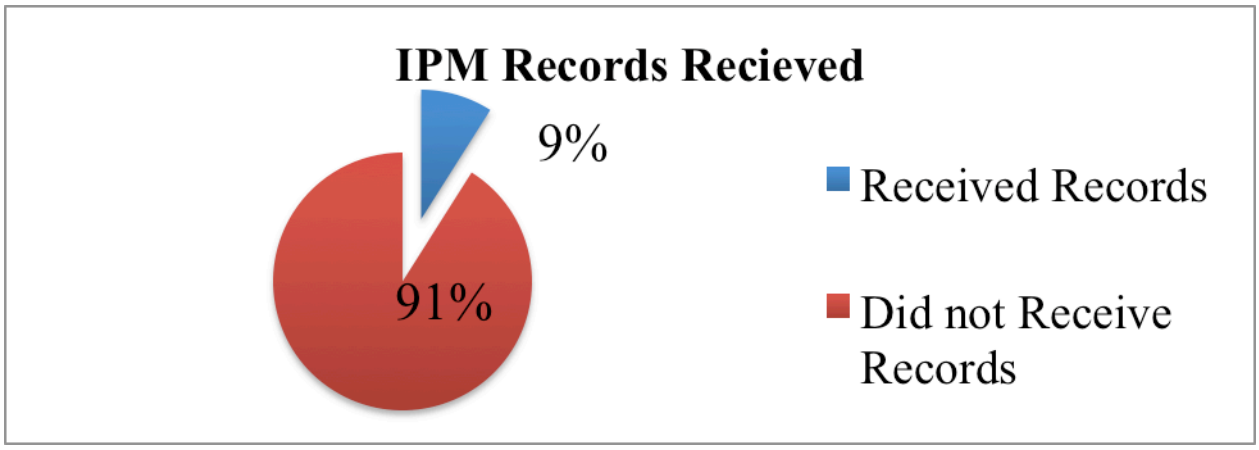


Figure 4: % of Records Received From Survey Respondents



Figures 2, 3, and 4 are graphs that respond to IPM findings from our survey. While 82% of schools have IPM policies, 18% of schools surveyed are not fulfilling the state requirement to have an IPM policy. While 68% of schools are keeping records either with a contractor or with the school, 32% of schools do not keep records at all, and are again not fulfilling state requirement. Although we asked for IPM record for all schools we surveyed, we did not receive IPM records from 91% of schools surveyed. IPM records should be accessible to the public and indicate exactly what chemicals are being used on school grounds.

Figure 6: Products Used by Survey Respondents

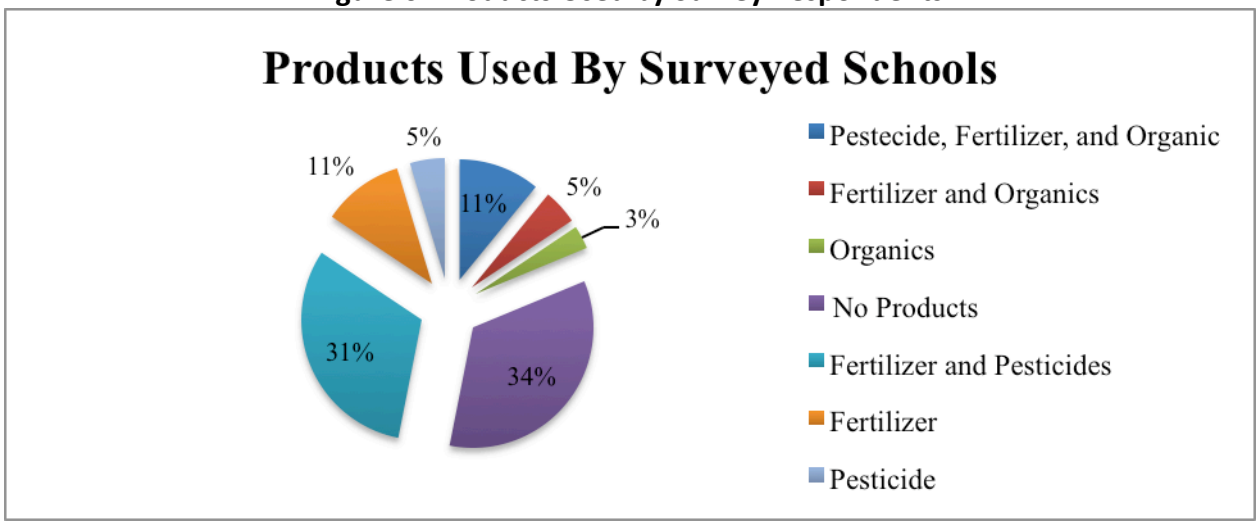


Figure 6 shows the difference in products used by schools that responded to our survey. Eleven percent of schools use a mixture of fertilizer, pesticides, and organic lawn treatments. Five percent use only fertilizers and organics. Just 3% use strictly organic lawn care. Thirty-four percent of surveyed schools use no products on their lawn and only mow and trim grass and bushes.

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[xiii] Grassroots Education Fund.
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Concern over pesticide use at schools rises

Parents are becoming more aware as some schools in the state are not moving to reduce pesticide use.

By North Cairnncairn@pressherald.com
Staff Writer

Until she read a newspaper article about pesticide use on school grounds, Marla Zando of Scarborough was unaware that chemicals used on playgrounds or ballfields could hurt children.

"I really, really never had thought about it," she said. "And I sort of think of myself as being environmentally aware," but "wow, it was really eye-opening. I really was clueless, very, very clueless.

"Kids love to play in the dirt," said Zando, the mother of a 4-year-old son. "You don't know when (pesticides) are there; you can't see them. I find it very scary."

Zando began asking questions of physicians, members of the town council, even bird watchers -- people she knew would be knowledgeable about the subject -- to find out about synthetic pesticides and their potential health effects.

Numerous studies have linked pesticide use at certain levels to a variety of learning disabilities, hyperactivity, attention deficit disorder, cancers and developmental problems, especially in younger children.

"Children are still developing," said Zando. Chemicals "can affect growth and development," and people need to be educated about the health risks of these substances, she said.

The use of chemicals on school properties and other public areas has become a matter of growing public concern in a number of Maine communities. In Camden, Castine, Ogunquit, Brunswick and Scarborough, ordinances or policies have been approved that call for bans, restrictions or reductions in the use of synthetic pesticides and a transition toward organic alternatives or horticultural practices that do not rely on traditional chemical treatments, said Zando.

Zando is now a member of the Pesticide Management Advisory Committee in Scarborough.

The town council passed an organic policy in 2011, meaning Scarborough is early on in the process of restricting chemical treatments and beginning to phase out their use on public properties, most notably in areas used by children.

"It was as close to a full ban as we could get," Zando said. The measure "does allow for waivers, in cases of emergency," she said, adding that there is no simple definition for what would constitute an emergency.

SCHOOLS USE CHEMICALS

More than half of 200 schools surveyed in the state still use chemicals on school yards and athletic fields, even though state law requires that they move toward reducing pesticides and develop an integrated pest

management plan, a New England environmental group has reported.

The Toxics Action Center, a New England grassroots nonprofit organization, studied the schools -- which represent less than 10 percent of Maine's districts -- in part because the state had not conducted its own survey in a decade, said Tracie Konopinski, Maine community organizer for the group's Portland office and author of the report, "A Call for Safer School Grounds: A Survey of Pesticide Use on K-12 Public School Grounds in Maine."

In 2000, a state Department of Agriculture study of pesticide use on school grounds showed that almost one-third of elementary and high schools were still using chemical pesticides and herbicides to control insects, weeds or other plants, Konopinski said. That report had a more broad-based sample group, she acknowledged, but the center's survey encompasses more than 200 schools and nearly 100 municipalities.

Compared with the earlier state survey, the study by Toxics Action Center, which helps local communities deal with toxins, reveals a "shocking" increase of pesticide use, Konopinski said.

This is an educational issue as well as an environmental one, she said.

In Maine, pest control was not the most common reason reported by schools for spraying chemicals, the survey found. "Rather, schools cited aesthetic reasons, such as needing to get rid of dandelions and brush on athletic fields, reducing broad-leaf weeds around the edges of school buildings and playgrounds, and the reduction of weeds in school gardens," the survey said.

Konopinski said that allowing cosmetic considerations to override safety is "inadequate protection."

Part of the challenge is that no one knows just how much exposure -- if any -- is acceptable or tolerable for children. The U.S. Environmental Protection Agency's toxicity and safety levels in pesticide exposure "are based on an adult male," Konopinski said. That should lead municipalities and school districts to exercise even greater care and caution in the use of toxic materials where children play, she said.

The center is calling on the state Legislature to strengthen laws, from instituting a complete ban on pesticide use on school properties and endorsing stronger enforcement of integrated pest management to providing more effective notification to parents when chemicals are to be used.

2011 BILL TO BAN FAILED

In 2011, a bill was introduced in the Legislature that, in effect, would have banned pesticide use, including to control weeds, insects, rodents and plant disease on school grounds. The bill failed, and the Legislature instead directed the Maine Board of Pesticides Control to evaluate the use of pesticides on school grounds and to develop "best management practices" with an emphasis on minimizing human exposure to pesticides.

The Maine Department of Agriculture, Conservation and Forestry disputes the Toxics Action Center's survey. Department officials initially declined to be interviewed or respond to questions about the report, aside from emailing a news release to the Press Herald.

Walter Whitcomb, the agency commissioner, said in the release, "The advocacy group misses the point that Maine continues to work hard on this issue and is recognized as a national leader in balancing the need to minimize pesticide risks against the risks posed by harmful pests."

The Maine Board of Pesticides Control has been reviewing pesticide management practices for the past 18 months, said board director Henry Jennings, who was given permission to speak to the media several days after the Agriculture Department's emailed response.

"Pesticides are allowed to be used on school grounds," he said, but the state advises districts to "minimize exposure and (limit) use as much as possible" and to use chemicals "very carefully and keep people away (from sprayed areas) as long as possible."

Although the state cannot compel districts to ban spraying or even limit the use of chemical or synthetic versus "natural" pesticides, he said, it does promote the idea that when it comes to pesticide spraying, the equation is risk equals toxicity times exposure.

TAKING RISK INTO ACCOUNT

Konopinski, however, said the risk to children over time from repeated exposure to various chemicals isn't being taken into account. The state's formula, she said, "doesn't quite make sense with the newer science that's out there."

Other states, such as New York and Connecticut, have enacted statewide bans on pesticides on school properties, Konopinski said.

Maine's "best management practices" lists as its No.1 goal: "Reduce human pesticide exposure."

But of nine bullet points leading up to that goal, seven assume the use of pesticides, including minimizing pesticide use, applying chemicals when school is not in session and keeping people off treated areas for as long as possible.

"The goal is great," said Konopinski. "But it requires a plan and benchmarks. That's what we want to see."

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

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Posted:Today
Updated: 1:10 AM

Another View: Maine schools work hard to protect kids from pesticides

Rules about chemical spraying can help, but educating school staff is also important.

By Henry Jennings

As "Concern over pesticide use at schools rises" (Jan. 1) exemplifies, the impact of pesticides on human health is understandably an important topic. Fortunately, Maine policymakers and professional staff have been working for years to protect the public from both pests and pesticide exposure with some of the strictest pesticide laws in the country. Protecting children is always the top priority.

Maine has had a school pesticide law since 2003. Its cornerstone relies on one fundamental principle: if there is no human exposure to pesticides, then there is no risk.

Vigorously applying this principle allows Maine schools to benefit from a pest-free environment without risking children's health. A key outcome of the law is that pesticides are not used on school grounds when students are present. Rather, they are almost always applied during long school vacations.

The pesticide law requires Maine's schools to use proven strategies and a systematic approach to keep children as safe as possible from both pests and pesticides. This approach relies primarily on nonpesticidal means for combating pests, such as trapping and sanitation, as well as horticultural practices fostering good plant health.

The law only allows pesticide use in ways that minimize any chance of human exposure, and only by trained, licensed professionals. Visits by state inspectors and a strong education program help ensure strict adherence to the law's requirements.

Maine continues to work on improving protection of our school children by reassessing school practices and strengthening the law. An updated rule that should go into effect this year requires additional training of school personnel and provides better guidance on lawn care. To learn more about pesticide use in Maine schools, go to www.thinkfirstspraylast.org/schoolipm/.

Henry Jennings is the director of the Maine Board of Pesticides Control in Augusta.

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Portland Press Herald

1:00 AM, 12/21/12

Maine Voices: Act now to get some protection from pesticide spraying

Those who register with the state by Dec. 31 can at least be warned about being exposed to toxins.

By DONNA HERCZEG

During these holiday months, it hardly comes to mind to think about lawn care and the chemical sprays neighbors and businesses use to kill weeds on their properties.

Many people are not aware of their right to be notified before spraying, either by a neighbor or their pesticide application company, within 500 feet of their property or within 250 feet for people on Maine's Pesticide Notification Registry.

The most important aspect of registering with the Maine Board of Pesticides Control is that your family and pets will not be caught unaware and unknowingly exposed to the toxins used in these applications, as we were this year.

We have an organic gardening area and many windows facing our neighbor, who had never sprayed before. One day when our windows were open, a strong chemical smell permeated our house, coming from the neighbor's lawn after it had been sprayed.

That day and the following week we found numerous dead bees in the driveway on the side of the house that had been sprayed.

Concerned about the toxicity of the lawn spray, we contacted the company that had done the application and asked for the material safety data sheet to check the ingredients used.

After much research, the one of most concern was the dimethylamine salt of 2,4-dichlorophenoxyacetic acid (2,4-D for short), shockingly a major ingredient in Agent Orange.

This chemical is listed as highly and acutely toxic, a known carcinogen, known groundwater pollutant and known reproductive or development toxicant. Even the smell of 2,4-D can be toxic to the liver in small doses.

It is also very toxic to several breeds of dogs, particularly golden retrievers, German shepherds, Scottish terriers, West Highland terriers and several others (two of them breeds that we own). Chemical exposure for these breeds from vapor drift, eating grass or walking on sprayed lawns is linked to causing higher than normal incidences of bladder cancer and certain lymphomas.

After contacting our neighbor about our concerns, we were assured there would be no more spraying.

Four weeks later we again smelled the spray and saw the pesticide application sign on the lawn.

We then contacted the pesticide company indicated on the lawn sign and asked to be put on their notification list for any further spraying.

Lawn pesticides are sprayed from spring until November, and in our neighborhood, it meant a lawn was being sprayed every couple of weeks.

This past summer, pesticide warning signs were posted at churches, schools, museums, retail strip malls, railroad trails, veterinarian offices and many business and public spaces.

At a school, children and pets were walking by while the median was being sprayed, and at a cemetery, children were sitting on a brick walkway before the required drying time of 48 hours.

Many times the spray on neighbors' lawns was applied the day before torrential rains or on days that were windy.

All the people I spoke to who applied these chemicals denied health concerns and insisted that the chemicals had been tested for safety.

However, they did agree the testing was under certain conditions and for people wearing shoes. Not for children and dogs rolling in the grass, or eating it.

Chemical residues that run off after rainfall are still toxic, as is the vapor drift during application.

Unfortunately, the Environmental Protection Agency makes no claims to protect us from these harmful chemicals.

Our families, pets and wildlife are under an unprecedented assault from chemicals in our food and environment. Why add to the toxic burden for purely cosmetic reasons, when the same results can be achieved naturally for a healthy, safe and beautiful lawn?

To protect your family and pets, apply with the Maine Board of Pesticides Control for spray notification.

The very short 61-day enrollment period began Nov. 1 and ends Dec. 31 of this year in order to be eligible for next year's spraying notifications. They require a form to be completed, on which all abutters within 250 feet must be listed, and a $20 annual fee included. This form can be obtained online at www.thinkfirstspraylast.org.

Click on "pesticide notification" and then scroll down to the bottom and click on Pesticide Notification Registry Application (PDF) or call the Maine Board of Pesticides Control at 287-2731 to have a form mailed to you.

If you miss the enrollment period, you can directly request a call before a scheduled spray application from the company your neighbors use.

Donna Herczeg is a resident of Portland.

Organic Farmers Criticize Presentation Endorsed By State Pesticides Board

01/09/2013 Reported By: Susan Sharon

Included in the list of programs at the Maine Agricultural Trades Show this week was one titled: "Talking About Pesticides with Customers and Neighbors." Sponsored by the Maine Board of Pesticides Control the session was initially billed as a way for pesticide applicators in Maine to learn how to effectively communicate "nightmare scenarios." It featured a leading authority on the topic. The two-day session has offended some in the organic farming community who are upset with the message it sends as well as its timing.

Related Media

Organic Farmers Criticize State Pesticides Board Listen *Duration: 4:14*

This is the second time the Maine Board of Pesticides Control has brought Dr. Vincent Covello of the Center of Risk Communication to Augusta to meet with farmers. They paid him six thousand dollars for a two-day presentation that lasted about four hours.

"And the reason we wanted him to come here is it's so difficult for producers and other people who use pesticides to effectively communicate with their customers, their neighbors and the public in general about pesticide risks," said Henry Jennings, director for the Board of Pesticides Control.

The board is mandated by the Legislature to help farmers reduce their reliance on pesticides. In recent years public notification about pesticide application has become a thorny issue for the board, farmers, lawmakers and concerned members of the public. That's because a notification system set up to inform property owners when growers were spraying nearby was dismantled by the Legislature. It was then replaced with a voluntary system that critics such as Heather Spaulding of the Maine Organic Farmers and Gardners Association view as less transparent.

"The problem is that the pesticides industry wants to limit the access to information that people have, the access to information that people have about pesticide exposure," said Spaulding.

She said against this backdrop she was disheartened to learn that the Board was bringing in Dr. Covello to teach pesticide applicators how to spin their message. Over the past two decades Covello has held positions in academia and government including as an Associate Professor of Environmental Sciences and Clinical Medicine at Columbia University. His clients have included the Nuclear Regulatory Commission, the Environmental Protection Agency and the Chemical Manufacturers Association.

"It just seemed a bit suspect that here was somebody who worked very closely with all the chemical industry and the pesticide manufacturers coming in to teach people to talk to the public about pesticide spraying," Spaulding said.

During his first presentation to about 75 farmers at the Augusta Civic Center Covello did not take a general position on pesticide application. But he did come to the defense of Alar. Alar was an additive used to prevent apples from ripening too early. Covello worked on crisis communication around the great apple scare in 1989. Alar was eventually removed from the marketplace in the United States. Covello said a *60 Minutes* expose that attacked it as the most toxic substance in America's food supply was a big factor in getting it banned.

"The issue was not a well-told story. There was no narrative that the public could follow and the end result was because of that negative dominance people tend to focus on the negative than the positive," Covello. "For all effective purposes people stopped eating apples."

While some may call him a "spin doctor" or criticize risk communication as a substitute for action and regulation Covello said his principles are grounded in the facts. But his

first piece of advice is to always demonstrate compassion or caring.

"The key principle of risk communication is to tell the truth but tell it well and that's the whole purpose of my presentation is how to tell the truth well," he said.

But for organic dairy farmer and MOFGA board member Spencer Atel of South China, Covello's message and his invitation by the Board of Pesticide Control couldn't have come at a worse time. Just last month, Russell Libby, the longtime executive director of the Maine Organic Farmers and Gardeners Association died after a struggle with cancer. Libby was dedicated to the promotion of organic farming and to the education of the public about the harm caused by synthetic pesticides.

"This is a real slap in the face to us to try to figure out how the department thought it was justifiable to put someone whose real message is how to talk to the public about your pesticide use in the face of our recent loss," said Atel.

On the same day that Dr. Covello was teaching farmers how to communicate pesticide risks, Russell Libby's family was at the same trade show posthumously accepting an award from the governor and the agriculture commissioner on the MOFGA leader's behalf.

Return!

Growers May be Required to be Licensed to Use Over-the-Counter Pest Control Products

December 19th, 2012

An Update from the Maine Board of Pesticides Control

To all Maine fruit, vegetable and grain growers who sell edible produce to consumers or to processors to be made into products for human consumption: A new law may require you to be licensed to use over-the-counter pest control products.

Please read the following announcement and see details on training below. Preregistration is required. Please call (207) 287-2661 or email anne.bills@maine.gov to reserve a seat.

In the spring of 2011, the Maine Legislature passed Public Law 2011, Chapter 169: An Act to Require Certification of Private Applicators of General Use Pesticides. The new law requires the Maine Board of Pesticides Control to begin licensing growers who use only general-use (over-the-counter) pesticides and annually sell more than $1,000.00 of plant or plant products intended for human consumption.

Keep in mind that, by definition, a pesticide is any naturally or synthetically derived substance used to kill, control, or repel undesired insects, weeds, fungi, bacteria, mammals, birds, rodents, or other organisms.

Products which are organic are also pesticides if they are used as described above. Consequently, these substances may include insecticides or bug sprays; herbicides, including weed killers and top killer products; fungicides or disease controls, rodenticides; deer repellents; defoliants; growth regulators; and disinfectants.

