



JOHN ELIAS BALDACCI
GOVERNOR

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, FOOD AND RURAL RESOURCES
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0028

SETH H. BRADSTREET III
COMMISSIONER

HENRY JENNINGS
DIRECTOR

PRESS RELEASE

For Immediate Release
April 8, 2010

Contact: Paul Schlein, 207-287-2731
paul.b.schlein@maine.gov

Maine Legislature Revises Pesticide Notification Law

- **Pesticide Notification Registry Deadline Extended to June 15**
- **Board of Pesticides Control Holds Public Meetings, Seeks Input**

AUGUSTA—On April 1, Governor Baldacci signed Public Law 2009, Chapter 584, LD 1547, *An Act To Revise Notification Requirements for Pesticides Applications Using Aircraft or Air-carrier Equipment*. This new law was passed in response to concerns expressed by pesticide applicators, and shifts, to the Maine Board of Pesticides Control (BPC), the burden of informing the public of its right to be notified about pesticide spraying through a notification registry.

The law retains the neighbors' right to join the notification registry and receive notice about individual pesticide applications, made by airplanes, helicopters, mist blowers, or air-blast sprayers, throughout the growing season. The law gives the BPC the responsibility for developing and maintaining the registry, where those listed with property located within 1,320 feet (one-quarter mile) of an area being sprayed will have to be notified at least one day, but not more than seven days, before a pesticide application will be made. Exceptions are a notification distance of 500 feet for applications to fruit trees or Christmas trees, and non-agricultural spraying, such as for ticks, mosquitoes, and tree pests. These exemptions expire in January 2012.

The first edition of the 2010 registry was closed on March 15. However, names can be added to the 2010 registry until June 15. Anyone signing up between March 15 and June 15 will not qualify for notification until July 1, 2010. To sign up on the registry, go to the BPC website, www.thinkfirstspraylast.org, or call the BPC at 207-287-2731 for a registry application form.

The new law also directs the BPC to establish a comprehensive pesticide notification registry, incorporating the two registries that now exist into a single unit. This would allow anyone interested about nearby outdoor pesticide applications to be notified. The comprehensive registry would also be expanded to include other types of pesticide application equipment.

In an effort to obtain as much input from the public as possible on the development of a comprehensive registry, the BPC will be holding Public Information Gathering Meetings at various locations around the state. The first meeting will focus on the scope and operation of a comprehensive registry and will take place at the Board's next meeting on Friday, April 16, at the John E. Dority Safety & Performance Training Center, 10 Mountain Avenue, in Fairfield. Members of the public and pesticide applicators are encouraged to attend to offer their constructive ideas. Details of the meeting and directions to the location can be found at www.thinkfirstspraylast.org, or by calling the Board's office at 207-287-2731

The Maine Board of Pesticides Control is the lead state agency for pesticide regulation. It is an administrative unit of the Maine Department of Agriculture, Food and Rural Resources, with policy decisions made by a seven-member, public board.

###

PHONE: 207-287-2731
FAX: 207-287-7548

WWW.THINKFIRSTSPRAYLAST.ORG
PESTICIDES@MAINE.GOV



Thursday, April 15, 2010

Legislature Revises Pesticide Notification Law

Thursday, April 15, 2010

On April 1, Governor Baldacci signed a new law, passed in response to concerns expressed by pesticide applicators, that shifts the burden of informing the public of its right to be notified about pesticide spraying through a notification registry to the Maine Board of Pesticides Control (BPC).

The law retains the neighbors' right to join the notification registry and receive notice about individual pesticide applications, made by airplanes, helicopters, mist blowers, or air-blast sprayers, throughout the growing season. The law gives the BPC the responsibility for developing and maintaining the registry; those listed with property located within 1,320 feet (one-quarter mile) of an area being sprayed will have to be notified at least one day, but not more than seven days, before a pesticide application will be made. Exceptions are a notification distance of 500 feet for applications to fruit trees or Christmas trees, and non-agricultural spraying, such as for ticks, mosquitoes and tree pests. Those exemptions expire in January 2012.