Cooperative Extension: New Farmers Home

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News & Workshops

- UMaine Extension Faculty Paper in Agricultural Journal
- Growers May be Required to be Licensed to Use Over-the-Counter Pest Control Products
- An Introduction to Growing Grapes in Maine
- Beginning Women Farmers Class January 2013!
- Sunday Telegram Features UMaine Agritourism Initiative
- UMaine Extension Pest Specialists Find Spotted Wing Drosophila Problematic in State

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To obtain a license, you must pass the Maine Board of Pesticides Control "core exam." The Maine Board of Pesticides Control and University of Maine Cooperative Extension are offering a three-hour training session to help prepare growers for the Private Pesticide Applicator Core Exam at the Maine Agricultural Trades Show on January 9, 2013. Ideally, exam candidates should review the Pesticide Education (Core) Manual prior to taking the exam. The Pesticide Education (Core) Manual is available from the University of Maine Cooperative Extension online or call 1-800-287-0279 in Maine, (207) 581-3880 outside Maine.

Wednesday, January 9, 2013
Augusta Civic Center, Arnold/Howard Rooms (first floor, north wing)

9:30 AM – 12:30 PM Private Pesticide Applicator Core Exam Training
Jim Dill, University of Maine Cooperative Extension and Gary Fish, Maine Board of Pesticides Control

1:30 PM – 4:00 PM Private Pesticide Applicator Core and Commodity Exams Administered
Maine Board of Pesticides Control Staff
Preregistration is required. Please call (207) 287-2661 or email anne.bills@maine.gov to reserve a seat.

If you cannot make it to this session we do plan to hold many more before the requirement becomes fully enforceable on April 1, 2015. The exam can also be taken at the Maine Board of Pesticides Control office in Augusta (207-287-2731) or at County Cooperative Extension offices. Contact the Maine Board of Pesticides Control office to have the exam mailed to the Extension office, and then make arrangements with Extension for taking the exam.

The three-year license will cost $15.00 You will need to obtain one hour of continuing education per year in order to maintain your license.

Tags: Maine pesticide certification, Maine pesticide training

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Some Maine farmers estimate crop loss to new invasive fruit fly

Kathryn Skelton, Staff Writer

Lewiston-Auburn | Monday, December 3, 2012 at 6:00 pm

MONMOUTH — They're here, they're statewide, and they're "rugged."

A researcher who spent the fall surveying farmers said Monday that initial response indicates more than half saw Spotted Wing Drosophila fruit flies around their crops this fall, a year after it was found in the state for the first time. David Handley's traps at Highmoor Farm caught the fruit flies up to the end of November.

"It kind of points to the fact of how rugged this thing is. After a couple of what we would normally consider killing frosts they were still laughing at us and we were still catching them in high numbers," said Handley, a vegetable and small fruit specialist for the University of Maine Cooperative Extension.

The Spotted Wing Drosophila, native to Northern Asia, slits a hole in ripening fruit to lay its eggs. It spoils the fruit, though the raspberries, blueberries and other soft-skinned produce can look fine for a day or two — long enough to be picked, sold and become an unpleasant surprise.

Their numbers picks up in late summer. One female can lay 300 eggs during its 14-day lifespan.

In early responses, Handley said four raspberry farmers estimated 20 percent crop loss. Of 30 highbush blueberry growers, fewer than half reported seeing the flies and 10 percent found larvae in fruit and took a measure such as spraying, to combat the pest.

"Hopefully our trapping made growers aware of this so they were trying to prevent infestations," he said. "Not only did we catch them in every area we put a trap, in some cases we were catching them by the thousands on a weekly basis. That's amazing."

David Yarborough, a wild blueberry specialist and professor of horticulture at the University of Maine, said it's been hard to measure how hard the fruit fly hit that crop. Ruined berries often shrivel and drop to the ground.

Maine appears to have had its second largest wild blueberry crop ever this season, an estimated 95 million pounds, he said.

"At this point in time we don't feel they made a significant injury to the crop but that doesn't mean they couldn't in the future and they won't if we don't address them and be aware of them," Yarborough said. "We don't know, we could have potentially had a bigger crop than we did."

Winter will be spent researching means to combat the fruit fly, talking to farmers and educating consumers, Handley said.

People want to buy local, he said. At the same time, "we've got to be able to have good, clean product for them or you're going to be out of business."

kskelton@sunjournal.com

Portland Press Herald

PRINTTHIS

November 21

Nancy Oden, of Jonesboro, environmental activist

By North Cairnncairn@pressherald.com
Staff Writer

Since moving to Washington County in 1979, much of Nancy Oden's environmental activism has focused on curbing or eliminating the use and proliferation of pesticides and other toxic chemicals.

click image to enlarge

Nancy Oden harvests medicinal herbs, tansy and goldenrod, in her Jonesboro organic garden.

Photo by Peter Aldridge

An organic grower, she was the leader of successful campaigns over three decades to bar waste incineration and disposal that would have allowed millions of tons of out-of-state garbage to be dumped in townships 30 and 14 in Washington County. She helped halt a proposed jetport in Jonesboro that threatened wetlands, and organized a citizen's referendum to stop virtually all aerial spraying of pesticides in Downeast Maine.

"These issues flow into one another," says Oden, who acknowledges that more than 35 years of activism, virtually all of it without pay, has required constant vigilance and struggle. She has attended countless public meetings, cajoled people to care about issues that often seem too big to tackle, and given up private time to make a difference in the future of the state and the planet.

Oden is a conscientious troublemaker, a characterization she sees as a vindication of her work, not a condemnation. She has agitated against special interests and corporate greed in her unrelenting effort to protect Maine's natural resources, farms, fisheries and families from harm.

Oden's dedication to the effort to preserve a clean earth for future generations has been a spark of hope for other environmental activists in Maine.

Were you interviewed for this story? If so, please fill out our accuracy form

KENNEBEC JOURNAL

December 7, 2012

US government to buy Maine blueberries

The Maine Wild Blueberry Commission requested the purchase to help the industry address an oversupply caused by an usually large crop.

From staff reports

The federal government will buy wild Maine blueberries for use in federal nutrition programs.

click image to enlarge

Workers harvest wild blueberries in July at the Ridgeberry Farm in Appleton. Maine is the country's top wild blueberry state, and the U.S. Department of Agriculture says it intends to buy up to $16 million worth of wild Maine blueberries for federal food programs. (AP Photo / Robert F. Bukaty)

The Agriculture Department will buy up to $16 million worth of blueberries, which could help ease a drop in prices due to a bumper crop of the berries this summer.

"The USDA's purchase will go a long way to stabilizing those prices and helping Maine growers recoup losses," said Rep. **Chellie Pingree**, D-Maine, who said growers have seen the price they received for blueberries drop by about 25 percent.

The Wild Blueberry Commission of Maine had asked the USDA to make the purchase earlier this year.

The department buys food that goes into school breakfasts and lunches; the Summer Food Service Program; the Food Distribution Program on Indian Reservations; the Commodity Supplemental Food Program; and the Emergency Food Assistance Program. USDA also makes emergency food purchases for distribution to victims of natural disasters.

Democratic U.S. Rep. **Mike Michaud** of Maine asked the government to make a timely decision on the request.

Michaud calls the USDA purchase "a win-win that will help address the needs of the industry as well as the nation's food programs."

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2012 Ties Warmest Year on Record in Portland

01/07/2013 10:30 AM ET

The National Weather Service said 2012 is going into the record books.

PORTLAND, Maine (AP) _ Portland's average temperature for the year came in at 49.2 degrees, tying 2010 as the city's warmest year on record. Temperatures are recorded at the Portland International Jetport, where records have been logged since 1940.

The weather service said 2012 was highlighted by the second-warmest spring on record followed by the sixth-warmest summer. Nine out of the 12 months had above-normal temperatures.

Portland had more than 54 inches of precipitation for the year, more than 7 inches above normal.

The snowfall total came in at just shy of 63 inches, which was 1 inch above normal.

Return!

The New York Times

January 8, 2013

Not Even Close: 2012 Was Hottest Ever in U.S.

By JUSTIN GILLIS

The numbers are in: 2012, the year of a surreal March heat wave, a severe drought in the Corn Belt and a huge storm that caused broad devastation in the Middle Atlantic States, turns out to have been the hottest year ever recorded in the contiguous United States.

How hot was it? The temperature differences between years are usually measured in fractions of a degree, but last year's 55.3 degree average demolished the previous record, set in 1998, by a full degree Fahrenheit.

If that does not sound sufficiently impressive, consider that 34,008 daily high records were set at weather stations across the country, compared with only 6,664 record lows, according to a count maintained by the Weather Channel meteorologist Guy Walton, using federal temperature records.

That ratio, which was roughly in balance as recently as the 1970s, has been out of whack for decades as the country has warmed, but never by as much as it was last year.

"The heat was remarkable," said Jake Crouch, a scientist with the National Climatic Data Center in Asheville, N.C., which released the official climate compilation on Tuesday. "It was prolonged. That we beat the record by one degree is quite a big deal."

Scientists said that natural variability almost certainly played a role in last year's extreme heat and drought. But many of them expressed doubt that such a striking new record would have been set without the backdrop of global warming caused by the human release of greenhouse gases. And they warned that 2012 was probably a foretaste of things to come, as continuing warming makes heat extremes more likely.

Even so, the last year's record for the United States is not expected to translate into a global temperature record when figures are released in the coming weeks. The year featured a La Niña weather pattern, which tends to cool the global climate over all, and scientists expect it to be the world's eighth- or ninth-warmest year on record.

Assuming that prediction holds up, it will mean that the 10 warmest years on record all fell within the past 15 years, a measure of how much the planet has warmed. Nobody who is under 28 has lived through a month of global temperatures that fell below the 20th-century average, because the last such month was February 1985.

Last year's weather in the United States began with an unusually warm winter, with relatively little snow across much of the country, followed by a March that was so hot that trees burst into bloom and swimming pools opened early. The soil dried out in the March heat, helping to set the stage for a drought that peaked during the warmest July on record.

The drought engulfed 61 percent of the nation, killed corn and soybean crops and sent prices spiraling. It was comparable to a severe drought in the 1950s, Mr. Crouch said, but not quite as severe as the legendary Dust Bowl drought of the 1930s, which was exacerbated by poor farming practices that allowed topsoil to blow away.

Extensive records covering the lower 48 states go back to 1895; Alaska and Hawaii have shorter records and are generally not included in long-term climate comparisons for that reason.

Mr. Crouch pointed out that until last year, the coldest year in the historical record for the lower 48 states, 1917, was separated from the warmest year, 1998, by only 4.2 degrees Fahrenheit. That is why the 2012 record, and its one degree increase over 1998, strikes climatologists as so unusual.

"We're taking quite a large step above what the period of record has shown for the contiguous United States," Mr. Crouch said.

In addition to being the nation's warmest year, 2012 turned out to be the second-worst on a measure called the Climate Extremes Index, surpassed only by 1998.

Experts are still counting, but so far 11 disasters in 2012 have exceeded a threshold of $1 billion in damages, including several tornado outbreaks; Hurricane Isaac, which hit the Gulf Coast in August, and, late in the year, Hurricane Sandy, which caused damage likely to exceed $60 billion in nearly half the states, primarily in the mid-Atlantic region.

Among those big disasters was one bearing a label many people had never heard before: the derecho, a line of severe, fast-moving thunderstorms that struck central and eastern parts of the country starting on June 29, killing more than 20 people, toppling trees and knocking out power for millions of households.

For people who escaped both the derecho and Hurricane Sandy relatively unscathed, the year may be remembered most for the sheer breadth and oppressiveness of the summer heat wave. By the calculations of the climatic data center, a third of the nation's population experienced 10 or more days of summer temperatures exceeding 100 degrees Fahrenheit.

Among the cities that set temperature records in 2012 were Nashville; Athens, Ga.; and Cairo, Ill., all of which hit 109 degrees on June 29; Greenville, S.C., which hit 107 degrees on July 1; and Lamar, Colo., which hit 112 degrees on June 27.

With the end of the growing season, coverage of the drought has waned, but the drought itself has not. Mr. Crouch pointed out that at the beginning of January, 61 percent of the country was still in moderate to severe drought conditions. "I foresee that it's going to be a big story moving forward in 2013," he said.

Year in Review: CDC Reports Surge in West Nile Cases

By Todd Neale, Senior Staff Writer, MedPage Today
Published: December 26, 2012

Our Year in Review series highlights the major medical news stories of 2012. After several years of decline, the number of cases of West Nile virus infection increased dramatically this year. Here is the original article on the surge, published on Aug. 1. In a companion article, you'll find out what has happened with it since.

This year is shaping up as the worst for West Nile virus infections in the U.S. at this point in the season since 2004, the CDC reported Wednesday.

Through the end of July there have been 241 cases reported from 42 states -- including four deaths, the agency said.

Last year's total case count of 712 for the full season was the lowest since 2001, when only 66 infections were reported. The highest yearly total was in 2003, with 9,862 cases. Annual totals had been steadily decreasing since then.

Officials indicated that they were perplexed by the apparent surge this year. "It is not clear why we are seeing more activity than in recent years," said Marc Fischer, MD, MPH, a medical epidemiologist with CDC's Arboviral Diseases Branch, in a statement.

More than 80% of the cases were reported from just three states: Texas, Oklahoma, and Mississippi.

The virus is transmitted by mosquitoes and most cases occur in the summer months, peaking in mid-August, according to the CDC.

The agency reminded members of the public to take steps to protect themselves against West Nile virus and other mosquito-borne infections. These include wearing long sleeves and pants when outdoors at dawn and dusk, using repellents, and eliminating pooled water that can serve as mosquito breeding grounds.

West Nile Symptoms

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Published On: Wed, Dec 12th, 2012

Outbreak News | By **Robert Herriman**

CDC Releases Final West Nile Virus Update For 2012

Image/CDC

Not since 2003 has the United States seen so many human cases of West Nile virus (WNV), reports the Centers for Disease Control and Prevention Dec. 11.

In their final update for 2012, the federal health agency reported a total of 5,387 cases of West Nile virus disease in people, including 243 deaths, according to the preliminary data for this year.

Of the 5,387 cases reported, 2,734 (51%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 2,653 (49%) were classified as non-neuroinvasive disease.

Eighty percent of the cases have been reported from 13 states (Texas, California, Louisiana, Illinois, Mississippi, South Dakota, Michigan, Oklahoma, Nebraska, Colorado, Arizona, Ohio, and New York) and a third of all cases have been

reported from Texas.

In 2003, the year with the most reported cases, there were 9,862 cases and 264 fatalities. Colorado reported nearly 3,000 cases alone.

Alaska and Hawaii are the only states not to report West Nile virus infections in people, birds, or mosquitoes this year.

Final data for the 2012 West Nile outbreak will be available next spring.

For more infectious disease news and information, visit and "like" the Infectious Disease News Facebook page

You may also like -

CDC: Number of West Nile virus cases exceed 4,500, highest since 2003

West Nile Virus cases increase 40 percent in a week according to CDC

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Pesticide News Story: Proposed Rule Will Enhance the Public's Right to Know the Ingredients in Minimum Risk Pesticide Products

For Release: January 3, 2013

The EPA is proposing to clarify the substances on the minimum risk pesticide ingredient list and the way ingredients are identified on product labels. Minimum risk pesticides are a special class of pesticides that are not subject to federal registration requirements because their ingredients, both active and inert, are demonstrably safe for the intended use. The agency is proposing to reorganize these lists and add specific chemical identifiers to make clearer to manufacturers, the public and federal, state and tribal inspectors the specific ingredients that are permitted in minimum risk pesticide products. The EPA is also proposing to require producer contact information and the use of specific common chemical names in lists of ingredients on minimum risk pesticide product labels.

EPA's proposal, announced in a December 31, 2012, Federal Register notice, does not alter the substance of the minimum risk pesticide ingredient lists, but more accurately describes which chemical substances can be used in pesticide products that are exempt from federal pesticide registration requirements. State enforcement agencies have expressed support for the proposed changes.

The agency is sensitive to the economic impact of regulations and acknowledges that the proposed changes could have a very small impact on current manufacturers of minimum risk products. However, we believe the industry – manufacturers of these products and businesses considering entering the market for minimum risk pesticides – will ultimately benefit from clearer guidance. In addition, we believe that consumers of these products have a right to know in an easily understandable way which chemicals the products contain. This proposed regulation promotes clearer information for consumers while maintaining the availability of minimum risk pesticide products in the market.

Please see the EPA's minimum risk pesticide Web pages for more information on these products that are not subject to federal registration requirements.

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Minimum Risk Pesticides

Minimum risk pesticides are a special class of pesticides that are not subject to federal registration requirements because their ingredients, both active and inert, are *demonstrably* safe for the intended use. These Web pages provide detailed information for pesticide companies who want to register minimum risk pesticide products.

Criteria for FIFRA 25(b) Exemption

Minimum risk pesticides that meet certain criteria are exempt from federal registration under section 25(b) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The U.S. Environmental Protection Agency (EPA) does not review or register pesticides that satisfy the 25(b) criteria, though registration is required by most states. For information on minimum risk pesticides in your state, please contact your state's pesticide registration office. EXIT Disclaimer

To satisfy the conditions required for federal minimum risk status, all five of the following conditions must be met:

- **Condition 1:** The product must contain **only** active ingredients that are listed in the table below. The active ingredient of a product is the ingredient that kills, destroys, mitigates, or repels pests named on the product label.

- **Condition 2:** The product must contain **only** those inert ingredients that have been classified by EPA as List 4A "Inert Ingredients of Minimal Concern." An explanation of the Inert Ingredients of Minimal Concern and links to List 4A are available on EPA's Permitted Inerts Web page.

- **Condition 3:** All of the ingredients (both active and inert) must be listed on the label. The active ingredient(s) must be listed by name and percentage by weight. Each inert ingredient must be listed by name.

- **Condition 4:** The label cannot include any false or misleading statements, and claims that minimum risk pesticides protect human or public health are prohibited. For example, since these products are exempt from federal registration, label language implying federal registration, review or endorsement, such as "It is a violation of federal law to use this product in a manner inconsistent with the label," or the use of an EPA registration or establishment number is not allowed.

Minimum Risk Pesticides

- Criteria for FIFRA 25(b) Exemption
- Permitted Inerts
- State Pesticide Registration Contacts EXIT Disclaimer
- Pesticide Registration Notice (11 pp, 132 K, about PDF)
- Frequent Questions

Related Information

- New! December 2012 Minimum Risk Pesticides Proposed Rule
- Determining If Insect Repellent Skin Patch Products Must Be Registered Under FIFRA
- Recent Enforcement Actions

- **Condition 5:** In general, public health claims are prohibited. Minimum risk pesticide labels may not bear claims to control rodent, insect or microbial pests in a way that links the pests with any specific disease. EPA recommends that anyone considering manufacturing, distributing, or selling minimum risk antimicrobial pesticide products first contact the Pesticide Program's Antimicrobial Division ombudsman, who can assist in ensuring that proposed antimicrobial minimum risk products meet the strict requirements for exemption from registration.

Additionally, EPA requires the establishment of maximum residue limits, which EPA calls tolerances, or exemptions from the requirement of a tolerance for all pesticides intended for use in a manner that may result in residues in food or feed.

Active Ingredients Exempted Under 25(b) of the Federal Insecticide, Fungicide, & Rodenticide Act

* indicates exempt active ingredients that are also exempt from pesticide residue tolerance requirements

Castor oil (U.S.P. or equivalent)*	Linseed oil
Cedar oil	Malic acid
Cinnamon and cinnamon oil*	Mint and mint oil
Citric acid*	Peppermint and peppermint oil*
Citronella and Citronella oil	2-Phenethyl propionate (2-phenylethyl propionate)
Cloves and clove oil*	Potassium sorbate*
Corn gluten meal*	Putrescent whole egg solids
Corn oil*	Rosemary and rosemary oil*
Cottonseed oil*	Sesame (includes ground sesame plant) and sesame oil*
Dried Blood	Sodium chloride (common salt) *
Eugenol	Sodium lauryl sulfate
Garlic and garlic oil*	Soybean oil
Geraniol*	Thyme and thyme oil*
Geranium oil	White pepper
Lauryl sulfate	Zinc metal strips (consisting solely of zinc

	metal and impurities)
Lemongrass oil	

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Products Intended for the Control of Public Health Pests Must Be Effective

EPA received a petition from the Consumer Specialty Products Association (CSPA) dated March 15, 2006, requesting that the Agency exclude from the minimum risk pesticide exemption those pesticides that claim to control “pests of significant public health importance” and require an abbreviated registration for minimum risk products that are to be used for the control of public health pests. On September 13, 2006, EPA published in the Federal Register a Notice of Availability and Request for Comments on the petition allowing a 60-day comment period. On December 6, 2006, EPA reopened the comment period for an additional 30 days at the request of CropLife America. During the public comment period, the Agency received approximately 60 comments, both in support of and in opposition to the petition.

EPA has analyzed the comments on the petition and concluded that public health products must be supported by evidence that they are effective against the target pest. EPA is now looking at options to ensure that minimum risk public health pesticides that are otherwise exempted from regulation are effective. CSPA’s letter of June 11, 2007, (6 pp, 3.45 MB, about PDF) suggested that EPA engage in expedited rulemaking, including promulgating an interim final rule without notice and comment. EPA’s response letter (2 pp, 25 K, about PDF) responds to that letter as well as the March 15 petition.

installed on airplanes of U.S. registry. We also estimate that one hour would be required per engine to accomplish the actions required by this AD. The average labor rate is $85 per hour. We also estimate that the required parts will cost about $370 per engine. We estimate that the cost of the idle leak check is $1,000 per engine. Based on these figures, we estimate the total cost of the proposed AD to U.S. operators is $3,275,231.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. ''Subtitle VII: Aviation Programs'' describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: ''General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Is not a ''significant rule'' under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2012–XX–XX General Electric Company: Docket No. FAA–2012–0817; Directorate Identifier 99–NE–24–AD.

(a) Comments Due Date

We must receive comments by March 1, 2013.

(b) Affected ADs

This AD supersedes AD 2000–04–14, Amendment 39–11597 (65 FR 10698, February 29, 2000).

(c) Applicability

This AD applies to all General Electric Company (GE) CF6–80C2 A1/A2/A3/A5/A8/A5F/B1/B2/B4/B5F/B6/B1F/B2F/B4F/B6F/B7F/D1F turbofan engines with fuel tubes, part number (P/N) 1321M42G01, 1334M88G01, 1374M30G01, 1383M12G01, 1606M57G03, 1606M57G01, or 1775M61G01, or supporting bracket, P/N 1321M88P001A, installed.

(d) Unsafe Condition

This AD was prompted by several reports of fuel leaks, and two reports of engine fire, due to mis-assembled supporting brackets on the fuel tube connecting the flowmeter to the Integrated Drive Generator (IDG) fuel-oil cooler. We are proposing this AD to prevent high-pressure fuel leaks caused by improper seating of fuel tube flanges, which could result in an engine fire and damage to the airplane.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done.

(f) Replacement

After the effective date of this AD, if the fuel tubes are disconnected for any reason, or at the next engine shop visit, whichever occurs first, replace the fuel tubes and brackets with improved tubes and brackets eligible for installation. For on-wing maintenance, replace only tubes and brackets that have been disconnected. Do the following:

(1) Replace the fuel flowmeter to IDG fuel-oil cooler fuel tube, P/N 1321M42G01, with a part eligible for installation.

(2) For engines with Power Management Controls, replace the Main Engine Control to fuel flowmeter fuel tube, P/N 1334M88G01, with a part eligible for installation.

(3) For engines with Full Authority Digital Electronic Controls, replace the Hydromechanical Unit to fuel flowmeter fuel tubes, P/Ns 1383M12G01 and 1374M30G01, with a part eligible for installation.

(4) Replace supporting bracket, P/N 1321M88P001A, and spray shields, P/Ns 1606M57G01, 1606M57G03, and 1775M61G01 with one-piece supporting bracket, P/N 2021M83G01.

(5) Perform an idle leak check after accomplishing paragraphs (f)(1), (f)(2), (f)(3), or (f)(4), or any combination thereof.

(g) Prohibition

After the effective date of this AD, do not install any of the following parts into any GE CF6–80C2 series turbofan engines: P/Ns 1321M42G01, 1321M88P001A, 1334M88G01, 1374M30G01, 1383M12G01, 1606M57G01, 1606M57G03, and 1775M61G01.

(h) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(i) Related Information

(1) For more information about this AD, contact Kasra Sharifi, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781–238–7773; fax: 781–238–7199; email: *kasra.sharifi@faa.gov.*

(2) For guidance on the replacements, refer to GE Alert Service Bulletins CF6–80C2 SB 73–A0224, CF6–80C2 SB 73–A0231, CF6–80C2 SB 73–A0401, and CF6–80C2 SB 73–0242.

(3) For service information identified in this AD, contact General Electric Company, GE-Aviation, Room 285, 1 Neumann Way, Cincinnati, OH 45215, phone: (513) 552–3272; email: *geae.aoc@ge.com.* You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781–238–7125.

Issued in Burlington, Massachusetts on December 20, 2012.

Robert J. Ganley,

Acting Manager, Engine & Propeller Directorate, Aircraft Certification Service.

[FR Doc. 2012–31362 Filed 12–28–12; 8:45 am]

BILLING CODE 4910–13–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 152

[EPA–HQ–OPP–2010–0305; FRL–9339–1]

RIN 2070–AJ79

Pesticides; Revisions to Minimum Risk Exemption

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to more clearly describe the active and inert ingredients permitted in products eligible for the exemption from regulation for minimum risk pesticides. EPA is proposing to reorganize these lists with a focus on clarity and transparency by adding specific chemical identifiers. The identifiers would make it clearer to manufacturers; the public; and Federal, state, and tribal inspectors which ingredients are permitted in minimum risk pesticide products. EPA is also proposing to modify the label requirements in the exemption to require the use of specific common chemical names in lists of ingredients on minimum risk pesticide product labels, and to require producer contact information on the label. Once final, these proposed changes would maintain the availability of minimum risk pesticide products while providing more consistent information for consumers, clearer regulations for producers, and easier identification by states, tribes and EPA as to whether a product is in compliance with the exemption.

DATES: Comments must be received on or before April 1, 2013.

ADDRESSES: Submit your comments, identified by docket identification (ID) number 12P–0200 EPA–HQ–OPP–2010–0305, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.
- *Mail:* OPP Docket, Environmental Protection Agency Docket Center (EPA/DC) (28221T), 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001. In addition, please mail a copy of your comments on the information collection provisions to the Office of Information and Regulatory Affairs, Office of Management and Budget, ATTN: Desk Officer for EPA, 725 17th St. NW., Washington, DC 20503.
- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.htm.*

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: Ryne Yarger, Field and External Affairs Division (7506P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; telephone number: (703) 605–1193; fax number: (703) 305–5884; email address: *yarger.ryne@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

You may be potentially affected by this action if you manufacture, distribute, sell, or use minimum risk pesticide products. Minimum risk pesticide products are exempt from Federal regulation, and are described in 40 CFR 152.25(f). The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Manufacturers of these products, which includes pesticide and other agricultural chemical manufacturers (NAICS codes 325320 and 325311), as well as other manufacturers in similar industries such as animal feed (NAICS code 311119), cosmetics (NAICS code 325620), and soap and detergents (NAICS code 325611).
- Manufacturers who may also be distributors of these products, which includes farm supplies merchant wholesalers (NAICS code 424910), drug and druggists' merchant wholesalers (NAICS code 424210), and motor vehicle supplies and new parts merchant wholesalers (NAICS code 423120).
- Retailers of minimum risk pesticide products (some of which may also be manufacturers), which includes nursery, garden center, and farm supply stores (NAICS code 44220); outdoor power equipment stores (NAICS code 444210); and supermarkets (NAICS code 445110).
- Users of minimum risk pesticides, including the public in general, as well as exterminating and pest control services (NAICS code 561710), landscaping services (NAICS code 561730), sports and recreation institutions (NAICS code 611620), and child day care services (NAICS code 624410). Many of these companies also manufacture minimum risk pesticide products.

B. What is the agency's authority for taking this action?

This action is issued under the authority of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), 7 U.S.C. 136 et seq., sections 3 and 25.

C. What action is the agency taking?

EPA is proposing to more clearly describe the active and inert ingredients permitted in products eligible for the exemption from regulation for minimum risk pesticides (40 CFR 152.25(f)). EPA is proposing to reorganize these lists by adding specific chemical identifiers. The identifiers would make it clearer to manufacturers; the public; and Federal, state, and tribal inspectors the specific ingredients that are permitted in minimum risk pesticide products. EPA is also proposing to modify the label requirements in the exemption to require the use of specific common chemical names in lists of ingredients on minimum risk pesticide product labels, and to require producer contact information on the label.

D. Why is EPA taking this action?

The primary goal of this proposal is to clarify the conditions of exemption for minimum risk pesticides by making clearer the specific ingredients that are permitted in minimum risk pesticide products. EPA has exempted from the requirement of registration certain pesticide products if they are composed of specified ingredients and labeled according to EPA's regulations in 40 CFR 152.25(f). EPA created the exemption for minimum risk pesticides to eliminate the need to expend significant resources to regulate products that were deemed to be of minimum risk to human health and the environment. In addition, exempting such products freed Agency resources to focus on evaluating formulations whose toxicity was less well characterized or of higher toxicity. The existing regulatory structure, however, leads to confusion as to which ingredients are exempt under 40 CFR 152.25(f), and how they should be labeled on products.

The proposed revisions to the exemption would clarify the specific ingredients that are permitted, specify how they should be presented on a label, and provide consumers with contact information for the manufacturer of the products. EPA's intention is to restructure the exemption with a focus on clarity and transparency for the ingredient lists. Once final, these proposed changes would provide more consistent information for consumers, clearer regulations for producers, and easier identification by states, tribes and EPA as to whether a product is in compliance with the exemption.

II. Background

A. The Minimum Risk Pesticide Exemption

Under FIFRA section 25(b)(2), EPA may exempt from the requirements of FIFRA any pesticide that is ''of a character unnecessary to be subject to [FIFRA].'' Pursuant to this authority, in March 1996, EPA promulgated 40 CFR 152.25(g), which exempted from FIFRA any pesticide product consisting solely of specified ingredients that EPA judged to pose minimum risk to humans and the environment (61 FR 8876, March 6, 1996) (FRL–4984–8). This provision was later redesignated as 40 CFR 152.25(f) (66 FR 64759, December 14, 2001) (FRL–6752–1).

Unlike registered pesticides, sale and distribution of products exempted under 40 CFR 152.25(f) do not require that the products be registered with EPA, payment of registration fees, or reporting of production to EPA. To meet the criteria for the minimum risk exemption, a pesticide must:

- Contain only specified active and inert ingredients.
- List active ingredients on the label by name and percent weight in the formula.
- List inert ingredients on the label by name.
- Not bear claims either to control or mitigate microorganisms that pose a threat to human health, including but not limited to disease transmitting bacteria or viruses, or claims to control insects or rodents carrying specific diseases, including, but not limited to ticks that carry Lyme disease.
- Not include false or misleading labeling statements, specified in 40 CFR 156.10(a)(5)(i) through (viii). These include false or misleading statements about product composition, effectiveness, comparison to other products, endorsement by the Federal Government, or label disclaimers.

Restrictions on which ingredients may be used in minimum risk pesticide products are key aspects of the exemption, since the properties of these specific ingredients are the reason EPA exempted minimum risk pesticide products from FIFRA regulatory requirements. As stated in the notice of proposed rulemaking for the minimum risk exemption, ''EPA believes regulation of these substances is not necessary to prevent unreasonable adverse effects on man or the environment, and these substances are not of a character necessary to be subject to FIFRA in order to carry out its purposes'' (Ref. 1).

1. *Active ingredients.* Active ingredients for minimum risk pesticide products are listed in 40 CFR 152.25(f)(1); no new active ingredients have been added since 1996.

2. *Inert ingredients.* Inert ingredients for minimum risk pesticide products were originally listed in List 4A, referenced at 40 CFR 152.25(f)(2). The 4A Inert Ingredient List was created on November 22, 1989 (54 FR 48314) (FRL–3667–6). List 4A ingredients were described as minimal risk, or ''substances for which there is no information to indicate that there is a basis for concern'' (Ref. 2). On September 28, 1994, EPA added new chemicals to List 4A by publishing an updated list in the **Federal Register** (Ref. 3). The exemption for minimum risk pesticides referred to this list, as it appeared in the **Federal Register** in September 1994.

Since 1994, EPA has updated the list of inert ingredients permitted in minimum risk pesticide products. In 2002, EPA proposed (in January) and finalized (in May) a consolidated set of tolerance exemptions for minimum risk chemicals under section 408 of the Federal Food, Drug and Cosmetic Act (FFDCA), 21 U.S.C. 346a. These changes primarily allowed a set of commonly consumed foods to be included in minimum risk pesticides with food uses (Ref. 4). Some commonly consumed foods (such as peanuts, tree nuts, milk, soybeans, eggs, fish, crustacean, and wheat) were excluded due to their known allergenic properties. EPA proposed and finalized these changes as part of the tolerance reassessment requirements of the Food Quality Protection Act of 1996, which amended FFDCA. In the 2002 proposal, EPA explained that commonly consumed foods could be considered minimum risk, since ''it is unlikely that a commonly consumed food commodity could be used to control a pest via a toxic mode of action'' and that foods are generally recognized as safe (Ref. 2). The 2002 final rule explained that, with some exceptions, all commonly consumed food items and all animal feed items would be considered minimum risk pesticide chemicals and would be located in the newly established 40 CFR 180.950. The 2002 final rule did not amend the FIFRA minimum risk exemption in 40 CFR 152.25(f). In 2004, EPA updated List 4A to specifically list the substances in the 2002 rulemaking (Ref. 5).

In 2006, EPA classified additional substances as minimum risk for purposes of tolerance exemptions under 40 CFR 180.950(e). The proposed rule also clarified that EPA was shifting existing tolerance exemptions for the inert ingredients that appear on List 4A from that list to 40 CFR 180.950(e) (Ref. 6).

Since 2006, EPA has been responding to stakeholder input and revising the Web page that lists inert ingredients eligible for use in minimum risk pesticide products. Among these updates, this Web page was revised on March 3, 2009, to include a common chemical name for many of the chemicals and to clearly delineate the food and non-food use status of the chemical substances.

The list was most recently re-formatted on December 20, 2010, to provide a more easily understood format for the chemicals listed. The list is available on the Agency's Web site at *http://www.epa.gov/opprd001/inerts/section25b_inerts.pdf* (Ref. 7).

3. *Labeling requirements.* Labeling requirements are also a key component of the exemption. While EPA does not review these products, and therefore a label review is not conducted, in order to maintain exempt status, an exempt product's label must meet certain criteria. The methods for displaying active and inert ingredient information are detailed in the exemption: Labels must include percentage (by weight) of active ingredients and list all inert ingredients.

The regulations for displaying ingredients on minimum risk pesticide product labels differ from the regulations for registered products. Since exempt products are not registered with EPA and manufacturers submit no information to the Agency, listing product ingredients provides important information to the public, and to enforcement officials who must determine whether or not a product complies with the exemption.

B. EPA's Initial Expectations for the Exemption

EPA had several expectations regarding this exemption:

- Reduction of burden on the Agency and manufacturers of minimum risk pesticides.
- Facilitate the development of more low-risk methods of pest control.
- No significant environmental use of these substances as pesticides.
- Uncomplicated enforcement.

Though some of these expectations were met, the lack of clarity regarding ingredients has produced significant enforcement difficulties. For example, the way active ingredients are currently listed in the exemption is vague, and inspectors are confronted with the need to determine whether certain product ingredients as they are listed on product labels, such as cedar leaf oil or cedar wood oil, are exempt under the more

general terminology used in 40 CFR 152.25(f), which lists only ''cedar oil.'' EPA has attempted to provide clarity by updating its Web site explaining minimum risk pesticide products; however, feedback from stakeholders indicated this was not sufficient to address the problems described in the next unit.

C. Reactions From and Challenges for States

1. *State registration practices.* Though minimum risk pesticide products are exempt from Federal regulation, most states regulate these products in some manner. In 2010, approximately 37 states and the District of Columbia required products that are exempt from Federal regulation under 40 CFR 152.25(f) to have a state-registration. In some ways, this is similar to many states' registration processes for federally registered pesticides, which also must be approved in each state in which they are sold or used.

However, a state's registration of a federally registered pesticide usually relies heavily on the previous Federal review of the product's toxicity, use patterns, and label. In contrast, given that minimum risk pesticides are largely exempt from Federal regulation under FIFRA, the numerous states that do regulate these products review and examine the products using criteria that vary from state to state. In some states, manufacturers of minimum risk pesticide products are only required to pay a registration fee; in others, there is a label review, which can include a review of the ingredients used in the product; and a few require Material Safety Data Sheets and data on product efficacy.

Though some states have more detailed registration processes for minimum risk pesticide products, and some states do not register these products at all, the exemption created significant enforcement concerns for all states since it created a category of legal but federally unregistered products. Instead of being able to rely on a Federal determination of whether a pesticide product was complying with relevant regulations, each state's enforcement authority had to make those decisions. To do this, each state had to become familiar with all active and inert ingredients permitted under the Federal exemption in order to determine whether a pesticide product lacking an EPA registration number was lawfully exempt from Federal regulation.

Inspectors have found it difficult to determine whether seemingly exempt products were complying with the exemption. One of the most common minimum risk pesticide product issues encountered by inspectors and enforcement case developers are products that claim the 40 CFR 152.25(f) exemption, but contain active or inert ingredients whose status as an ingredient that may be used in minimum risk pesticide products is not readily apparent from the name of the ingredient as listed on the label. Since ingredients may be listed on the label with one of numerous chemical, common, or Latin names, determining whether an ingredient on a pesticide product label is the same substance referred to by the active or inert ingredient lists is a time consuming task.

The lack of clarity in which ingredients are permitted in minimum risk pesticide products makes it difficult for companies to determine whether a specific formulation is within the exemption. The lack of consistency in how those ingredients are displayed on the product labels by the various manufacturers has led to inefficiencies in enforcement of the exemption. As discussed in Unit IV., by creating a situation in which enforcement officials cannot swiftly examine an unregistered pesticide product label and then determine if the ingredients listed on the label are eligible for use in minimum risk pesticide products creates slowdowns in developing enforcement cases.

2. *Early negative response.* States' frustration with the exemption developed quickly. In 1998, less than 2 years after the exemption took effect, the Association of American Pesticide Control Officials (AAPCO) surveyed its members regarding 40 CFR 152.25(f) (Ref. 8). Overall, respondents indicated that the 1996 exemption has had a negative effect on their agencies or their states, and that ingredient or labeling issues are a major concern. Responses to selected questions from the survey are shown in Table 1.

TABLE 1—RESPONSES TO SELECTED QUESTIONS IN THE 1998 AAPCO SURVEY

Response	Total Number of states	Percent of all states + territories in AAPCO (53) (percent)	No. of states exempt products in 1998	Percent of states at that time registering exempt products (36) (percent)
Have problems with companies submitting labels for 25(b) products that contain active ingredients not on the list	11	21	9	25
Have a system for determining changes in List 4A (inert ingredients)	7	13	5	14
Have seen exempt products that fail to list inert ingredients on the label as required	21	40	18	50

3. *Continuing enforcement challenges.* States' experience with 40 CFR 152.25(f) indicate that the exemption from regulation is not working as intended and, instead, has resulted in numerous inefficiencies. Under the exemption as it is currently written, inspectors have difficulty determining on-site whether a product is legally exempt from regulation or if it is an illegal product. If the pesticide's exemption status is not clear, the inspector collects evidence documenting sale/distribution (photos, sales records, etc.) and follows-up with EPA. This creates a noticeable resource burden for the states and EPA.

In 2006, in response to a petition from the Consumer Specialty Products Association, several states submitted comments that described their difficulties enforcing the terms of the exemption for minimum risk pesticide products. For example, the comment from Colorado stated:

In Colorado this results in numerous cases of enforcement actions requiring Colorado retailers to remove unregistered products from their shelves. We issue about 90 Cease and Desist Orders per year to retailers selling unregistered pesticides that claim to be 25(b) exempt. (Ref. 9)

A similar comment was received from California:

Although well intended, rather than relieving the States of ever increasing regulatory workload, the proliferation of minimum risk pesticides now available in

the marketplace has resulted in the opposite effect. In California, recent data indicates that approximately 20% of the routine marketplace inspections include some type of additional follow up having to be performed to determine compliance status for 25(b) minimum risk pesticides. (Ref. 10)

Many of these burdens and inefficiencies resulted from confusion created by ambiguities in the list of ingredients permitted for use in pesticide products exempt from Federal regulation. Several lists must be consulted to determine if a product's ingredients are permitted, and, often, ingredients on product labels may—legitimately—use chemical names different from those that appear on the ingredient lists. Chemicals often have multiple names. However, inspectors and consumers may be unfamiliar with alternative chemical names, resulting in confusion over whether the product complies with the exemption. For example, as Colorado stated in its comment on the 2006 petition:

> There is also continuing confusion among applicants, extension educators, state regulators and even regional EPA staff on which ingredients are or are not allowed, and what statements can or cannot be on labels for 25(B) products. Even after 10 years, we frequently see applications for products with ingredients that are not allowed. (Ref. 9).

As currently written, it is difficult and time-consuming for state regulators and producers to determine which ingredients are allowed in products claiming the exemption. As a result, marketplace inspections are hobbled, and discovery of non-compliant products is delayed. As California stated in its comment on the 2006 petition:

> The increased workload generated by unregulated 25(b) pesticides impacts other vital regulatory duties, such as worker protection inspections, and product registration (Ref. 10).

This encourages a proliferation of illegal products, or products that do not meet the Federal exemption criteria for ingredients, labeling, or other conditions.

The burden on the states is clear: Identifying which minimum risk pesticide products are compliant with the exemption requires significant state resources for inspection, yet when products are found to be violating the Federal exemption, states in many cases cannot precisely identify the problem or take action without significant guidance and assistance from EPA, which must interpret the ingredient lists and other criteria in the exemption to determine whether a product is compliant.