The first edition of the 2010 registry was closed on March 15. However, names can be added to the 2010 registry until June 15. Anyone signing up between March 15 and June 15 will not qualify for notification until July 1, 2010. To sign up on the registry, go to the BPC website, www.thinkfirstspraylast.org, or call the BPC at 287-2731 for a registry application form.

The new law also directs the BPC to establish a comprehensive pesticide notification registry, incorporating the two registries that now exist into a single unit. That would allow anyone interested in nearby outdoor pesticide applications to be notified. The comprehensive registry would also be expanded to include other types of pesticide application equipment.

In order to obtain input from the public on the development of a comprehensive registry, the BPC will be holding public information meetings around the state. The first meeting will focus on the scope and operation of a comprehensive registry and will take place at the board's next meeting, on Friday, April 16, at the John E. Dority Safety & Performance Training Center, 10 Mountain Avenue, in Fairfield. Members of the public and pesticide applicators are encouraged to attend to offer ideas. Details of the meeting and directions to the location can be found at www.thinkfirstspraylast.org, or by calling the BPC's office at 287-2731.

The Maine Board of Pesticides Control, an administrative unit of the Maine Department of Agriculture, Food and Rural Resources, is the lead state agency for pesticide regulation.

Related Links

[BPC registry, online](#)

Maine Government News

[Back to current news.](#)

Maine Forest Service to Release Predator Beetles to Fight Hemlock Woolly Adelgid

May 4, 2010

Conservation

Allison Kanoti, (207) 287-3147

Jeanne Curran, (207) 287-3156

AUGUSTA, Maine – Maine Forest Service entomologists are releasing more predator beetles this week and next week in southern Maine in the continuing effort to fight hemlock woolly adelgid (HWA), a destructive aphid-like insect that kills eastern hemlock trees.

About 9,000 laboratory-reared beetles – a tiny lady beetle known formally as *Sasajiscymnus tsugae* (*St*) – will be released in Saco and York in new areas where they haven't previously been released, according to MFS officials.

In a process known as bio-control -- the use of one living organism to control another -- the lady beetles will be released at Ferry Beach State Park, which marks the northern most edge of the HWA-infested area, Allison Kanoti, MFS entomologist, said.

"It's good to release your bio-control in areas that have been recently colonized by HWA so their populations get to catch up the HWA's progressing populations," Kanoti said. "We're trying to get them out on the front line."

There are about 160,000 acres of hemlock-dominated forest in southern-coastal Maine and about 10,000 acres of infested hemlock in the area. HWA is an invasive species from Asia that kills eastern and Carolina hemlock but does not affect pine, spruce, fir or other conifers. It has been found in at least 16 states and was first found in Kittery in 2003. Since 2003 it has also been detected in the Maine towns of Eliot, Kennebunkport, Ogunquit, Saco, South Berwick, Wells and York.

HWA is distinguished by white, woolly masses found at the base of needles on the undersides of hemlock twigs. Infested trees also have off-color needles, often with a grayish cast, and premature needle drop and twig dieback. The adelgid often is accompanied by another invasive insect, elongate hemlock scale, which already has been found on planted hemlock in Kennebunkport and Kennebunk.

In an effort to control HWA, the Maine Forest Service began releasing the lady beetles in 2004, with almost 27,000 released to date. HWA adults and eggs are the favorite food of the lady beetles. The state agency also has been releasing another predatory insect, tooth-necked fungus beetles, known formally as *Laricobius nigrinus*, in the same locations where the lady beetles have been released, also to combat HWA. Almost 5,000 of the tiny fungus beetles, which also eat HWA, have been released since 2006.

"We're trying to create a suite of predators," Kanoti said. "We want more than one species."

The lady beetle is a black insect about 2 millimeters in length with fine golden hairs covering its whole body. The HWA adult, larvae and eggs are its favorite food.

The lady beetles are being purchased through a \$21,450 federal grant for bio-control from the USDA-Animal Plant Health Inspection Service. The beetles come in clumps of straw placed in deli containers, Kanoti said. Starting Wednesday, she and another Maine Department of Conservation staffer will transfer the straw clumps onto hemlock branches. Beetles remaining in the containers will be transferred carefully with paint brushes, allowing them to disperse through the trees.