III. Need for This Rulemaking

More than a decade of experience with 40 CFR 152.25(f) on the Federal and state levels has indicated that there is confusion over permitted ingredients. This lack of clarity has created a significant burden for enforcement of the exemption. Confusion over permitted ingredients may also result in public hazards due to the proliferation of unregistered pesticide products that do not comply with the ingredient restrictions in the exemption. As part of a survey of compliance with the exemption, EPA conducted an analysis of labels of products sold as minimum risk personal insect repellents (also referred to as skin-applied repellents), relying in part on information provided by the Nielsen Company. Personal insect repellent products are estimated to make up approximately 14% of products registered by states that make their registration databases publicly available. EPA found that nearly half (47%) of the minimum risk personal insect repellent products contained ingredients not permitted under 152.25(f) (Ref. 11). This finding is based on:

- Identification of 135 personal insect repellent products claiming to be exempt, or that were not registered with EPA. These products were identified through state registration lists, nationwide sales data compiled by the Nielsen Company, and Internet searches.
- Examination of publicly available labels of these personal insect repellent products. Labels were not available for 26 products (or 19% of all identified).
- Comparison of any stated ingredients with those on the active and inert ingredient lists specified in or referenced by the exemption. Forty-five products, or 33% of all identified, seemed to list only permitted ingredients; 64 products, or 47%, listed ingredients not permitted under the exemption.

The data are likely an underestimate of the non-compliance rate with the ingredient criteria of the exemption. These underestimations result from a lack of information available on these products, and the sources used to identify these products are not comprehensive of the entire universe of minimum risk personal insect repellents, which are not registered in all states and which may not be sold in the major retailers tracked by the Nielsen Company nor sold online. Furthermore, the compliance rate for skin-applied insect repellents may not be representative of all minimum risk pesticide products. EPA has not examined the other products with respect to compliance, since labels from other minimum risk pesticide products representative of the national marketplace could not be located.

Lack of compliance with the requirements of the exemption may result from producers' uncertainty about which ingredients are permitted, or inspectors' inability to develop enforcement cases to remove non-compliant products from the marketplace in a timely manner. Currently, it may not be clear to companies which specific ingredients are permitted for minimum risk pesticides exempt from regulation, since the terminology describing the ingredients is difficult to understand. Additionally, product labels often use unfamiliar terms for permitted ingredients, which creates confusion for state and Federal inspectors who are not familiar with all possible names for these chemicals. For example, some products use Latin names for some ingredients, such as a product that listed some of its inert ingredients as Glycine Soja Oil, Cymbopogon Nardus Oil, and Pimenta Acris Leaf Oil, which most inspectors and members of the public would not recognize as soybean oil, citronella oil, and bay leaf oil, respectively. Inspectors have reported the difficulty of determining the legality of some minimum risk pesticide products during field inspections.

The actions proposed today will provide greater specificity and clarity concerning the inert and active ingredients that can be used in exempted products, and specify the exact chemical terms that must be displayed on product labels. This will aid in resolving many of the issues surrounding non-compliance, as well as providing clearer information to consumers of these products without adversely affecting the availability of minimum risk pesticide products. Providing accurate and clear information to the public will assist users in making good choices regarding their use of pesticides. EPA believes that these beneficial label changes cannot be achieved through non-regulatory means.

IV. What EPA Considered

EPA considered the following options for addressing the issues described previously related to the minimum risk exemption:

Item 1: Revising the exemption to redesign the format of the active ingredient list.

Item 2: Revising the exemption to codify the inert ingredient list into the CFR.

Item 3: Revising the exemption to require the use of a common chemical name on the label.

Item 4: Revising the exemption to require a label statement that signals exempt status.

Item 5: Publishing guidance on how an exempt label should look.

Items 1 and 2 would provide clarity regarding the ingredients and, to some extent, promote states' abilities to enforce the exemption while continuing the availability of minimum risk pesticide products.

Item 3 would not only significantly increase the clarity of the ingredients in a product claiming to be a minimum risk pesticide, but also augment visibility of that product's compliance with the exemption. Though companies would need to modify product labels to comply with the changes, the costs expended would be minimal and this would not impede the continued availability of minimum risk pesticides.

When considering Item 4, EPA believes that Item 4 is unlikely to provide any significant benefit to consumers from having a statement, a disclaimer, which signals exempt status on the product label. EPA's analysis of information from open literature and survey results indicates that in general most people do not read, understand, or believe a disclaimer. This means that a label disclaimer is unlikely to change consumer behavior or influence a purchasing decision. For a label statement to be effective, the purchaser must first read the label and notice the disclaimer, and then read the disclaimer, understand the disclaimer, believe the disclaimer, and choose to act on the disclaimer (Ref. 12). Potentially, there could be a slight benefit from such a statement for enforcement, as state inspectors could use this statement as part of their determination of a product's status under the exemption. However, as other pieces of label information may provide more useful information to consumers and enforcement, EPA chose to focus on making those modifications to the exemption.

Item 5 would assist manufacturers with complying with the minimum risk exemption. EPA plans to update its Web site on minimum risk pesticides (Ref. 13) to provide this guidance, including label formats, directions for use, and ways to display ingredient lists. Any clarifications communicated through this kind of guidance, however, would not be considered requirements for compliance with the exemption, and would not aid in efficient enforcement of the exemption. For this reason, merely providing guidance to manufacturers is not sufficient to address the exemption's issues related to enforcement difficulties and current lack of clarity. EPA intends to provide guidance by updating the sections of its Web site explaining the minimum risk exemption, but this would be independent of rulemaking.

Additional issues regarding the minimum risk exemption have been raised by states, with states expressing interest in:

Item 6: Revising the exemption to require directions for use on minimum risk pesticide products.

Item 7: Revising the exemption to require company name and contact information.

Item 6 would provide consumers with directions for safe use of the product. Though many products already include directions on how to apply the product, some do not, and even for minimum risk pesticides there is a theoretical potential for injury or environmental hazard from improper use of the products. However, assessing the risk of certain uses of minimum risk pesticides already determined to be minimum risk is outside the scope of this rulemaking, which only proposes to clarify the terms of the original exemption. Additionally, EPA was not able to create a requirement for directions for use that would be both broad enough to apply to all potential categories of products, yet specific enough to be enforced fairly and effectively. For these reasons, EPA chose to focus on other aspects of minimum risk pesticide product labeling and on the ingredient lists. EPA will continue to seek ways to provide guidance on improving directions for use on minimum risk pesticide products.

Item 7 would provide a significant benefit to consumers, who may be unable to determine which company manufactured or distributed a minimum risk pesticide product. Although the labels of many products already provide this information, it does not appear on all minimum risk pesticide products. These changes would provide useful information without burdening manufacturers beyond the cost of changing their labels. Unlike directions for use, the requirements for company name and contact information (such as address and phone number) can be specified clearly in the proposed amendments to the exemption. Though this does not deal with ingredient clarity, EPA feels that in the interest of efficiency it is appropriate to propose this change at the same time, since it would provide a strong benefit to consumers with little added cost.

EPA determined that a combination of revisions and guidance would provide the best approach to the issues discussed previously. This combination is:

Item 1: Redesign the format of the active ingredient list.

Item 2: Codify the list of permitted inert ingredients.

Item 3: Require that common chemical names be used to describe active and inert ingredients on product labels.

Item 5: Provide guidance on how an exempt label should look.

Item 6: Require company name and address on product labels.

Items 1, 2, 3, and 6 are proposed in this rulemaking and are discussed in greater detail in Unit VII. Item 5 includes Web site changes that are in addition to the rulemaking proposed here, and is also outlined later in this document.

By clarifying the way ingredients are defined in the exemption and the way they should be displayed on product labels, EPA will be able to protect public health while relieving product manufacturers of the burdens associated with regulation. Similarly, requiring contact information on product labels would provide important consumer information and greater producer accountability with minimal cost.

V. Proposal To Modify the Minimum Risk Exemption To Improve Clarity

A. Clarify the List of Active Ingredients

EPA proposes to replace the text in 40 CFR 152.25(f) specifying the active ingredients and their variations with a table that would show, for each permitted active ingredient:

- Label Display Name. This is the common chemical name that would be required to be used on labels of products that contain these ingredients.
- Chemical Name, as determined by Chemical Abstract Services (CAS).
- Specifications. Though this column would generally be empty, some substances listed in the exemption had specifications associated with them in the text of the exemption as published in 1996.
- CAS Registry Number (CAS No.). The Agency listed the CAS No. for each of the chemical substances listed in 40 CFR 152.25(f) where a CAS No., was available. A CAS No. is a unique numerical identifier that provides one of the most distinct, readily available, and universally accepted means of identifying chemical substances. Identifying chemicals permitted in minimum risk pesticides by CAS No. would assure manufacturers that they

are purchasing and using the chemicals that can be used in minimum risk pesticide products. Only substances identified by the CAS No. listed would be permitted for use as active ingredients in minimum risk pesticide products. EPA is only providing additional clarity concerning the ingredients that are currently used in exempted products: No ingredients are being added or removed from the list.

An example of this table is provided here, as Table 2.

TABLE 2—EXAMPLE OF NEW FORMAT FOR ACTIVE INGREDIENTS

Label display name	Chemical name	Specifications	CAS No.
Citric Acid	2-Hydroxypropane-1,2,3-tricarboxylic acid	USP	77–92–9
Citronella Oil	Citronella Oil		8000–29–1

In this document, EPA is not proposing to remove or add any active ingredients to the list. The current list is being clarified by using more precise chemical identifiers and nomenclature. For approximately 20 of the active ingredients in the proposed table, EPA is proposing to include the specification of USP (United States Pharmacopeia) standard in the Specifications column. USP standards are set for quality, purity, and identity, and usually provide information on chemical formula, chemical weight, CAS numbers, function, definition, packaging, storage, and labeling requirements. Information on the USP standards is included in the docket for this proposal.

State and Federal inspectors and interested members of the public would be able to easily match the name of the active ingredient on the label to the column in the table in 40 CFR 152.25(f)(1) that contains label display names. Linking the CAS No., the label display name, and the chemical name maintains the chemical identity specificity needed for enforcement, would provide the public and inspectors with understandable information, and would provide guidance for product manufacturers who may be unsure of the specific ingredients that their products can and cannot contain in order to comply with the minimum risk exemption.

B. Codify the Existing List of Inert Ingredients

As previously discussed, in Unit III.A.2., the minimum risk exemption in 40 CFR 152.25(f)(2) references a list of chemicals permitted to be used as inert ingredients that has been updated and currently is maintained on EPA's public Web site. To clarify which inert ingredients may be used in these products, EPA proposes to codify in the CFR a reference to sections detailing which chemicals may be used in addition to a reformatted version of the table that currently appears online.

The proposed changes to the section of the exemption dealing with inert ingredients would include references to 40 CFR 180.950(a), (b), and (c), which describe chemical substances exempt from the requirements of a tolerance and that may also be used as inert ingredients in minimum risk pesticides. The regulatory reference will provide the clarity needed for understanding which commonly consumed food commodities, animal feed items, and edible fats and oils can be used in exempted products. Additionally, EPA proposes to add a table that would contain the chemicals currently listed in 40 CFR 180.950(e) as well as those that appeared originally on List 4A. A version of this table currently appears online. Any duplicate listings would be removed.

EPA believes that adding these references and reformatting the table and placing it into the CFR will provide needed clarity, in as much as State inspectors, members of the public, or manufacturers of minimum risk pesticide products would be able to more quickly determine whether a given ingredient is a permitted inert ingredient for minimum risk pesticide products.

The columns of the table that would be codified would be:

- Label Display Name.
- Chemical Name, as determined by CAS.
- CAS No. (described previously).

An example of this table is listed, as Table 3.

TABLE 3—EXAMPLE OF NEW FORMAT FOR PERMITTED INERT INGREDIENTS

Label display name	Chemical name	CAS No.
Aluminum potassium sodium silicate	Silicic acid, aluminum potassium sodium salt	12736–96–8
Aluminum silicate	Silicic acid, aluminum salt	1335–30–4
Aluminum sodium silicate	Silicic acid, aluminum sodium salt	1344–00–9

Unlike the proposed table listing the active ingredients, the proposed table for the inert ingredients does not include a column outlining specifications, since none were outlined in the exemption. However, some of the substances have no tolerances or tolerance exemptions under FFDCA section 408 and thus have not been permitted for use in pesticides that may come in contact with foods, which are also known as food-use pesticides. For this reason, EPA is proposing that in addition to the proposed table listing inert ingredients, the text of the exemption be amended to indicate the address of an EPA Web site at which information can be found on which chemicals listed could be used in food-use pesticide products.

The FFDCA requires all active and inert ingredients that come into contact with food have an applicable tolerance or exemption from the tolerance requirement. EPA currently indicates on the minimum risk inert ingredient table that appears online (at *http://www.epa.gov/opprd001/inerts/section25b_inerts.pdf*) those chemicals that are exempt from the requirement of a tolerance, and thus could be used in pesticides that come in contact with food. EPA proposes to maintain as guidance the online list that includes a column indicating which chemicals may be allowed as active or inert ingredients in pesticides that come in contact with food; there would also be a note indicating where the exemptions from the requirements of a tolerance are detailed in the CFR. This table could thus continue to serve as a quick guide

to manufacturers, enforcement officials, and members of the public.

There are benefits to having all information about the minimum risk exemption consolidated in one location, and the CFR is a useful reference for many people interested in the exemption. Therefore, EPA proposes to add a reference to the address of the Web site that would contain the reformatted active and inert ingredient tables that include a ''food use'' and ''non-food use'' column. EPA would make clear that the information on the Web site is advisory and serves as guidance, and that the specific regulations should be consulted when seeking to learn about a chemical's exemption from the requirements of a tolerance. However, EPA believes that highlighting in the CFR where this guidance is available online would be helpful in explaining some of the more complicated aspects of the minimum risk exemption.

C. Require That Ingredient Lists Use a Label Display Name

Currently, the chemical names on exempted labels are derived from a variety of sources, which include CAS nomenclature, informal or lay terminology, and Latin plant name derivatives. This causes confusion for inspectors and the public, who may not be aware of the multiple names a single chemical may have. All stakeholders would benefit from the use of a common chemical name for ingredients listed on the product label. EPA proposes to revise 40 CFR 152.25(f)(3) to include the requirement that labels of exempt products use the ''label display name'' in the ingredient listing, when a label display name is specified in the exemption.

D. Require Company Name and Contact Information

An additional revision to the exemption would require that producers of minimum risk pesticide products include their company's name and contact information (address and telephone number) on the product label. In separate guidance, to be posted on EPA's Web site on minimum risk pesticides, companies would be encouraged to also provide a phone number, mailing address, Web site, or email address on their minimum risk pesticide product labels.

Requiring a company name and contact information would provide valuable information to consumers with minimal cost. It would also provide state and Federal inspectors with important information that currently can be difficult to find. To provide additional clarity, if a company name appears on the label and that company is not the producer, EPA proposes that the text indicate that the product was ''packed for'' ''distributed by'' or ''sold by'' to show that the company selling the product is not the producer.

E. Estimated Costs Associated With These Proposed Changes

The potential costs incurred by manufacturers of minimum risk pesticide products to comply with these proposed changes are estimated to be minimal. The analysis summarized in this unit estimates the cost of label changes required by the proposed rule, as separate and distinct from (i.e., incremental to) routine label changes that producers already undertake. For greater detail, including the assumptions used for the cost analysis, see the ''Cost and Small Business Analysis of Proposed Revisions to Minimum Risk Exemption'' (Ref. 14).

For Items 1 and 2 (Revising the exemption to redesign the format of the active ingredient list and revising the exemption to codify the inert ingredient list into the CFR), there are no costs to producers of exempt products. Since no ingredients are being added or removed from the list, manufacturers of currently exempted products should not need to change their product formulations.

For Items 3 and 7 (Revising the exemption to require the use of a common chemical name, and company name and contact information on the label), the cost is the cost of changing the label. To comply with the proposed changes for labeling requirements for minimum risk pesticide products, EPA expects that all products may need to be re-labeled in order to list ingredients by common chemical name. Some companies may also need to add their company name and contact information to product labels. The estimated costs associated with changing a label are summarized here.

Currently, EPA is aware of 216 companies producing 757 minimum risk pesticide products. EPA derived this information from publicly available lists of state registrations for minimum risk pesticides (Ref. 15), and AC Nielsen retail store scanner data (Ref. 16). As explained in the cost analysis, 192 parent companies were identified. Together, the 192 parent companies account for 541 minimum risk pesticide products, or about 79% percent of those identified by EPA.

Table 4 shows the distribution of firms by NAICS code. Most firms in the minimum risk pesticide industry belong to *Chemical Manufacturing* (NAICS code 325) and *Merchant Wholesalers, Nondurable Goods* (NAICS code 424). Forty-two firms are divided among 31 NAICS codes.

TABLE 4—PRODUCERS OF MINIMUM RISK PESTICIDES

3-Digit NAICS code	NAICS code description	Number of parent firms
325	Chemical Manufacturing	72
339	Miscellaneous Manufacturing	8
423	Merchant Wholesalers, Durable Goods	11
424	Merchant Wholesalers, Nondurable Goods	32
444	Building Material and Garden Equipment and Supplies Dealers	7
541	Professional, Scientific, and Technical Services	7
561	Administrative and Support Services	13
Others		42
Total with classification.		192

The estimated cost of the proposed rule consists of a one-time change in the design of the label to comply with the proposed requirements. The estimated incremental cost of the proposed rule depends on the extent to which the

change is separate and distinct from the routine label changes firms undertake on a regular basis. Firms routinely change their labels to update or ''refresh'' their product labels. This is an important factor that determines the magnitude of the cost of the rule since the expected cost of the label change will depend on the duration of the implementation period. A longer implementation period means that the new requirements could be incorporated into a routine or planned re-label.

Many products have more than one size or type of package. Each is referred to as a stock keeping unit (SKU). Each SKU would have to be relabeled to comply with the new requirements. Using an estimate of 1.53 SKUs per product, there are 1,158 products to be relabeled.

In its analysis, EPA has assumed that firms will routinely re-label every 3 years, although some firms may re-label more or less frequently. EPA also assumed that if the changes occurred during a routine label update, then one-third of the label's artwork cost would be due to the new requirements. If the firm's routine relabeling cycle falls outside the rule compliance period (that is, if the rule requirements cannot be incorporated into the firm's routine labeling change), then the full cost of label change is due to the change in regulations.

The estimated costs of the rule under different rule compliance periods are shown in Table 5.

TABLE 5—RELABELING COST PER SKU (STOCK KEEPING UNIT) FOR THREE IMPLEMENTATION PERIODS

Implementation period	Average cost estimate
Immediate relabeling	$6,306
2-year implementation	2,550
3-year implementation	672

Using the average cost estimates from Table 5, EPA estimates the total potential industry cost in Table 6.

TABLE 6—INDUSTRY COST FOR THREE RULE IMPLEMENTATION PERIODS

Industry costs	Immediate	2 Years	3 Years
Total number of SKUs	1,158	1,158	1,158
Average cost per SKU label change (from Table 5)	$6,306	$2,550	$672
Total cost to industry	$7,300,282	$2,952,097	$778,005

Under an implementation period of 2 years, the estimated industry cost is about $3 million.

VI. Request for Comments

The Agency invites the public to provide its views and suggestions for changes on all the various proposals in this document. Specifically included within the Agency's request for comments are the following:

- The format of the ingredient lists (active and inert ingredients).
- The information in the new format of the ingredient lists (active and inert ingredients).
- The proposed reference to a Web site that contains a table formatted to include more information on exemptions from the requirement of a tolerance (which would indicate whether or not a substance can be in a pesticide used on or near food). Would this Web site provide the clarity some stakeholders seek?
- EPA's methodology for estimating the costs associated with the proposed label changes.
- The proposed timeframe (2 years from the effective date of the final rule) for complying with label changes.
- How will these changes impact state and local agencies?
- What are effective methods and venues for communicating these proposed changes to affected entities, and receiving their feedback?
- Because EPA's analysis was conducted with a subset of products, EPA was unable to determine if most minimum risk pesticide products for sale today comply with the requirements of the exemption, and it is unclear how specifying active and inert ingredients would affect the composition of products on the market. EPA expects that the only costs to industry will be re-labeling; however, the Agency is especially interested in learning of any products that would need to be reformulated as a result of these proposed changes.

Commenters are encouraged to present any data or information that should be considered by EPA during the development of the final rule. Please describe any assumptions and provide any technical information used in preparing your comments. You should explain estimates in sufficient detail to allow for them to be reproduced for validation. EPA's underlying principle in developing the proposed revisions has been to strike an appropriate balance among:

- Clarifying the ingredients permitted for use in minimum risk pesticide products.
- Having revised labels with better information on the labels quickly.
- Minimizing the impacts on the affected industry.

VII. Reference List

The following is a listing of the documents that are specifically referenced in this proposed rule. The docket for this rulemaking, identified by docket ID number EPA–HQ-OPP–2010–0305, includes these documents and other information considered by EPA in developing this proposed rule. In some cases this may include documents that are referenced within the documents that are included in the docket, even if the referenced document is not physically located in the docket. For assistance in locating documents, please consult the person listed under **FOR FURTHER INFORMATION CONTACT**.

1. U.S. Environmental Protection Agency (EPA). Pesticides; Exemption of Certain Substances from Federal Insecticide, Fungicide, and Rodenticide Act Requirements; Proposed Rule. **Federal Register** (59 FR 47289, September 15, 1994) (FRL–4872–4). *https://federalregister.gov/a/94-22855*.

2. EPA. Pesticides; Tolerance Exemptions for Minimal Risk Active and Inert Ingredients; Proposed Rule. **Federal Register** (67 FR 1925, January 15, 2002) (FRL–6807–8). *https://federalregister.gov/a/02-699*.

3. EPA. Inert Ingredients in Pesticide Products; List of Minimal Risk Inerts; Notice. **Federal Register** (September 28, 1994; FRL–4872–5). *http://www.gpo.gov/fdsys/pkg/FR-1994-06-23/html/94-15013.htm*.

4. EPA. Pesticides; Tolerance Exemptions for Minimal Risk Active and Inert Ingredients; Final Rule. **Federal Register** (67 FR 36534, May 24, 2002) (FRL–6834–8); *http://federalregister.gov/a/02-12973*.

5. EPA. Office of Pesticide Programs (OPP). List 4A—Minimal Risk Inert Ingredients—By CAS Number. (August

2004). *http://www.epa.gov/opprd001/inerts/inerts_list4Acas.pdf*.

6. EPA. Pesticides: Minimal Risk Tolerance Exemptions; Proposed Rule. **Federal Register** (71 FR 4087, January 25, 2006) (FR–7754–8). *http://federalregister.gov/a/06-574*.

7. EPA. OPP. Inert Ingredients Eligible for FIFRA 25(b) Pesticide Products. (December 20, 2010). *http://www.epa.gov/opprd001/inerts/section25b_inerts.pdf*.

8. AAPCO. 25(b) Exempt Pesticides Survey. (1998). Accessible at: *http://aapco.ceris.purdue.edu/doc/surveys/25b_1srvy.html*. Survey results accessible at: *http://aapco.ceris.purdue.edu/doc/surveys/25b_1.html*.

9. Comment attachment by L. Quakenbush, Colorado Department of Agriculture. Docket ID No.: EPA–HQ–OPP–2006–0687. Document ID No.: EPA–HQ–OPP–2006 0687–0026.

10. Comment submitted by G. Farnsworth, Department of Pesticides Regulation (DPR). Docket ID No.: EPA–HQ–OPP–2006–0687. Document ID No.: EPA–HQ–OPP– 2006–0687–0064.

11. EPA. OPP. EPA Analysis of Labeled Ingredients on Minimum Risk Insect Repellent Products. (2009). Docket ID No.: EPA–HQ–OPP–2010–0305. Document ID No.: EPA–HQ–OPP–2010–0305–0010.

12. EPA. OPP. Review of Literature on Consumer Use of Label Statements and Findings Relevant to Planned Action on Minimum Risk Insect Repellents. (2009). Docket ID No.: EPA–HQ–OPP–2010–0305. Document ID No.: EPA–HQ–OPP–2010– 0305–0011.

13. EPA. OPP. Minimum Risk Pesticides. *http://www.epa.gov/oppbppd1/biopesticides/regtools/25b_list.htm*.

14. EPA. OPP. Cost and Small Business Analysis of Proposed Revisions to Minimum Risk Exemption. (2012). Docket ID No.: EPA–HQ–OPP–2010–0305. Document ID No.: EPA–HQ–OPP–2010–0305–0012.

15. EPA. OPP. Minimum Risk Products Registered with States with Publicly Searchable Databases (AL, AK, AZ, CO, IA, LA, MS, NH, NC, OK, RI, SC, SD, and WA). (2010). Docket ID No.: EPA–HQ–OPP–2010–0305. Document ID No.: EPA–HQ–OPP–2010–0305–0013.

16. EPA. OPP. Products Located Through EPA Query of Nielson Company Scanner Data + Walmart Customer Panel Surveys. (2008). Docket ID No.: EPA–HQ–OPP–2010–0305. Document ID No.: EPA–HQ–OPP–2010–0305–0014.

17. EPA. OPP. Supporting Statement for an Information Collection Request (ICR): Labeling Change for Certain Minimum Risk Pesticides under FIFRA Section 25(b). (2012). Docket ID No.: EPA–HQ–OPP–2010–0305. Document ID No.: EPA–HQ–OPP–2010–0305–0015.

18. Small Entity Representative (SER) comments from 2009 SBREFA Panel, for minimum risk insect repellents proposed rule. Docket ID No.: EPA–HQ–OPP–2010–0305. Document ID No.: EPA–HQ–OPP–2010–0305–0016.

VIII. FIFRA Review Requirements

Under FIFRA section 25(a), EPA submitted a draft of the proposed rule to the Secretary of the Department of Agriculture (USDA) and the appropriate Congressional Committees. Additionally, under FIFRA section 21(b), EPA submitted a draft of the proposed rule to the Secretary of the Department of Health and Human Services (HHS). No comments were received regarding this proposed rule. USDA waived its review of the draft proposed rule on December 19, 2011, and HHS waived its review of the draft proposed rule on February 2, 2012. Both USDA and HHS have retained the right to review a draft of the final rule.

Under FIFRA section 25(d), EPA submitted a draft of the proposed rule to the Scientific Advisory Panel (SAP). The SAP waived its scientific review of the proposed rule on January 4, 2012, because the proposed rule does not contain scientific issues that warrant review by the Panel.

IX. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a ''significant regulatory action'') under the terms of Executive Order 12866 (58 FR 51735, October 4, 1993) and was not therefore submitted to the Office of Management and Budget (OMB) for review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act (PRA)

The information collection requirements in this proposed rule have been submitted for approval to OMB under the PRA, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document prepared by EPA has been assigned EPA ICR No. 2475.01; and OMB Control No. 2070–tbd, entitled ''Labeling Change for Certain Minimum Risk Pesticides under FIFRA Section 25(b)''.

The information collection requirements in this proposed rule consist of proposed changes to existing requirements that would involve the relabeling of products currently exempt under 40 CFR 152.25(f) in order to list chemical names in the format EPA proposes to require. The proposed change would be a one-time burden increase for existing products. The estimated annual respondent burden for this rule-related collection is estimated to be 5.5 hours per response, for a total one-time burden of 6,369 hours. Burden is defined at 5 CFR 1320.3(b).

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, EPA asks that you use the public docket established for this rule, i.e., Docket ID No. EPA–HQ–OPP–2010–0305. Submit any comments related to the ICR to EPA and OMB. For EPA, follow the instructions in the **ADDRESSES** section at the beginning of this document. For OMB, send comments to the following address: Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street NW., Washington, DC 20503, Attention: Desk Office for EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after December 31, 2012, a comment to OMB is best assured of having its full effect if OMB receives it by January 30, 2013. EPA will consider comments on the ICR as it develops the final rule, and will respond in the final rule to any OMB or public comments on the information collection requirements contained in this proposal.

C. Regulatory Flexibility Act (RFA)

The RFA, 5 U.S.C. 601 *et seq.,* generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act, 5 U.S.C. 551–553, or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this proposed rule on small entities, small entity is defined as:

1. A small business as defined by the Small Business Administration's (SBA)

regulations at 13 CFR 121.201. As indicated in the Cost Analysis prepared for this proposed rule (Ref. 14), which is summarized in Unit V.E., most firms in the minimum risk pesticide industry are identified under NAICS code 325. A small business that manufactures pesticides and other agricultural chemicals as defined by NAICS code 325 has 500 or fewer employees based on the SBA standards.

2. A small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000. This proposed rule is not expected to impact any governmental jurisdictions.

3. A small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field. This proposed rule is not expected to impact any not-for-profit entities.

After considering the economic impacts of this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. The factual basis for the Agency's determination is presented in the small entity impact analysis prepared as part of the Cost Analysis for this proposed rule (Ref. 14) that is summarized in Unit V.E., and a copy of which is available in the docket at *http://www.regulations.gov*. The following is a brief summary of the factual basis for this certification.

EPA has determined that this rulemaking does not impact any small governmental jurisdictions or any small not-for-profit enterprise because these entities are rarely producers of pesticide products. As such, EPA assessed the impacts on small businesses.

EPA determined that for the minimum risk pesticide industry, there are 97 small firms (out of the total 192), accounting for approximately 51% of the industry. EPA estimated the impacts on small firms in two ways. The first analysis estimated the impacts of the proposed rule on small firms by measuring the cost of the rule as a percent of the average small business annual revenue. These average small business impacts are presented in Table 6.

TABLE 6—SMALL BUSINESS IMPACTS BASED ON AVERAGE REVENUES

Rule implementation period	Average cost per SKU	Average cost per firm	Impact (% of gross revenue)
Immediate	$6,306	$36,189	1.3
With 2 years to change labels	2,550	14,634	0.5
With 3 years to change labels	672	3,857	0.1

However, this average revenues analysis may not account for the realities of very small firms. To account for the impacts on very small firms, i.e., those with sales of less than $500K, EPA performed a refined analysis that divided each individual firm's relabeling cost by that firm's sales revenue. Additionally, a lower labeling cost was assumed for very small firms. These impacts are presented in Table 7.

TABLE 7—SMALL BUSINESS IMPACTS—REFINED ANALYSIS

Rule implementation period	Impact (% of annual gross revenue)	
	≥ 1%	≥ 3%
Immediate	64 (62)	21 (21)
With 2 years to change labels	27 (26)	9 (9)
With 3 years to change labels	7 (7)	0 (0)

With a 2-year compliance period, 26 small firms (or 27% of all small firms) are likely to experience an economic impact of 1% or more of gross sales, and nine small firms (9% of all small firms) may incur impacts greater than or equal to 3% of gross sales. The selection of the 2-year compliance period was also based on information obtained in 2009, from a group of small manufacturers of minimum risk insect repellents. These small manufacturers, in comments submitted to EPA, indicated that they would need 2 years to re-label their products to avoid significant costs (Ref. 18). By providing a 2-year transition period (2 years from the effective date of the final rule), most companies would be able to incorporate the changes proposed in this document into their regularly planned label updates, and sell any products with older labels, thus reducing the cost and burden of the proposed changes to the exemption.

EPA is particularly interested in receiving comment from small businesses as to the benefits, costs and impacts of this proposed rule. Any comments should be submitted to the Agency in the manner specified under **ADDRESSES**.

D. Unfunded Mandates Reform Act (UMRA)

Title II of UMRA, 2 U.S.C. 1531–1538, establishes requirements for Federal agencies, unless otherwise prohibited by law, to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. This proposed rule does not contain a Federal mandate that may result in expenditures of $100 million or more for state, local and tribal governments, in the aggregate, or for the private sector in any 1 year. This proposed rule is unlikely to affect state, local, and tribal governments at all, because no minimum risk pesticide products have been found to be produced by any state, local, or tribal governments. As summarized previously, under an implementation period of 2 years, the estimated industry total costs for the one-time relabeling proposed in this rule is about $3 million.

Thus, this proposed rule is not subject to the requirements of UMRA sections 202 or 205. This rule is also not subject to the requirements of UMRA section 203, because it contains no regulatory requirements that might significantly or uniquely affect small governments.

E. Executive Order 13132: Federalism

This rule does not have federalism implications because it will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). As indicated previously, there are no known instances where a state or local government is currently the producer of a minimum risk pesticide currently exempt from regulation. Thus, Executive Order 13132 does not apply to this action.

In the spirit of Executive Order 13132 and consistent with EPA policy to promote communication between EPA, and state and local governments, EPA did consult with representatives of state and local governments in developing

this action. These consultations were conducted during the September 2010 meeting of the State-FIFRA Issues Research and Evaluation Group (SFIREG), two meetings of the Pesticide Regulatory Education Program (PREP) (July 2010 and April 2011) and a separate telephone conference with state pesticide regulators held on February 16, 2010.

Although these proposed changes would not have substantial direct effects on the states, they may indirectly affect states in two ways. First, the states that register minimum risk pesticide products may determine that they need to re-evaluate those registrations, since companies selling products claiming to be exempt from EPA registration would have to adopt the new label requirements, and demonstrate that compliance to any states in which they register. However, since most states that register minimum risk products require a new registration every year, little or no extra burden on state pesticide registration services is anticipated as a result of the changes at the Federal level. Second, there may be an improvement in the efficiency of state pesticide inspections, since the proposed changes would make it easier and faster for inspectors to identify which unregistered pesticide products contain ingredients that comply with the minimum risk exemption. This would positively affect all states, including those that do not register minimum risk pesticide products.

EPA specifically solicits comment on this proposed rule from state and local officials.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This proposed rule does not have tribal implications because it will not have substantial direct effects on Indian Tribes, will not significantly or uniquely affect the communities of Indian Tribal governments, and does not involve or impose any requirements that affect Indian Tribes, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). As indicated previously, there are no known instances where a tribal government is currently the producer of a minimum risk pesticide currently exempt from regulation. Thus, Executive Order 13175 does not apply to this proposed rule. EPA specifically solicits comment on this proposed rule from tribal officials.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997), as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. This action is not subject to Executive Order 13045, because it is not an ''economically significant regulatory action'' as defined in Executive Order 12866, and because the Agency does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This proposed rule does not involve an environmental standard that is intended to have a negatively disproportionate effect on children. To the contrary, this proposed rule is intended to provide added protection to children by requiring clearer and more transparent information on the labels of exempted pesticide products.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act (NTTAA)

Section 12(d) of NTTAA, 15 U.S.C. 272 note, directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards. This action does not involve any technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards. EPA invites comment on its conclusion regarding the applicability of voluntary consensus standards to this rulemaking.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes the Federal executive policy on environmental justice. Its main provision directs Federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this proposed rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations, because it is expected to increase the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. This proposed rule only impacts minimum risk pesticide products, and, once final, may have positive impacts for all communities, since the rule provides increased information for consumers considering the use of pesticides. This proposed action, which would improve clarity on product labels, will enable all users, regardless of economic status, to become more informed about the substances they may be interested in using as pesticides.

List of Subjects in 40 CFR Part 152

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: December 13, 2012.

Lisa Jackson,

Administrator.

Therefore, it is proposed that 40 CFR chapter I be amended as follows:

PART 152—[AMENDED]

1. The authority citation for part 152 continues to read as follows:

Authority: 7 U.S.C. 136–136y; subpart U is also issued under 31 U.S.C. 9701.

2. Section 152.25 is amended by revising paragraph (f) to read as follows:

§ 152.25 Exemptions for pesticides of a character not requiring FIFRA regulation.

* * * * *

(f) *Minimum risk pesticides.* (1) Products containing the following active ingredients are exempt from the requirements of FIFRA, alone or in combination with other substances listed in this paragraph, provided that all of the criteria of this section are met. All listed active ingredients may be used in non-food use products. Under section 408 of the Federal Food, Drug, and Cosmetic Act and EPA implementing regulations at part 180 of this chapter, products intended for use on food or animal feed can only include active ingredients with applicable tolerances or tolerance exemptions in part 180 of this chapter. Such tolerances or exemptions may be found, for example, in §§ 180.950, 180.1071, 180.1233, and 180.1251 of this chapter.

Label display name	Chemical name	Specifications	CAS Reg. No.
Castor oil	Castor oil	United States Pharmacopeia (USP) standard.	8001–79–4
Cedar oil	Cedar oil		8000–27–9
Cedar oil	Cedar oil		68990–83–0
Cedar oil	Cedar oil		85085–29–6
Cinnamon	Food: N/A		Food: N/A
Cinnamon oil	Cinnamon oil	USP	8015–91–6
Citric acid	2-Hydroxypropane-1,2,3-tricarboxylic acid.	USP	77–92–9
Citronella	N/A		N/A
Citronella oil	Citronella oil		8000–29–1
Cloves	Food: N/A		Food: N/A
Clove oil	Clove oil	USP	8000–34–8
Corn gluten meal	Corn gluten		66071–96–3
Corn oil	Corn oil	USP	8001–30–7
Cottonseed oil	Cottonseed oil	USP	8001–29–4
Dried blood	N/A		68991–49–9
Eugenol	4-Allyl-2-methoxyphenol	USP	97–53–0
Garlic	Food: N/A		Food: N/A
Garlic oil	Garlic oil	USP	8000–78–0
Geraniol	(2E)-3,7-Dimethylocta-2,6-dien-1-Ol	USP	106–24–1
Geranium oil	Geranium oil	USP	8000–46–2
Lauryl sulfate	Lauryl sulfate		151–41–7
Lemongrass oil	Lemongrass oil	USP	8007–02–1
Linseed oil	Linseed oil		8001–26–1
Malic acid	2-Hydroxybutanedioic acid	USP	6915–15–7
Mint	Food: N/A		Food: N/A
Mint oil	Mint oil	USP	68917–18–0
Peppermint	Food: N/A		Food: N/A
Peppermint oil	Peppermint oil	USP	8006–90–4
2-Phenylethyl propionate	2-Phenylethyl propionate		122–70–3
Potassium sorbate	Potassium (2E,4E)-hexa-2,4-Dienoate	USP	24634–61–5
Putrescent whole egg solids	Putrescent whole egg solids		51609–52–0
Rosemary	Food: N/A		Food: N/A
Rosemary oil	Rosemary oil	USP	8000–25–7
Sesame	Food: N/A		Food: N/A
Sesame oil	Sesame oil		8008–74–0
Sodium lauryl sulfate	Sulfuric acid monododecyl ester, sodium salt.	USP	151–21–3
Soybean oil	Soybean oil	USP	8001–22–7
Thyme	Food: N/A		Food: N/A
Thyme oil	Thyme oil	USP	8007–46–3
White pepper	Food: N/A		Food: N/A
Zinc	Zinc	Zinc metal strips (consisting solely of zinc metal and impurities).	7440–66–6

(2) *Permitted inert ingredients.* A pesticide product exempt under paragraph (f)(1) of this section may only include the inert ingredients listed in paragraphs (f)(2)(i) through (iv) of this section.

(i) *Commonly consumed food commodities* as described in § 180.950(a) of this chapter.

(ii) *Animal feed items* as described in § 180.950(b) of this chapter.

(iii) *Edible fats and oils* as described in § 180.950(c) of this chapter.

(iv) *Specific chemical substances,* as listed in the following table.

Label display name	Chemical name	CAS Reg. No.
Acetyl tributyl citrate	Citric acid, 2-(acetyloxy)-, tributyl ester	77–90–7
Agar	Agar	9002–18–0
Almond hulls	Almond hulls	N/A
Almond shells	Almond shells	N/A
alpha-Cyclodextrin	alpha-Cyclodextrin	10016–20–3
Aluminatesilicate	Aluminatesilicate	1327–36–2
Aluminum magnesium silicate	Silicic acid, aluminum magnesium salt	1327–43–1

Label display name	Chemical name	CAS Reg. No.
Aluminum potassium sodium silicate	Silicic acid, aluminum potassium sodium salt	12736–96–8
Aluminum silicate	Aluminum silicate	1335–30–4
Aluminum sodium silicate	Silicic acid, aluminum sodium salt	1344–00–9
Aluminum sodium silicate (1:1:1)	Silicic acid (H4 SiO4), aluminum sodium salt (1:1:1)	12003–51–9
Ammonium benzoate	Benzoic acid, ammonium salt	1863–63–4
Ammonium stearate	Octadecanoic acid, ammonium salt	1002–89–7
Amylopectin, acid-hydrolyzed, 1-octenylbutanedioate	Amylopectin, acid-hydrolyzed, 1-octenylbutanedioate	113894–85–2
Amylopectin, hydrogen 1-octadecenylbutanedioate	Amylopectin, hydrogen 1-octadecenylbutanedioate	125109–81–1
Animal glue	Animal glue	N/A
Ascorbyl palmitate	Ascorbyl palmitate	137–66–6
Attapulgite-type clay	Attapulgite-type clay	12174–11–7
Beeswax	Beeswax	8012–89–3
Bentonite	Bentonite	1302–78–9
Bentonite, sodian	Bentonite, sodian	85049–30–5
beta-Cyclodextrin	beta-Cyclodextrin	7585–39–9
Bone meal	Bone meal	68409–75–6
Bran	Bran	N/A
Bread crumbs	Bread crumbs	N/A
(+)-Butyl lactate	Lactic acid, n-butyl ester, (S)	34451–19–9
Butyl lactate	Lactic acid, n-butyl ester	138–22–7
Butyl stearate	Octadecanoic acid, butyl ester	123–95–5
Calcareous shale	Calcareous shale	N/A
Calcite (Ca(CO3))	Calcite (Ca(CO3))	13397–26–7
Calcium acetate	Calcium acetate	62–54–4
Calcium acetate monohydrate	Acetic acid, calcium salt, monohydrate	5743–26–0
Calcium benzoate	Benzoic acid, calcium salt	2090–05–3
Calcium carbonate	Calcium carbonate	471–34–1
Calcium citrate	Citric acid, calcium salt	7693–13–2
Calcium octanoate	Calcium octanoate	6107–56–8
Calcium oxide silicate	Calcium oxide silicate (Ca3 O(SiO4))	12168–85–3
Calcium silicate	Silicic acid, calcium salt	1344–95–2
Calcium stearate	Octadecanoic acid, calcium salt	1592–23–0
Calcium sulfate	Calcium sulfate	7778–18–9
Calcium sulfate dihydrate	Calcium sulfate dihydrate	10101–41–4
Calcium sulfate hemihydrate	Calcium sulfate hemihydrate	10034–76–1
Canary seed	Canary seed	N/A
Carbon	Carbon	7440–44–0
Carbon dioxide	Carbon dioxide	124–38–9
Carboxymethyl cellulose	Cellulose, carboxymethyl ether	9000–11–7
Cardboard	Cardboard	N/A
Carnauba wax	Carnauba wax	8015–86–9
Carob gum	Locust bean gum	9000–40–2
Carrageenan	Carrageenan	9000–07–1
Caseins	Caseins	9000–71–9
Castor oil	Castor oil	8001–79–4
Castor oil, hydrogenated	Castor oil, hydrogenated	8001–78–3
Cat food	Cat food	N/A
Cellulose	Cellulose	9004–34–6
Cellulose acetate	Cellulose acetate	9004–35–7
Cellulose, mixture with cellulose carboxymethyl ether, sodium salt.	Cellulose, mixture with cellulose carboxymethyl ether, sodium salt.	51395–75–6
Cellulose, pulp	Cellulose, pulp	65996–61–4
Cellulose, regenerated	Cellulose, regenerated	68442–85–3
Cheese	Cheese	N/A
Chlorophyll a	Chlorophyll a	479–61–8
Chlorophyll b	Chlorophyll b	519–62–0
Citric acid	Citric acid	77–92–9
Citric acid, monohydrate	Citric acid, monohydrate	5949–29–1
Citrus meal	Citrus meal	N/A
Citrus pectin	Citrus pectin	9000–69–5
Citrus pulp	Citrus pulp	68514–76–1
Clam shells	Clam shells	N/A
Cocoa	Cocoa	8002–31–1
Cocoa shell flour	Cocoa shell flour	N/A
Cocoa shells	Cocoa shells	N/A
Cod-liver oil	Cod-liver oil	8001–69–2
Coffee grounds	Coffee grounds	68916–18–7
Cookies	Cookies	N/A
Cork	Cork	61789–98–8
Corn cobs	Corn cobs	N/A
Cotton	Cotton	N/A
Cottonseed meal	Cottonseed meal	68424–10–2
Cracked wheat	Cracked wheat	N/A
Decanoic acid, monoester with 1,2,3- propanetriol	Decanoic acid, monoester with 1,2,3- propanetriol	26402–22–2