So far, monitoring has shown that the lady beetles are surviving well and reproducing in the Kittery area. They also have been recovered several times in the York area, Kanoti said.

Recovery of the fungus beetle has been less successful, but nonetheless it has been found at one site in York, the entomologist said. "We know it's reproducing, but it's really not well established yet in Maine," she said.

Bio-control is a slow process, and so far, there has been no measurable decrease in HWA in Maine. "We expect it to be years before we see measurable impacts from these beetles' offspring," Kanoti said.

Unfortunately, the recent warm winters in Maine are causing the HWA to thrive, the scientist said. Usually, the entomologists like to see an over-winter mortality rate of over 90 percent; this past year, there was rate of 17 percent, she said.

HWA has continued to move, Kanoti acknowledged. "I really do expect that over the next few years, people in those communities where you don't normally find adelgid will find it," she said.

There are some things, however, that Maine residents can do to slow HWA's progression, Kanoti said. They can:

- Check their hemlock trees regularly, especially if they live within 20 miles of the coast, and call the MFS laboratory if they think they have found HWA;
- Take down bird feeders between April and August, when HWA and scale most easily are spread by birds. This also will lessen the presence of ticks around homes, Kanoti pointed out.
- In infested areas, time timber harvests and hemlock pruning and maintenance to coincide with the period when adelgid is less likely to spread, August through February.
- If you live in or near an infested town, prune hemlock foliage that might come in contact with delivery trucks, hikers, and other potential carriers of adelgid eggs and larvae.

To report suspected HWA, call the MFS lab at (207) 287-2431 or e-mail allison.m.kanoti@maine.gov.

For more information on HWA, go to: <http://www.maine.gov/doc/mfs/HemlockWoollyAdelgid.htm>

###

May 3, 2010

Farmers Cope With Roundup-Resistant Weeds

By **WILLIAM NEUMAN** and **ANDREW POLLACK**

DYERSBURG, Tenn. — For 15 years, Eddie Anderson, a farmer, has been a strict adherent of no-till agriculture, an environmentally friendly technique that all but eliminates plowing to curb erosion and the harmful runoff of fertilizers and pesticides.

But not this year.

On a recent afternoon here, Mr. Anderson watched as tractors crisscrossed a rolling field — plowing and mixing herbicides into the soil to kill weeds where soybeans will soon be planted.

Just as the heavy use of antibiotics contributed to the rise of drug-resistant supergerms, American farmers' near-ubiquitous use of the weedkiller Roundup has led to the rapid growth of tenacious new superweeds.

To fight them, Mr. Anderson and farmers throughout the East, Midwest and South are being forced to spray fields with more toxic herbicides, pull weeds by hand and return to more labor-intensive methods like regular plowing.

“We’re back to where we were 20 years ago,” said Mr. Anderson, who will plow about one-third of his 3,000 acres of soybean fields this spring, more than he has in years. “We’re trying to find out what works.”

Farm experts say that such efforts could lead to higher **food prices**, lower crop yields, rising farm costs and more pollution of land and water.

“It is the single largest threat to production agriculture that we have ever seen,” said Andrew Wargo III, the president of the Arkansas Association of Conservation Districts.

The first resistant species to pose a serious threat to agriculture was spotted in a Delaware soybean field in 2000. Since then, the problem has spread, with 10 resistant species in at least 22 states infesting millions of acres, predominantly soybeans, cotton and corn.

The superweeds could temper American agriculture's enthusiasm for some **genetically modified crops**. Soybeans, corn and cotton that are engineered to survive spraying with Roundup have become standard in American fields. However, if Roundup doesn't kill the weeds, farmers have little incentive to spend the extra money for the special seeds.

Roundup — originally made by **Monsanto** but now also sold by others under the generic name glyphosate — has been little short of a miracle chemical for farmers. It kills a broad spectrum of weeds, is easy and safe to work with, and breaks down quickly, reducing its environmental impact.