Label display name	Chemical name	CAS Reg. No.
Dextrins	Dextrins	9004–53–9
Diglyceryl monooleate	9-Octadecenoic acid, ester with 1,2,3- propanetriol	49553–76–6
Diglyceryl monostearate	9-Octadecanoic acid, monoester with oxybis(propanediol)	12694–22–3
Dilaurin	Dodecanoic acid, diester with 1,2,3- propanetriol	27638–00–2
Dipalmitin	Hexadecanoic acid, diester with 1,2,3- propanetriol	26657–95–4
Dipotassium citrate	Citric acid, dipotassium salt	3609–96–9
Disodium citrate	Citric acid, disodium salt	144–33–2
Disodium sulfate	Disodium sulfate decahydrate	7727–73–3
Diatomaceous earth	Kieselguhr; Diatomite	61790–53–2
Dodecanoic acid, monoester with 1,2,3- propanetriol	Dodecanoic acid, monoester with 1,2,3- propanetriol	27215–38–9
Dolomite	Dolomite	16389–88–1
Douglas fir bark	Douglas fir bark	N/A
Egg shells	Egg shells	N/A
Eggs	Eggs	N/A
(+)-Ethyl lactate	Lactic acid, ethyl ester, (S)	687–47–8
Ethyl lactate	Lactic acid, ethyl ester	97–64–3
Feldspar	Feldspar	68476–25–5
Fish meal	Fish meal	N/A
Fish oil	Fish oil	8016–13–5
Fuller's earth	Fuller's earth	8031–18–3
Fumaric acid	Fumaric acid	110–17–8
gamma-Cyclodextrin	gamma-Cyclodextrin	17465–86–0
Gelatins	Gelatins	9000–70–8
Gellan gum	Gellan gum	71010–52–1
Glue (as depolymd. animal collagen)	Glue (as depolymd. animal collagen)	68476–37–9
Glycerin	1,2,3-Propanetriol	56–81–5
Glycerol monooleate	9-Octadecenoic acid (Z)-, 2,3-dihydroxypropyl ester	111–03–5
Glyceryl dicaprylate	Octanoic acid, diester with 1,2,3-propanetriol	36354–80–0
Glyceryl dimyristate	Tetradecanoic acid, diester with 1,2,3-propanetriol	53563–63–6
Glyceryl dioleate	9-Octadecenoic acid (9Z)-, diester with 1,2,3-propanetriol	25637–84–7
Glyceryl distearate	Glyceryl distearate	1323–83–7
Glyceryl monomyristate	Tetradecanoic acid, monoester with 1,2,3-propanetriol	27214–38–6
Glyceryl monooctanoate	Octanoic acid, monoester with 1,2,3-propanetriol	26402–26–6
Glyceryl monooleate	9-Octadecenoic acid (9Z)-, monoester with 1,2,3-propanetriol	25496–72–4
Glyceryl monostearate	Octadecanoic acid, monoester with 1,2,3-propanetriol	31566–31–1
Glyceryl stearate	Octadecanoic acid, ester with 1,2,3-propanetriol	11099–07–3
Granite	Granite	N/A
Graphite	Graphite	7782–42–5
Guar gum	Guar gum	9000–30–0
Gum Arabic	Gum arabic	9000–01–5
Gum tragacanth	Gum tragacanth	9000–65–1
Gypsum	Gypsum	13397–24–5
Hematite (Fe2O3)	Hematite (Fe2O3)	1317–60–8
Humic acid	Humic acid	1415–93–6
Hydrogenated cottonseed oil	Hydrogenated cottonseed oil	68334–00–9
Hydrogenated rapeseed oil	Hydrogenated rapeseed oil	84681–71–0
Hydrogenated soybean oil	Hydrogenated soybean oil	8016–70–4
Hydroxyethyl cellulose	Cellulose, 2-hydroxyethyl ether	9004–62–0
Hydroxypropyl cellulose	Cellulose, 2-hydroxypropyl ether	9004–64–2
Hydroxypropyl methyl cellulose	Cellulose, 2-hydroxypropyl methyl ether	9004–65–3
Iron magnesium oxide	Iron magnesium oxide (Fe2 MgO4)	12068–86–9
Ferric oxide	Iron oxide (Fe2 O3)	1309–37–1
Iron oxide (Fe2 O3), hydrate	Iron oxide (Fe2 O3), hydrate	12259–21–1
Iron oxide (Fe3 O4)	Iron oxide (Fe3 O4)	1317–61–9
Ferric oxide	Iron oxide (FeO)	1345–25–1
Isopropyl alcohol	2-Propanol	67–63–0
Isopropyl myristate	Isopropyl myristate	110–27–0
Kaolin	Kaolin	1332–58–7
Lactose	Lactose	63–42–3
Lactose monohydrate	Lactose monohydrate	64044–51–5
Lanolin	Lanolin	8006–54–0
Latex rubber	Latex rubber	N/A
Lauric acid	Lauric acid	143–07–7
Lecithins	Lecithins	8002–43–5
Licorice extract	Licorice extract	68916–91–6
Lime (chemical) dolomitic	Lime (chemical) dolomitic	12001–27–3
Limestone	Limestone	1317–65–3
Linseed oil	Linseed oil	8001–26–1
Magnesium carbonate	Carbonic acid, magnesium salt (1:1)	546–93–0
Magnesium benzoate	Magnesium benzoate	553–70–8
Magnesium oxide	Magnesium oxide	1309–48–4
Magnesium oxide silicate	Magnesium oxide silicate (Mg3 O(Si2 O5)2), monohydrate	12207–97–5
Magnesium silicate	Magnesium silicate	1343–88–0
Magnesium silicate hydrate	Magnesium silicate hydrate	1343–90–4

Label display name	Chemical name	CAS Reg. No.
Magnesium silicon oxide	Magnesium silicon oxide ($Mg_2Si_3O_8$)	14987–04–3
Magnesium stearate	Octadecanoic acid, magnesium salt	557–04–0
Magnesium sulfate	Magnesium sulfate	7487–88–9
Magnesium sulfate heptahydrate	Magnesium sulfate heptahydrate	10034–99–8
Malic acid	Malic acid	6915–15–7
Malt extract	Malt extract	8002–48–0
Malt flavor	Malt flavor	N/A
Maltodextrin	Maltodextrin	9050–36–6
Methylcellulose	Cellulose, methyl ether	9004–67–5
Mica	Mica	12003–38–2
Mica-group minerals	Mica-group minerals	12001–26–2
Milk	Milk	8049–98–7
Millet seed	Millet seed	N/A
Mineral oil (U.S.P.)	Mineral oil (U.S.P.)	8012–95–1
1-Monolaurin	Dodecanoic acid, 2,3-dihydroxypropyl ester	142–18–7
1-Monomyristin	Tetradecanoic acid, 2,3-dihydroxypropyl ester	589–68–4
Monomyristin	Decanoic acid, diester with 1,2,3-propanetriol	53998–07–1
Monopalmitin	Hexadecanoic acid, monoester with 1,2,3-propanetriol	26657–96–5
Monopotassium citrate	Citric acid, monopotassium salt	866–83–1
Monosodium citrate	Citric acid, monosodium salt	18996–35–5
Montmorillonite	Montmorillonite	1318–93–0
Myristic acid	Myristic acid	544–63–8
Nepheline syenite	Nepheline syenite	37244–96–5
Nitrogen	Nitrogen	7727–37–9
Nutria meat	Nutria meat	N/A
Nylon	Nylon	N/A
Octanoic acid, potassium salt	Octanoic acid, potassium salt	764–71–6
Octanoic acid, sodium salt	Octanoic acid, sodium salt	1984–06–1
Oils, almond	Oils, almond	8007–69–0
Oils, wheat	Oils, wheat	68917–73–7
Oleic acid	Oleic acid	112–80–1
Oyster shells	Oyster shells	N/A
Palm oil	Palm oil	8002–75–3
Palm oil, hydrogenated	Palm oil, hydrogenated	68514–74–9
Palmitic acid	Hexadecanoic acid	57–10–3
Paper	Paper	N/A
Paraffin wax	Paraffin wax	8002–74–2
Peanut butter	Peanut butter	N/A
Peanut shells	Peanut shells	N/A
Peanuts	Peanuts	N/A
Peat moss	Peat moss	N/A
Pectin	Pectin	9000–69–5
Perlite	Perlite	130885–09–5
Perlite, expanded	Perlite, expanded	93763–70–3
Plaster of paris	Plaster of paris	26499–65–0
Polyethylene	Polyethylene	9002–88–4
Polyglyceryl oleate	Polyglyceryl oleate	9007–48–1
Polyglyceryl stearate	Polyglyceryl stearate	9009–32–9
Potassium acetate	Acetic acid, potassium salt	127–08–2
Potassium aluminum silicate, anhydrous	Potassium aluminum silicate, anhydrous	1327–44–2
Potassium benzoate	Benzoic acid, potassium salt	582–25–2
Potassium bicarbonate	Carbonic acid, monopotassium salt	298–14–6
Potassium chloride	Potassium chloride	7447–40–7
Potassium citrate	Citric acid, potassium salt	7778–49–6
Potassium humate	Humic acids, potassium salts	68514–28–3
Potassium myristate	Tetradecanoic acid, potassium salt	13429–27–1
Potassium oleate	9-Octadecenoic acid (9Z)-, potassium salt	143–18–0
Potassium ricinoleate	9-Octadecenoic acid, 12-hydroxy-, monopotassium salt, (9Z, 12R)-.	7492–30–0
Potassium sorbate	Sorbic acid, potassium salt	24634–61–5
Potassium stearate	Octadecanoic acid, potassium salt	593–29–3
Potassium sulfate	Potassium sulfate	7778–80–5
Potassium sulfate	Sulfuric acid, monopotassium salt	7646–93–7
1,2-Propylene carbonate	1,3-Dioxolan-2-one, 4-methyl-	108–32–7
Pumice	Pumice	1332–09–8
Red cabbage color	Red cabbage color (expressed from edible red cabbage heads via a pressing process using only acidified water).	N/A
Red cedar chips	Red cedar chips	N/A
Red dog flour	Red dog flour	N/A
Rubber	Rubber	9006–04–6
Sawdust	Sawdust	N/A
Shale	Shale	N/A
Silica, amorphous, fumed (crystalline free)	Silica, amorphous, fumed (crystalline free)	112945–52–5
Silica, amorphous, precipitate and gel	Silica, amorphous, precipitate and gel	7699–41–4

Label display name	Chemical name	CAS Reg. No.
Silica (crystalline free)	Silica (crystalline free)	7631–86–9
Silica gel	Silica gel	63231–67–4
Silica gel, precipitated, crystalline-free	Silica gel, precipitated, crystalline-free	112926–00–8
Silica, hydrate	Silica, hydrate	10279–57–9
Silica, vitreous	Silica, vitreous	60676–86–0
Silicic acid (H2 SiO3), magnesium salt (1:1)	Silicic acid (H2 SiO3), magnesium salt (1:1)	13776–74–4
Soap	Soap (The water soluble sodium or potassium salts of fatty acids produced by either the saponification of fats and oils, or the neutralization of fatty acid).	N/A
Soapbark	Quillaja saponin	1393–03–9
Soapstone	Soapstone	308076–02–0
Sodium acetate	Acetic acid, sodium salt	127–09–3
Sodium alginate	Sodium alginate	9005–38–3
Sodium benzoate	Benzoic acid, sodium salt	532–32–1
Sodium bicarbonate	Sodium bicarbonate	144–55–8
Sodium carboxymethyl cellulose	Cellulose, carboxymethyl ether, sodium salt	9004–32–4
Sodium chloride	Sodium chloride	7647–14–5
Sodium citrate	Sodium citrate	994–36–5
Sodium humate	Humic acids, sodium salts	68131–04–4
Sodium oleate	Sodium oleate	143–19–1
Sodium ricinoleate	9-Octadecenoic acid, 12-hydroxy-, monosodium salt, (9Z,12R)-.	5323–95–5
Sodium stearate	Octadecanoic acid, sodium salt	822–16–2
Sodium sulfate	Sodium sulfate	7757–82–6
Sorbitol	D-glucitol	50–70–4
Soy protein	Soy protein	N/A
Soya lecithins	Lecithins, soya	8030–76–0
Soybean hulls	Soybean hulls	N/A
Soybean meal	Soybean meal	68308–36–1
Soybean, flour	Soybean, flour	68513–95–1
Stearic acid	Octadecanoic acid	57–11–4
Sulfur	Sulfur	7704–34–9
Syrups, hydrolyzed starch, hydrogenated	Syrups, hydrolyzed starch, hydrogenated	68425–17–2
Tetragylceryl monooleate	9-Octadecenoic acid (9Z)-, monoester with tetraglycerol	71012–10–7
Tricalcium citrate	Citric acid, calcium salt (2:3)	813–94–5
Triethyl citrate	Citric acid, triethyl ester	77–93–0
Tripotassium citrate	Citric acid, tripotassium salt	866–84–2
Tripotassium citrate monohydrate	Citric acid, tripotassium salt, monohydrate	6100–05–6
Trisodium citrate	Citric acid, trisodium salt	68–04–2
Trisodium citrate dehydrate	Citric acid, trisodium salt, dehydrate	6132–04–3
Trisodium citrate pentahydrate	Citric acid, trisodium salt, pentahydrate	6858–44–2
Ultramarine blue	C.I. Pigment Blue 29	57455–37–5
Urea	Urea	57–13–6
Vanillin	Benzaldehyde, 4-hydroxy-3-methoxy-	121–33–5
Vermiculite	Vermiculite	1318–00–9
Vinegar (maximum 8% acetic acid in solution)	Vinegar (maximum 8% acetic acid in solution)	8028–52–2
Vitamin C	L-Ascorbic acid	50–81–7
Vitamin E	Vitamin E	1406–18–4
Walnut flour	Walnut flour	N/A
Walnut shells	Walnut shells	N/A
Wheat	Wheat	N/A
Wheat flour	Wheat flour	N/A
Wheat germ oil	Wheat germ oil	8006–95–9
Whey	Whey	92129–90–3
White mineral oil (petroleum)	White mineral oil (petroleum)	8042–47–5
Wintergreen oil	Wintergreen oil	68917–75–9
Wollastonite	Wollastonite (Ca(SiO3))	13983–17–0
Wool	Wool	N/A
Xanthan gum	Xanthan gum	11138–66–2
Yeast	Yeast	68876–77–7
Zeolites	Zeolites (excluding erionite (CAS Reg. No. 66733–21–9))	1318–02–1
Zeolites, NaA	Zeolites, NaA	68989–22–0
Zinc iron oxide	Zinc iron oxide	12063–19–3
Zinc oxide	Zinc oxide (ZnO)	1314–13–2
Zinc stearate	Octadecanoic acid, zinc salt	557–05–1

(3) *Other conditions of exemption.* All of the following conditions must be met for products to be exempted under this section:

(i) Each product containing the substance must bear a label identifying the label display name and percentage (by weight) of each active ingredient. It must also list all inert ingredients by the label display name listed in the table in paragraph (f)(2)(iv) of this section.

(ii) The product must not bear claims either to control or mitigate microorganisms that pose a threat to

human health, including but not limited to disease transmitting bacteria or viruses, or claims to control insects or rodents carrying specific diseases, including, but not limited to ticks that carry Lyme disease.

(iii) Company name and contact information.

(A) The name of the producer or the company for whom the product was produced must appear on the product label. If the company whose name appears on the label in accordance with this paragraph is not the producer, the company name must be qualified by appropriate wording such as ''Packed for * * *,'' ''Distributed by * * *,'' or ''Sold by * * *'' to show that the name is not that of the producer.

(B) Contact information for the company specified in accordance with paragraph (f)(3)(iii)(A) of this section must appear on the product label including the street address plus ZIP code and the telephone phone number of the location at which the company may be reached.

(C) The company name and contact information must be displayed prominently on the product label.

(iv) The product must not include any false and misleading labeling statements, including those listed in § 156.10(a)(5)(i) through (viii).

(v) Guidance on minimum risk pesticides is available at *http://www.epa.gov/oppbppd1/biopesticides/regtools/25b_list.htm* (or successor web pages at *http://www.epa.gov*). This advisory information includes guidance on label formats, explanation of when exemptions from the requirements of a tolerance should be consulted, and tables in alternative formats that may be suitable for some users.

[FR Doc. 2012–31188 Filed 12–28–12; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 745

[EPA–HQ–OPPT–2010–0173; FRL–9373–7]

RIN 2070–AJ56

Lead; Renovation, Repair, and Painting Program for Public and Commercial Buildings; Request for Information and Advance Notice of Public Meeting

AGENCY: Environmental Protection Agency (EPA).

ACTION: Request for information and advance notice of public meeting.

SUMMARY: In 2010, EPA issued an advance notice of proposed rulemaking (2010 ANPRM) concerning renovation, repair, and painting activities on and in public and commercial buildings. EPA is in the process of determining whether these activities create lead-based paint hazards, and, for those that do, developing certification, training, and work practice requirements as directed by the Toxic Substances Control Act (TSCA). This document opens a comment period to allow for additional data and other information to be submitted by the public and interested stakeholders. This document also provides advance notice of EPA's plan to hold a public meeting on June 26, 2013.

DATES: Comments must be received on or before April 1, 2013.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA–HQ–OPPT–2010–0173, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute.
- *Mail:* Document Control Office (7407M), Office of Pollution Prevention and Toxics (OPPT), Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001.
- *Hand Delivery:* To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at *http://www.epa.gov/dockets/contacts.htm.*

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at *http://www.epa.gov/dockets.*

FOR FURTHER INFORMATION CONTACT: *For technical information contact:* Hans Scheifele, National Program Chemicals Division (7404T), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460–0001; telephone number: (202) 564–3122; email address: *scheifele.hans@epa.gov.*

For general information contact: The TSCA-Hotline, ABVI-Goodwill, 422 South Clinton Ave., Rochester, NY 14620; telephone number: (202) 554–1404; email address: *TSCA-Hotline@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

This document is directed to the public in general. However, you may be potentially affected by this action if you perform renovations, repairs, or painting activities on the exterior or interior of public buildings or commercial buildings. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Other types of entities not listed may also be affected. Potentially affected entities may include:

- Building construction (NAICS code 236), *e.g.,* commercial building construction, industrial building construction, commercial and institutional building construction, building finishing contractors, drywall and insulation contractors, painting and wall covering contractors, finish carpentry contractors, other building finishing contractors.
- Specialty trade contractors (NAICS code 238), *e.g.,* plumbing, heating, and air-conditioning contractors; painting and wall covering contractors; electrical contractors; finish carpentry contractors; drywall and insulation contractors; siding contractors; tile and terrazzo contractors; glass and glazing contractors.
- Real estate (NAICS code 531), *e.g.,* lessors of non-residential buildings and dwellings, non-residential property managers.
- Other general government support (NAICS code 921), *e.g.,* general services departments, government, public property management services, government.

If you have any questions regarding the applicability of this action to a particular entity, consult the technical person listed under **FOR FURTHER INFORMATION CONTACT**.