Sales took off in the late 1990s, after Monsanto created its brand of Roundup Ready crops that were genetically modified to tolerate the chemical, allowing farmers to spray their fields to kill the weeds while leaving the crop unharmed. Today, Roundup Ready crops account for about 90 percent of the soybeans and 70 percent of the corn and cotton grown in the United States.

But farmers sprayed so much Roundup that weeds quickly evolved to survive it. "What we're talking about here is Darwinian evolution in fast-forward," Mike Owen, a weed scientist at **Iowa State University**, said.

Now, Roundup-resistant weeds like horseweed and giant ragweed are forcing farmers to go back to more expensive techniques that they had long ago abandoned.

Mr. Anderson, the farmer, is wrestling with a particularly tenacious species of glyphosate-resistant pest called Palmer amaranth, or pigweed, whose resistant form began seriously infesting farms in western Tennessee only last year.

Pigweed can grow three inches a day and reach seven feet or more, choking out crops; it is so sturdy that it can damage harvesting equipment. In an attempt to kill the pest before it becomes that big, Mr. Anderson and his neighbors are plowing their fields and mixing herbicides into the soil.

That threatens to reverse one of the agricultural advances bolstered by the Roundup revolution: minimum-till farming. By combining Roundup and Roundup Ready crops, farmers did not have to plow under the weeds to control them. That reduced erosion, the runoff of chemicals into waterways and the use of fuel for tractors.

If frequent plowing becomes necessary again, "that is certainly a major concern for our environment," Ken Smith, a weed scientist at the **University of Arkansas**, said. In addition, some critics of genetically engineered crops say that the use of extra herbicides, including some old ones that are less environmentally tolerable than Roundup, belies the claims made by the biotechnology industry that its crops would be better for the environment.

“The biotech industry is taking us into a more pesticide-dependent agriculture when they’ve always promised, and we need to be going in, the opposite direction,” said Bill Freese, a science policy analyst for the Center for Food Safety in Washington.

So far, weed scientists estimate that the total amount of United States farmland afflicted by Roundup-resistant weeds is relatively small — seven million to 10 million acres, according to Ian Heap, director of the International Survey of Herbicide Resistant Weeds, which is financed by the agricultural chemical industry. There are roughly 170 million acres planted with corn, soybeans and cotton, the crops most affected.

Roundup-resistant weeds are also found in several other countries, including Australia, China and Brazil, according to the survey.

Monsanto, which once argued that resistance would not become a major problem, now cautions against exaggerating its impact. “It’s a serious issue, but it’s manageable,” said Rick Cole, who manages weed resistance issues in the United States for the company.

Of course, Monsanto stands to lose a lot of business if farmers use less Roundup and Roundup Ready seeds.

“You’re having to add another product with the Roundup to kill your weeds,” said Steve Doster, a corn and soybean farmer in Barnum, Iowa. “So then why are we buying the Roundup Ready product?”

Monsanto argues that Roundup still controls hundreds of weeds. But the company is concerned enough about the problem that it is taking the extraordinary step of subsidizing cotton farmers’ purchases of competing herbicides to supplement Roundup.

Monsanto and other agricultural biotech companies are also developing genetically engineered crops resistant to other herbicides.

Bayer is already selling cotton and soybeans resistant to glufosinate, another weedkiller. Monsanto’s newest corn is tolerant of both glyphosate and glufosinate, and the company is developing crops resistant to dicamba, an older pesticide. [Syngenta](#) is developing soybeans tolerant of its Callisto product. And [Dow Chemical](#) is developing corn and soybeans resistant to 2,4-D, a component of Agent Orange, the defoliant used in the Vietnam War.

Still, scientists and farmers say that glyphosate is a once-in-a-century discovery, and steps need to be taken to preserve its effectiveness.

Glyphosate “is as important for reliable global food production as penicillin is for battling

disease,” Stephen B. Powles, an Australian weed expert, wrote in a commentary in January in [The Proceedings of the National Academy of Sciences](#).

The [National Research Council](#), which advises the federal government on scientific matters, [sounded its own warning last month](#), saying that the emergence of resistant weeds jeopardized the substantial benefits that genetically engineered crops were providing to farmers and the environment.