B. What should I consider as I prepare my comments for EPA?

1. *Submitting CBI.* Do not submit this information to EPA through regulations.gov or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD–ROM that you mail to EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

This is an official

CDC Health Advisory

Distributed via Health Alert Network
November 27, 2012, 21:05 ET (9:05 PM ET)
CDC HAN-0336-2012-11-27-ADV-N

Health Concerns about Misuse of Pesticides for Bed Bug Control

Public Health Issues

The Agency for Toxic Substances and Disease Registry (ATSDR) and the Centers for Disease Control and Prevention (CDC) are alerting the public to an emerging national concern regarding misuse of pesticides to treat infestations of bed bugs and other insects indoors. Some pesticides are being applied indoors even though they are approved only for outdoor use. Even pesticides that are approved for indoor use can cause harm if over applied or not used as instructed on the product label.

There has been a dramatic increase in the number of bed bug-related inquiries received by the National Pesticide Information Center (NPIC) over the past several years, with many involving incidents of pesticide exposure, spills, or misapplications.[1] From January 2006-December 2010, NPIC reported 169 calls to their hotline where residents, homeowners, or pesticide applicators sprayed pesticides indoors to treat bedbugs. These cases involved pesticides that were misapplied, not intended for indoor use, or legally banned from use. Of those, 129 resulted in mild or serious health effects (including one death) for persons living in affected residences.[2]

ATSDR warns that outdoor pesticides should not be used indoors under any circumstances. Homeowners and applicators should always carefully read the product label to make sure that:

- **it has an EPA registration number**
- **it is intended for indoor use**
- **it is effective against bed bugs (the label should say it is meant to be used to treat your home for bed bugs) and**
- **you know how to properly mix the product (if a concentrate) and where and how to apply it safely within the home.**

Consumers should also be aware of recent cases where licensed and unlicensed pest control applicators illegally sprayed outdoor pesticides indoors to control bed bugs. In some cases, these

[1] Buhl, K., Stone D, and Power, L. Bed bug-related pesticide incidents reported to the National Pesticide Information Center. Poster presented at the 2010 Annual meeting of the American Public Health Association (APHA), Denver, Colorado (http://npic.orst.edu/NPICbedbugposter101510.pdf)
[2] NPIC database provided to ATSDR in 2011 by Dr. Dave Stone, Dept. of Environmental and Molecular Toxicology, Oregon State University.

pesticides were found at levels that harmed or could have harmed people's health. In some cases, residents were relocated until their homes could be decontaminated.

Background

This issue first came to ATSDR's attention when a misapplication of a chemical to treat a bed bug infestation occurred in a residential building in Ohio. A pest control applicator hired by the building owner sprayed the interior of 2 occupied apartments with a pesticide intended only for outdoor use. These illegal applications were made five times over 72 hours and included spraying of ceilings, floors, and even beds and a crib mattress. The occupants included a family with small children, who displayed health symptoms typical of pesticide poisoning, including headache, nausea, vomiting, diarrhea, dizziness, and muscle tremors. The families were evaluated and treated at a local hospital. The homes were evacuated and families relocated. The families lost furniture, electronics, clothing, linens, toys, and other personal items that were grossly contaminated. A review of this case and other cases of acute illness related to exposure to insecticides used for bed bug control was recently published in Morbidity and Mortality Weekly Report[3].

Even pesticides that are approved for indoor use can cause harm if over applied or not used according to the label directions. Like the incident in Ohio, these situations can also result in the loss of personal items, the need to replace contaminated building materials, and expensive cleanups. For example, a mother with a young family contacted NPIC and reported a number of serious health effects her husband, her children, and she experienced from pesticide exposure. A pest control applicator hired by their landlord had applied multiple pesticides seven times over a five-month period. The infestation was later determined not to be bed bugs. Before moving out of the contaminated home, the family members (ranging in ages from 1-32 years) experienced neurological symptoms (such as headaches, dizziness, nausea, visual disturbances, numbness in the face and limbs, muscle tremors, etc.), abdominal pain, and cardiopulmonary symptoms (chest tightness, heart palpitations, and chest pain). Documented in another call was a mother who contacted NPIC describing her infant who developed vomiting and diarrhea after being placed on a mattress treated with an undiluted indoor insecticide. Other bed bug related calls to NPIC describe similar complaints where the caller or the caller's family members experienced headaches, dizziness, nausea, vomiting, tremors, etc., from indoor pesticides being misapplied (often over applied).

How might pesticide exposure affect children?

It is particularly dangerous to allow children to reoccupy a home that has had a recent pesticide treatment where surfaces are still wet, or where they can come in direct contact with pesticide dusts. Children can put objects that have pesticide residues on them in their mouths, and generally put their hands in their mouths and touch their faces more often than adults. They also breathe a greater volume of air per body weight than adults. Thus, the behavior and physical characteristics of children can lead to higher exposures than adults.

[3] http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6037a1.htm

Do pesticide products affect the health of animals?
Exposed animals may have the same health effects as people. **Illness in pets after a pest control application is sometimes a first warning that pesticides have been misused or over applied**. Because of their small body weights, exposed pets may show signs of pesticide poisoning quickly. Cats and dogs may be exposed to pesticides when they come in contact with contaminated surfaces such as floors.

Preventing Exposure to Pesticides

1. Make sure you are treating the right pest. Many pests look alike. Before using any pesticides, confirm that your infestation is actually from bed bugs. Some products are specific to an insect, and won't work if used on any other insect. Depending on the lifecycle stage in which they are found, bed bugs can resemble bat bugs, poultry bugs, carpet beetles, and barn swallow bugs. Ticks can also be mistaken for bed bugs. Bed bugs are small parasitic insects. Adult bed bugs are reddish-brown, have flat bodies, are the shape and size of an apple seed, and do not have wings. Signs of bed bugs in your home include bites on the skin resembling a rash, small spots of blood on bed sheets or clothing, brown fecal stains on linens or furniture, staining on ceilings or walls, and finding molts (cast off skins) in the home. For help making sure your pests are bed bugs, you can contact an entomologist (insect expert) at many county extension services. Follow the link below to find your local extension service: http://www.csrees.usda.gov/Extension/index.html

2. Do not use pesticides indoors if they are intended for outdoor use. The label on the product will tell you whether it can be used indoors. Using outdoor pesticides indoors can hurt your family's health, contaminate your home, result in the loss of your belongings if they become contaminated, and cost thousands of dollars to clean up your house to make it safe to reoccupy.

3. Use a pest control expert if you hire someone to treat your home for a pest problem.
Treating bed bugs is very challenging. If you choose to hire someone to treat your home, an experienced pest management professional can help you treat the infestation effectively. A pest management professional should thoroughly inspect your residence, and provide instructions for preparation and cleaning. They should use a combination of practices based on specific information about the pest's life cycle and habitat needs. This includes non-chemical methods along with limited and targeted pesticide use only as needed. In most cases, chemicals alone will not eliminate pests. When hiring a pest management professional, ask about the specific steps they take to treat infestations.

When you hire someone to control bed bugs or any other pest, make sure they are currently licensed and certified to apply pesticides. Ask to see the certification. Ask for the brand name of the pesticide and the name of the product's active ingredient in case you or a member of your family gets sick from exposure to the product. Read the label of the product the pest control applicator is planning to use to make sure it is for indoor use.

Check with your state pesticide agency to find out about certification and training requirements http://aspcro.org/?q=control-officials. They may also be able to help you find a certified pest

control applicator in your area.

4. If you buy over-the-counter pesticide products to apply yourself, be sure

- the product is in unopened, original pesticide containers
- the containers are labeled, and
- the containers have an EPA registration number.

If you feel you have been overexposed to a pesticide or feel sick after a pesticide has been used in your home, consult your doctor or a poison control center (1-800-222-1222) immediately.

5. ALWAYS FOLLOW THE INSTRUCTIONS ON THE PRODUCT LABEL. The label will tell you which bugs the product will kill, how to mix the product, and where and how to apply the product. Do not apply pesticides repeatedly or in excess of label directions - more is not better and may be unsafe for your family. Do not apply pesticides to beds or furniture unless the label allows it. Not following the label instructions can harm the health of your family, your pets, or you and can result in contamination of your home that can be expensive and time consuming to clean up. Do not use other household chemicals such as kerosene, rubbing alcohol, or bleach for pest control. They can cause negative health effects, fire, or explosions.

Treating an infestation: Integrated Pest Management (IPM)

How can bed bugs be treated safely?

Like lice infestations, bed bugs are best treated using a combination of practices, such as inspection, monitoring, reducing clutter, using physical barriers, and carefully applying pesticides if needed. This type of comprehensive pest control strategy is called "integrated pest management" (IPM). This approach includes vigilant activities by homeowners and renters, such as:

- checking luggage and clothes when returning from a trip or buying second hand clothing, mattresses, or furniture;
- thoroughly inspecting infested areas and the surrounding living space;
- reducing clutter where bed bugs can hide;
- installing encasements on box springs, mattresses and pillows, and using interceptors under bed posts and furniture legs;
- aggressively cleaning infested areas and clothing, in conjunction with professional heat/steam or cold treatments of baseboards and other belongings;
- carefully using pesticides approved for indoor use on bed bugs (see http://cfpub.epa.gov/oppref/bedbug/ for a list of EPA-approved pesticides), or hiring pest management professional.

There is no federal certification program for IPM pest control professionals, and some professionals practice IPM without specific certification, but two non-profit organizations do have certification programs. To learn more about their programs or to find a pesticide control applicator in your area, visit http://greenshieldcertified.org/ or

http://www.certifiedgreenpro.org/. This information is being provided solely to assist you and is not an endorsement or recommendation by CDC of any pest control individual or company.

DO NOT USE BLEACH in areas where you have treated your home with a pesticide. Bleach can convert some pesticides to more toxic forms that could result in harmful exposures to your family. See the following links and for more information on how to effectively treat bed bug infestations:

- Environmental Protection Agency: http://www.epa.gov/bedbugs
- National Pesticide Information Center: http://www.npic.orst.edu/pest/bedbug.html

Important phone numbers and Web sites

If you believe you or a family member has become ill from a pesticide exposure:

Call your local poison control center: 1-800-222-1222, your local hospital emergency room, or the National Pesticide Information Center at 1-800-858-7378. You can also call the Centers for Disease Control and Prevention Information Line at 1-800-CDC-INFO for information about pesticides.

If you believe your pet has become ill from a pesticide exposure:

Contact your local veterinarian or call the National Animal Poison Control Center at 1-888-426-4435.

To report a possible pesticide misuse:

Contact your state pesticide regulatory agency. You can state specific contact information at: http://www.npic.orst.edu/reg/state_agencies.html

To learn more about pesticides and bed bugs

ATSDR ToxFaqs
http://www.atsdr.cdc.gov/substances/index.asp

CDC Parasites Web site
http://www.cdc.gov/parasites/bedbugs/

Environmental Protection Agency Web sites
http://www.epa.gov/bedbugs
http://www.epa.gov/pesticides

National Pesticide Information Center
http://www.npic.orst.edu

The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national, and international organizations.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Categories of Health Alert messages:

Health Alert conveys the highest level of importance; warrants immediate action or attention.

Health Advisory provides important information for a specific incident or situation; may not require immediate action.

Health Update provides updated information regarding an incident or situation; unlikely to require immediate action.

##This message was distributed to state and local health officers, public information officers, epidemiologists, and HAN coordinators, as well as clinician organizations.##

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You have received this message based upon the information contained within our emergency notification database. If you have a different or additional e-mail or fax address that you would like us to use, please contact your state-based Health Alert Network program at your state or local health department.

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The New York Times

December 27, 2012

E.P.A. Chief Set to Leave; Term Fell Shy of Early Hope

By JOHN M. BRODER

Lisa P. Jackson is stepping down as administrator of the Environmental Protection Agency after a four-year tenure that began with high hopes of sweeping action to address climate change and other environmental ills but ended with a series of rear-guard actions to defend the agency against challenges from industry, Republicans in Congress and, at times, the Obama White House.

Ms. Jackson, 50, told President Obama shortly after his re-election in November that she wanted to leave the administration early next year. She informed the E.P.A. staff of her decision on Thursday morning and issued a brief statement saying that she was confident "the ship is sailing in the right direction."

She has not said what she intends to do after leaving government, and no successor was immediately named, although it is expected that Robert Perciasepe, the E.P.A. deputy administrator, will take over at least temporarily.

Ms. Jackson's departure comes as many in the environmental movement are questioning Mr. Obama's commitment to dealing with climate change and other environmental problems. After his re-election, and a campaign in which global warming was barely mentioned by either candidate, Mr. Obama said that his first priority would be jobs and the economy and that he intended only to foster a "conversation" on climate change in the coming months.

That ambivalence is a far cry from the hopes that accompanied his early months in office, when he identified climate change as one of humanity's defining challenges. Mr. Obama put the White House's full lobbying power behind a House cap-and-trade bill that would have limited climate-altering emissions and brought profound changes in how the nation produces and consumes energy.

But after the effort stalled in the Senate, the administration abandoned broad- change efforts, instead focusing on smaller regulatory actions largely though th

White House and E.P.A. officials said that Ms. Jackson's decision to leave gove own and that the timing had been negotiated with the White House.

Mr. Obama praised her in a statement, calling her “an important part of my team.”

“Over the last four years, Lisa Jackson has shown an unwavering commitment to the health of our families and our children,” the president said. “Under her leadership, the E.P.A. has taken sensible and important steps to protect the air we breathe and the water we drink, including implementing the first national standard for harmful mercury pollution, taking important action to combat climate change under the Clean Air Act, and playing a key role in establishing historic fuel economy standards that will save the average American family thousands of dollars at the pump, while also slashing carbon pollution.”

After Republicans took control of the House in 2010, Ms. Jackson became a favored target of the new Republican majority’s aversion to what it termed “job-killing regulations.” One coal industry official accused her of waging “regulatory jihad,” and she was summoned to testify before hostile House committees dozens of times in 2011. She was frequently subjected to harsh questioning that at times bordered on the disrespectful.

Ms. Jackson, the first African-American to head the E.P.A., brushed off that treatment as part of the territory and a reflection of the new partisan reality in Washington. More difficult for her was the occasional lack of support from environmental groups, who saw every compromise as a betrayal, and from the White House, which was trying to balance worries about the economy and the president’s re-election campaign against the perceived costs of tough environmental policies.

The White House rejected or scaled back a number of proposed new regulations from the environmental agency, most notably the withdrawal of a proposed new standard for ozone pollution that Ms. Jackson sought in the summer of 2011. Mr. Obama rejected the proposal on the grounds that it would be too costly for industry and local government to comply with at a time of continuing economic distress. Other new rules, including those for emissions from industrial boilers and cement factories, were either watered down or their introduction delayed after complaints from lawmakers, lobbyists and businesses.

Despite a number of disappointments, however, Ms. Jackson has achieved some notable firsts, including the finding that carbon dioxide and five other gases that contribute to global warming meet the definition of pollutants under the Clean Air Act. That so-called endangerment finding, which has survived federal court challenges from industry, allowed the agency to negotiate strict new emissions standards for cars and light trucks, the first time the federal government has limited global warming pollution.

The new vehicle standards will eliminate billions of tons of carbon dioxide emissions and double the fuel efficiency of the American light-duty transportation fleet over the next decade.

The finding also formed the basis of the first steps toward regulating greenhouse gas emissions from new power plants and, possibly, toward requiring existing ones to reduce global warming pollution. The rule governing new power plants in effect bans the construction of new coal-fired power plants unless they capture carbon dioxide emissions, a technology so far unproven on a commercial scale.

The E.P.A. under Ms. Jackson also established the first standards for emissions of mercury, arsenic and other airborne toxins from power plants, and finalized a rule reducing industrial pollution that crosses state borders. The latter rule was struck down by a federal court and is under appeal.

Ms. Jackson, a native of New Orleans who holds chemical engineering degrees from Tulane and Princeton, has spent most of her professional career at the E.P.A. She led the Department of Environmental Protection in New Jersey from 2006 to 2008 under Gov. Jon S. Corzine, who named her his chief of staff in late 2008, shortly before Mr. Obama chose her to head the federal environmental agency.

This month, the E.P.A.'s inspector general, prodded by Republicans in Congress, announced that he was opening an inquiry into Ms. Jackson's use of a secondary e-mail account to conduct business inside the agency. Ms. Jackson has said that she used the second account because her public e-mail address was widely known and that her e-mail alias — "Richard Windsor" — derived from the name of her dog and her former home in Windsor Township, N.J.

It is not known when the inquiry will be completed.

In a brief interview on Wednesday evening, Ms. Jackson said that she hoped to decompress after four intense years running the E.P.A., which has 17,000 employees and an $8 billion annual budget. She said she would probably do some consulting and public speaking but has not begun looking for a new job. She is thought to be a candidate for the presidency of Princeton.

Asked what she considered most important in her tenure, Ms. Jackson mentioned the endangerment finding, because it was the first time that the federal government began to address climate change. She also said that although it received little notice during her tenure, she was proud of her role in expanding the environmental agenda to include voices that have been little heard, including low-income communities, Native Alaskans and American Indian tribes.

"Before me," she said, "some people said that African-Americans don't care about the environment. I don't think that will ever be the case again."

Government, Schools

Bill Seeks to Restrict Use of Pesticides on Playing Fields

Proposed measure would put new restrictions on pesticide use on elementary school and childcare center playgrounds and fields.

By John Mooney, NJSpotlight.com | Email the author | December 23, 2012

Related Topics: Robert Gordon and Safe Playing Field Act

What it is: The proposed Safe Playing Field Act places new restrictions on the use of pesticides on elementary school and childcare center playgrounds and fields. Sponsored by state Sens. Shirley Turner (D-Mercer) and Robert Gordon (D-Bergen), the Senate Bill S-1143 was unanimously endorsed by the Senate environmental committee last week.

What it means: The bill has been supported through a loud and active public campaign, with supporters lobbying hard in the Statehouse and canvassers going door to door in some communities to urge residents to press its passage. But despite the apparent political support, the measure has had a tough time reaching final passage.

Voting record: A version of this bill passed once in the Senate last year, but not the Assembly. And while a compromise version was introduced and approved in the Senate committee this week, some supporters say the Senate's Democratic leadership has yet to agree to post for final vote.

Turner's prediction: "I'm hoping we'll get it posted in January when we come back. We have gotten this out of committee before, so we have had to start over. But I hope we can get it done in January."

What's in the way: Most of the opposition has come from the chemical, pesticide, and landscaping industries, which maintain that there are misconceptions as to the health hazards and applications of pesticides in such settings.

Industry perspective: "Perceptions being put forward by very concerned mothers who are not aware of the very strict guidelines that are set by the EPA," said Nancy Sadlon, executive director of the NJ Green Industry Council. "Nobody is arguing that these aren't toxic substances, but what we don't agree on is that there is, in fact, a lot of testing and training with these products."

Turner's retort: "We don't need the chemicals to accomplish what we want. And the most important of course is to protect the health and safety of our children, and we can do that with alternative methods. We heard that over and over in testimony."

Compromise: The latest version of the bill did step back on the scope of the measure, removing nonschool public recreation fields and playgrounds from those areas where pesticides would be banned.

Read more at NJSpotlight.com

Pesticides and Parkinson's: UCLA researchers uncover further proof of a link

Study suggests potential new target in fight against debilitating disease

By Mark Wheeler | January 03, 2013

For several years, neurologists at UCLA have been building a case that a link exists between pesticides and Parkinson's disease. To date, paraquat, maneb and ziram — common chemicals sprayed in California's Central Valley and elsewhere — have been **tied to increases in the disease**, not only among farmworkers but in individuals who simply lived or worked near fields and likely inhaled drifting particles.

Now, UCLA researchers have discovered a link between Parkinson's and another pesticide, benomyl, whose toxicological effects still linger some 10 years after the chemical was banned by the U.S. Environmental Protection Agency.

Even more significantly, the research suggests that the damaging series of events set in motion by benomyl may also occur in people with Parkinson's disease who were never exposed to the pesticide, according to Jeff Bronstein, senior author of the study and a professor of neurology at UCLA, and his colleagues.

Benomyl exposure, they say, starts a cascade of cellular events that may lead to Parkinson's. The pesticide prevents an enzyme called ALDH (aldehyde dehydrogenase) from keeping a lid on DOPAL, a toxin that naturally occurs in the brain. When left unchecked by ALDH, DOPAL accumulates, damages neurons and increases an individual's risk of developing Parkinson's.

The investigators believe their findings concerning benomyl may be generalized to all Parkinson's patients. Developing new drugs to protect ALDH activity, they say, may eventually help slow the progression of the disease, whether or not an individual has been exposed to pesticides.

The research is published in the current online edition of **Proceedings of the National Academy of Sciences**.

Parkinson's disease is a debilitating neurodegenerative disorder that affects millions worldwide. Its symptoms — including tremor, rigidity, and slowed movements and speech — increase with the progressive degeneration of neurons, primarily in a part of the mid-brain called the substantia nigra. This area normally produces dopamine, a neurotransmitter that allows cells to communicate, and damage to the mid-brain has been linked to the disease. Usually, by the time Parkinson's symptoms manifest themselves, more than half of these neurons, known as dopaminergic neurons, have already been lost.

While researchers have identified certain genetic variations that cause an inherited form of Parkinson's, only a small fraction of the disease can be blamed on genes, said the study's first author, Arthur G. Fitzmaurice, a postdoctoral scholar in Bronstein's laboratory.

"As a result, environmental factors almost certainly play an important role in this disorder," Fitzmaurice said. "Understanding the relevant mechanisms — particularly what causes the selective loss of dopaminergic neurons — may provide important clues to explain how the disease develops."

Benomyl was widely used in the U.S. for three decades until toxicological evidence revealed it could potentially lead to liver tumors, brain malformations, reproductive effects and carcinogenesis. It was banned in 2001.

The researchers wanted to explore whether there was a relationship between benomyl and Parkinson's, which would demonstrate the possibility of long-lasting toxicological effects from pesticide use, even a decade after chronic exposure. But because a direct causal relationship between the pesticide and Parkinson's can't be established by testing humans, the investigators sought to determine if exposure in experimental models could duplicate some of the pathologic features of the disease.

They first tested the effects of benomyl in cell cultures and confirmed that the pesticide damaged or destroyed dopaminergic neurons.

Next, they tested the pesticide in a zebrafish model of the disease. This freshwater fish is commonly used in research because it is easy to manipulate genetically, it develops rapidly and it is transparent, making the observation and measurement of biological processes much easier. By using a fluorescent dye and counting the neurons, the researchers discovered there was significant neuron loss in the fish — but only to the dopaminergic neurons. The other neurons were left unaffected.

Until now, evidence had pointed to one particular culprit — a protein called α-synuclein — in the development of Parkinson's. This protein, common to all Parkinson's patients, is thought to create

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a pathway to the disease when it binds together in "clumps" and becomes toxic, killing the brain's neurons. (See **UCLA research** using "molecular tweezers" to break up these toxic aggregations.)

The identification of ALDH activity now gives researchers another target to focus on in trying to stop this disease.

"We've known that in animal models and cell cultures, agricultural pesticides trigger a neurodegenerative process that leads to Parkinson's," said Bronstein, who directs the UCLA Movement Disorders Program. "And epidemiologic studies have consistently shown the disease occurs at high rates among farmers and in rural populations. Our work reinforces the hypothesis that pesticides may be partially responsible, and the discovery of this new pathway may be a new avenue for developing therapeutic drugs."

Other authors of the study included Lisa Barnhill, Hoa A. Lam, Aaron Lulla, Nigel T. Maidment, Niall P. Murphy, Kelley C. O'Donnell, Shannon L. Rhodes, Beate Ritz, Alvaro Sagastig and Mark C. Stahl, all of UCLA; John E. Casida of UC Berkeley; and Myles Cockburn of the University of Southern California. The authors declare no conflict of interest.

This work was funded in part by National Institute of Environmental Health Sciences grants P01ES016732, R01ES010544, 5R21ES16446-2 and U54ES012078; National Institute of Neurological Disorders and Stroke grant NS038367; the Veterans Affairs Healthcare System (Southwest Parkinson's Disease Research, Education, and Clinical Center); the Michael J. Fox Foundation; the Levine Foundation; and the Parkinson Alliance.

The UCLA Department of Neurology, with over 100 faculty members, encompasses more than 20 disease-related research programs, along with large clinical and teaching programs. These programs cover brain mapping and neuroimaging, movement disorders, Alzheimer's disease, multiple sclerosis, neurogenetics, nerve and muscle disorders, epilepsy, neuro-oncology, neurotology, neuropsychology, headaches and migraines, neurorehabilitation, and neurovascular disorders. The department ranks in the top two among its peers nationwide in National Institutes of Health funding.

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Concerns grow over children's pesticide exposure

Regulatory pendulum swings toward safety

By **Michael McCord**
news@seacoastonline.com
December 09, 2012 2:00 AM

The emergency and information hot line at the Northern New England Poison Center handles more than 30,000 requests every year.

The Maine-based center is the destination point for medical professionals and the general public on how to prevent and respond to poisonings in New Hampshire, Vermont and Maine. According the NNEPC figures from 2009, it handled more than 6,000 cases of suspected or real pediatric poisonings for newborns to age 5. More than 96 percent of those poisoning cases take place inside the home, with ingestions from prescription and over-the-county medications, cosmetics, household cleaners, and toy coatings topping the list of possible poisonings.

Due to a major policy report released last month by the American Academy of Pediatrics, the NNEPC may be fielding a different type of call in the coming years — potential long-term pesticide poisonings due to exposures in back yards or school and municipal playgrounds. The report said there is a growing body of evidence showing the relation between pesticides and negative health impacts to children.

"The past decade has seen an expansion of the epidemiologic evidence base supporting adverse effects after acute and chronic pesticide exposure in children," according to the report, "Pesticide Exposure in Children." The report and policy recommendations were published in the December issue of the journal Pediatrics. It said "prenatal and early childhood exposure to pesticides is associated with pediatric cancers, decreased cognitive function and behavioral problems."

According to the AAP, recognizing and reducing children's exposure to pesticides will require improved medical training, public health tracking, and regulatory approaches. The AAP recommends pediatricians become familiar with the effects of acute and chronic exposures to pesticides; learn what resources are available for both treatment of acute poisoning and addressing lower dose chronic exposures in children; and understand pesticide labeling.

Dr. Tomas Peredy, medical director of the NNEPC, said the AAP study was an important step and reflects a significant change in how general practitioners and pediatricians create patient assessments by including many more environmental factors.

"Typically, the factors of environmental importance of a diagnosis have been largely ignored by traditional practitioners because it wasn't part of their training," Peredy said. "Doctors have never asked these questions but now they are being encouraged and will be trained to ask about what pesticides are being used, what kind of house do you live in, the type of paint on the wall, how is it heated, what kind of household cleaners are used," he said.

The AAP report has moved closer to Canadian research efforts which, beginning more than a decade ago, found a scientific connection between pesticide use and early childhood diseases. These studies have prompted the ban of certain types of pesticides at certain locations in a number of municipalities and provinces in Canada.

"We have seen the regulatory pendulum swing towards safety in the past 50 years," Peredy said.

But there is still a lot unknown because so much of the data is dependent on "passive reporting" by manufacturers, regulators and medical professionals.

"I believe there has been a lot of noise in the data," he said. One of the loudest noises has been an unexplained rise in pediatric deaths that might increasingly be due to environmental factors.

Pediatricians should ask parents about pesticide use around the home and yard, offer guidance about safe storage and recommend parents choose lowest-harm approaches when considering pest control, the AAP report suggests. Pediatricians should also work with schools and government agencies to advocate for the least toxic methods of pest control, and to inform communities when pesticides are being used in the area. The policy statement also makes a number of recommendations for government, including specific recommendations related to marketing, labeling, use and safety of pesticides to minimize children's exposure.

In response to the AAP report, the pesticide industry's top agency said its products have been registered with the federal Environmental Protection Agency and that the industry's Integrated Pest Management system is the safest approach for consumers and their families.

"Consumers should feel confident that the application of these products is safe to both family and home when applied correctly by qualified and licensed pest professionals as directed on the product label," according to a statement from the National Pest Management Association. "The professional pest management industry's primary concern is for the health, safety and protection of its customers, the American public and especially our children. Common household pests pose significant health risks including the transmission of bacteria and disease, and can exacerbate respiratory issues such as allergies and asthma, particularly in small children."

Peredy said education is the most important step parents can take to protect their children.

"It's important to find credible sources of information so you can then make informed choices," he said. "Unfortunately, there are too many places that try to scare people and get them to donate to a cause."

Informed choices are critical, Peredy said, because exposure to pesticide or any type of toxic chemical is not always a black and white decision.

"There are two sides to this issue," he said in regard to the roles pesticides play in eradicating even more deadly types of pest dangers.

While children are more vulnerable to toxic exposures, parents and others might be surprised to learn that average adults carry more than 200 toxic chemical traces in their bodies.

"Everybody is different and many more people will die of a heart attack than from chemical or pesticide poisoning," Peredy said. "It's important to take reasonable steps to reduce exposure. For example, do we need to use pesticides to have flawless, green yards? Probably not."

Learn more

Northern New England Poison Center: www.nnepc.org

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The New York Times
Opinionator

DECEMBER 11, 2012, 8:26 PM

Pesticides: Now More Than Ever

By MARK BITTMAN

How quickly we forget.

After the publication of "Silent Spring," 50 years ago, we (scientists, environmental and health advocates, birdwatchers, citizens) managed to curb the use of pesticides[1] and our exposure to them -- only to see their application grow and grow to the point where American agriculture uses more of them than ever before.

And the threat is more acute than ever. While Rachel Carson[2] focused on their effect on "nature," it's become obvious that farmworkers need protection from direct exposure while applying chemicals to crops[3] . Less well known are the recent studies showing that routine, casual, continuing -- what you might call chronic -- exposure to pesticides is damaging not only to flora but to all creatures, including the one that habitually considers itself above it all: us.

As usual, there are catalysts for this column; in this case they number three.

I was impressed by a statement by the American Association of Pediatrics -- not exactly a radical organization -- warning parents of the dangers of pesticide and recommending that they try to reduce contact with them. The accompanying report calls the evidence "robust" for associations between pesticide exposure and cancer (specifically brain tumors and leukemia) and "adverse" neurodevelopment, including lowered I.Q., autism, and attention disorders and hyperactivity. (Alzheimer's, obviously not a pediatric concern, has also been linked to pesticide exposure.)

This reminded me of recently disclosed evidence showing that pesticide exposure in pregnant women may be obesogenic -- that is, it may cause their children to tend to become obese. The mechanism for this is beginning to be understood, and it's not entirely shocking, because many pesticides have been shown to be endocrine disruptors, changing gene expression patterns and causing unforeseen harm to health.

And that in turn prompted me to recall that genetically engineered crops, ostensibly designed in part to *reduce* the need for pesticides, have -- thanks to pesticide-resistant "superweeds" -- actually increased our pesticide use steadily over the last decade or so. (In general, fields growing crops using genetically engineered seeds use 24 percent more chemicals than those grown with conventional seeds.)

Although these all caught my attention, the most striking non-event of the last year -- decade, generation -- is how asleep at the wheel we have all been regarding pesticides. Because every human tested is found to have pesticides in his or her body fat. And because pesticides are found in nearly every stream in the United States, over 90 percent of wells, and -- in urban and agricultural areas -- over half the groundwater. So Department of Agriculture data show that the average American is exposed to 10 or

more pesticides every day, via diet and drinking water.

This shouldn't be surprising: pesticide drift is a term used to describe the phenomenon by which almost *all* pesticides -- 95 to 98 percent is the number I've seen -- wind up on or in something other than their intended target. (This means, of course, that in order to be effective more pesticides must be used than would be necessary if targeting were more accurate.)

Much damage has been done, and it's going to get worse before it gets better. The long-term solution is to reduce pesticide use, and the ways to do that include some of the typical laundry-list items that find their way into every "how to improve American agriculture" story: rotate crops, which reduces attacks by invasive species; employ integrated pest management, which basically means "think before you spray"; better regulate pesticides (and both increase funding for and eliminate the revolving door policy at the Environmental Protection Agency) with an eye toward protecting the most vulnerable -- that is, farmworkers, anyone of childbearing age, and especially women in their first trimester of pregnancy [4]; give farmers options for "conventional," that is, non-genetically engineered seeds (around 95 percent of all seeds for soy, corn and cotton contain a pesticide-resistant gene, which encourages wanton spraying); and in general move toward using more organic principles.

Note, please, that only this last strategy helps us protect ourselves and our families now. But although there's the usual disclaimer that not everyone can afford organic food, at a time when organic food has been under attack it's important to remember that part of the very reason for its existence is to bring food to the market that, if not free of all traces of pesticides -- remember drift -- at least contains none that have been applied intentionally. Charles Benbrook, in his excellent 2008 report "Simplifying the Pesticide Risk Equation: The Organic Option" estimates that organic food production would reduce our overall exposure to pesticides by 97 percent; that is, all but eliminate it.[5]

If I were of child-rearing age now, or the parent of young children, I would make every effort to buy organic food. If I couldn't do that, I would rely on the Environmental Working Group's guide to pesticides in produce. (Their "Dirty Dozen" lists those fruits and vegetables with highest pesticide residues, and their "Clean Fifteen" notes those that are lowest.) But regardless of age, we need to stay awake, and remember that the dangers of pesticides are as real now as they were half a century ago.

1. The word "pesticide" is used to include herbicides, fungicides, molluscicides (these kill snails and slugs) and a host of other "pests." Here's a definition from the E.P.A.

2. Nice piece by Margaret Atwood: "Why Rachel Carson Is a Saint."

3. Cancer, of course, is one awful risk of exposure. But there is the very real danger of anencephaly -- a birth defect in which the baby is born without parts of brain and/or skull -- in the children of farmworkers (both men and women) who were exposed to pesticides, even before pregnancy.

4. In a phone interview, Charles Benbrook, a professor at Washington State University, who is among the most articulate advocates of reducing pesticide use, said, "By building in sufficient margins of safety for that three-month window we are going to overprotect everyone else, which is great."

5. And the "Stanford study," which attracted attention for all the wrong reasons -- many reports focused on its finding of no discernible difference in nutritive quality between organic and conventional foods -- verified that the pesticide content of organic foods was vastly smaller than that of conventional.

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Rachel Was Wrong

Rachel Was Wrong

Agrochemicals' Benefit to Human Health and the Environment
By Angela Logomasini [1]
November 30, 2012

Full Document Available in PDF [2]

This year marks the 50th anniversary of biologist Rachel Carson's 1962 book, Silent Spring, which argued that man-made chemicals represented a grave threat to human health and the environment. Using harsh and unscientific rhetoric—which was rebuked in the journal Science magazine shortly after its publication—Carson postulated that man-made chemicals affect processes of the human body in "sinister and often deadly ways."

History has proven Carson's claims wrong. Contrary to her admonitions, a chemically caused cancer epidemic never came to pass. Researchers who identified environmental factors did not simply target trace chemical exposures as significant, but instead focused on major cancer causes such as tobacco and poor diets. In fact, people are living longer and healthier lives, cancer rates have declined even as chemical use has increased, and chemicals are not among the key causes of cancer.

As the world reexamines Carson's anti-pesticide legacy, this paper focuses on the importance of chemicals designed for crop production. These agrochemicals represent a subset of the many technologies and practices designed to promote high-yield farming— making it possible for farmers to increase food production per acre. Other technologies include biotechnology, better soil and water management, among other things. Policies that allow strategic development and application of such tools will continue to facilitate the Green Revolution and increase agriculture's ability to feed the world's growing population. In addition, high-yield agriculture reduces the amount of land necessary to meet those needs, thereby providing more land for conservation and biodiversity. The adverse impacts of pesticides on human health and the environment are often greatly exaggerated and history shows that these risks can be managed to ensure substantial net benefits.

Unfortunately, these benefits are at risk as Carson's legacy of misinformation lives on within the politically organized environmental movement. Green activists oppose strategic pesticide spraying to control deadly diseases like the West Nile virus and advocate "organic farming" using "natural chemicals," even though there is little evidence that organic farming makes food any healthier. As a result, regulatory trends around the world have supplanted wise management with heavy regulations and product bans. The cost and risks associated with bureaucratic regulations alone dampens the market for innovative new products, diminishes the supply of pest control options for farmers, and reduces their efficiency. The result is lower food production, higher food prices, and fewer environmental benefits.

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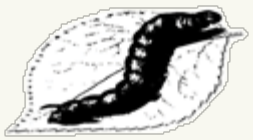

Several species of insects including the Western Spruce Budworm, Gypsy Moth, Western Pine Beetle, and the Eastern Spruce Budworm experience population cycles in which populations remain low for several years and are followed by outbreaks (population explosions). During non-outbreak years, these insects are usually confined to small areas where trees are subject to adverse conditions, such as drought, and are too weak to defend against the insects.

Population outbreaks of some insect species can have a devastating effect on the forest because the insects severely defoliate the trees or attack the bark. Vast areas of forest have been killed during outbreaks in the past.

The basic life cycle of outbreak insects is a rapid growth of the larvae (caterpillars) during a short period, usually in June to mid-July, then a pupae stage (cocoons) in which the larvae change into adults (moths, butterflies, beetles), and finally the adult stage in which breeding and egg-laying take place. In some species the pupae stage will last through the winter, in others, the adults emerge in the same summer.

DODGING DEATH

Insects are subject to a myriad of threats including adverse weather, disease, parasites, habitat destruction, insecticides, and predation from spiders, ants, beetles, mammals, reptiles, amphibians, and birds. In the face of these threats, insects have evolved with complex methods for survival.

Predator-avoidance strategies are as varied as the insect themselves. Some create poisonous chemicals in their bodies, while others may have spines. Caterpillars and pupae often match their surroundings' color patterns, and some even mimic the shapes of leaves or twigs. Other species hide in dead, curled leaves, on the undersides of green leaves, in crevices in bark, under leaf litter on the ground, or in flowers. Some have even evolved feeding patterns to avoid predators, such as feeding at night, foraging in hidden spots, or by living and feeding under the bark. Other snip off the leaves that they fed on during

the day in an attempt to trick birds that search for them on partially eaten leaves.

Birds are technologically advanced, highly motivated, extremely efficient, cost-effective insect pest controllers.

BIRDS KILL BUGS DEAD

For all of the tactics insects have developed to avoid predation, they still face many species of birds that are highly adapted, consummate insect-eaters:

- Birds are technologically advanced, highly motivated, extremely efficient, and cost-effective, insect-pest controllers.
- Outbreak insects are often infected with parasites. Many birds can identify the infected insects, and often choose to eat those that are not parasitized. By preying only on healthy individuals, birds greatly add to the effect of parasites in reducing insect populations.
- Birds can spread viral infections among the insect pests. By eating beetles and their viruses and by defecating these viruses along tree trunks, birds inadvertently spread it to bark beetles in the same tree and throughout the forest.
- The breeding season for birds occurs when the insect populations are their highest. During insect outbreaks, some birds will increase the number of offspring that they raise to take advantage of the abundant food supply.
- Birds are highly mobile and many species of birds will take advantage of a local insect outbreak by moving into the infected area. Some of these invasions can increase the normal numbers of birds in an area by 80 times.
- Birds like to feed large, juicy insects to their young. Relatively few insects survive past the egg and small, young larval stages. By feeding on large, late stages of caterpillars, and on pupae and adults, birds become a key force in depleting insect populations.
- Birds can alter their diets to feed almost exclusively on an insect pest during an outbreak, if it becomes profitable for them to do so. They can develop a search image for this new prey and can learn how to hunt for it more efficiently. Factors that help determine which insects birds select as prey are; insect density, body size and nutritional content, ease of capture, palatability (presence of chemical defenses or parasites), and density of potential competitors (other birds, mammals, ants, spiders, and predacious insects).
- Along with developing a search image, birds can change their foraging locations and foraging behavior in response to an insect outbreak. When a vast quantity of insects is found in the canopy of trees, many ground or shrub-dwelling birds may ascend into the canopy to feed. Similarly, during a hatch of flying insects, birds that generally feed by plucking caterpillars off leaves may instead fly after the insects and capture them in mid-air.
- Some foraging strategies of birds can alter an insect species' preferred habitat to such an extent that it kills many of those insects. For instance, by flaking bark off tree trunks, woodpeckers will expose bark beetles to temperature extremes, loss of moisture, parasites, and predators, all of which result in increased deaths.
- Birds can affect the evolution of insects by increasing the cost of avoidance

strategies to insects. Many of the adaptations can decrease the insect's efficiency in feeding and/or ability to lay the greatest, potential number of eggs.

BATTLING THE BUGS

Bird predation may play a critical role in reducing and/or maintaining low populations of insect prey during non-outbreak years and in significantly increasing the time between outbreaks. Studies have shown that birds can eat up to 98% of budworms and as much as 40% of non-outbreak species in eastern forests and can alter the population cycles and lower the population peaks when an outbreak does occur.

Increased numbers of birds in patches of forest with high insect pest density during a non-outbreak year may result in the elimination of those insects, and can alter the location and spread of a subsequent outbreak.

Orchards near woodlots tend to have a higher number of birds which result in a higher predation rate of agricultural insect-pests. In some orchards, birds eat up to 98% of the over-wintering Codling Moths, and can successfully control the pest population.

HELPING BIRDS HELP US

There is much that we can do to promote the effectiveness of birds as predators of harmful insect, thereby helping ourselves financially and environmentally.

For example, we can encourage birds to take up residence in an area. Purple Martins have long been known as one of the most affective mosquito repellents. Protecting an existing colony, or helping the establishment of one is an important management tool.

In Europe, there have been numerous, successful, programs to provide nest boxes for cavity-nesting birds such as the Pied Flycatcher. These birds can substantially reduce the insect pest population without the economic, health and environmental costs of pesticides.

Managing for snags in a forest or woodlot can greatly increase the number of woodpeckers and other cavity-nesting birds. These species are highly efficient predators of insects, and can have a marked effect on insect populations.

One of the most promising forms of insect control is Integrated Pest Management (IPM), in which birds play a key role. The success and economic feasibility of these programs may depend on the number and diversity of birds in an area. Providing hedgerows, woodlots, streamside habitat, and shade trees in an agricultural landscape can provide cover and nesting areas for birds.

Insect outbreaks can annually destroy hundreds of millions of dollars of agricultural and forest products. In 1921, Edward Forbush wrote that

> “forest and agricultural pests were reduced by 28% by birds resulting in savings of $444,000,000 in crop and timber losses.”

The value of birds in current dollars is beyond our imagination. Their value is

not just in their actual consumption of insect pests, but also in their role in keeping future outbreaks to a minimum.

FURTHER READING:

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