Weed scientists are urging farmers to alternate glyphosate with other herbicides. But the price of glyphosate has been falling as competition increases from generic versions, encouraging farmers to keep relying on it.

Something needs to be done, said Louie Perry Jr., a cotton grower whose great-great-grandfather started his farm in Moultrie, Ga., in 1830.

Georgia has been one of the states hit hardest by Roundup-resistant pigweed, and Mr. Perry said the pest could pose as big a threat to cotton farming in the South as the beetle that devastated the industry in the early 20th century.

“If we don’t whip this thing, it’s going to be like the boll weevil did to cotton,” said Mr. Perry, who is also chairman of the Georgia Cotton Commission. “It will take it away.”

William Neuman reported from Dyersburg, Tenn., and Andrew Pollack from Los Angeles.

APRIL 20, 2010, 8:39 PM

The Dandelion King

By **ROBERT WRIGHT**

Robert Wright on culture, politics and world affairs.

Tags:

dandelions, herbicides, lawn care, property values, weeds

As I've told my neighbors, I feel bad about lowering the value of their property. I mean, it isn't my *goal* to have a front yard that, by standard reckoning, is unattractive. The unkept look of my lawn is just a byproduct of a conclusion I reached a few years ago: the war on weeds, though not unwinnable, isn't winnable at a morally acceptable cost.

I hope you'll agree with me. As the spring lawn-care season unfolds, I'd like to enlist you in the war on the war on weeds. I want you to aspire to make your yard look like my yard, which looks like this:

I know the idea takes some getting used to. But once you set your sights on this goal, reaching it is easy. All you have to do is nothing; nature takes over from there.

When I first bought a house, back in 1993, I was under the naïve impression that the Wimbledonlike lawns in my neighborhood were more or less natural. At most, I figured, I'd have to pull the occasional weed and sometimes toss grass seed onto a barren patch before a spring rain.

I soon learned that the carpets of green in suburbia are the product of assiduously applied chemicals. "Pre-emergent" herbicides are laid down more than once in the spring (mixed in with the fertilizer) to sabotage the germination of crabgrass, dandelions and other undesirables. If this fails, post-emergents may be applied en masse. And as the summer wears on, local pockets of resistance can be wiped out with a spray canister of poison.

At this point you're probably expecting to hear an indictment of herbicides — a list of damning data that ranges from human respiratory ailments to tumors in laboratory rats. Hate to disappoint you, but one reason I decided to go AWOL in the war on weeds is that *I don't have time to figure this stuff out*.

Sure, I've done enough Googling to conclude that if you deploy the standard arsenal of lawn-care chemicals, you may well pose a threat to grass-eating pets or dirt-eating toddlers or, further downstream, water drinkers in general. (Certainly some of the most common herbicide ingredients — such as [glyphosate](#) and [atrazine](#) — aren't exactly mother's milk.) But my anti-herbicide database consists mainly of spending a few decades on this planet. When people use chemicals, I've noticed, unanticipated downsides are more likely than unanticipated upsides, and the downsides often aren't evident for a long time. I'm playing it safe.

As I've already suggested, my eco-friendly ethos dovetails suspiciously with my laziness. Waging a war on weeds takes more time and energy (or money, if you outsource it) than just mowing the lawn every once in awhile. (I'm not so radical as to oppose lawn mowing, though I recommend push or

electric mowers over gas guzzlers.)

I certainly applaud less lazy people who craft eco-friendly carpets of green in labor-intensive ways — researching and implementing elaborate “organic” weed-suppressant strategies. And I have nothing against people who can hire a battalion of weed pullers. But for me, the practical way to have an eco-friendly lawn is to have a weedy lawn.

The problem is that this approach doesn’t leave me with a wholly clear conscience. Sure, I can tell myself that I’m helping neighborhood pets and any straying toddlers — and maybe water drinkers in general. But then there’s the aforementioned effect on local property values.

An economist might frame my dilemma in terms of “negative externalities” — unwelcome effects that my behavior has on people other than me. Polluting the environment is a negative externality, but so is lowering the value of my neighbor’s home. How to choose between dueling externalities?

The preference for Wimbledonlike lawns is not, I submit, a law of nature.

In the long run, I hope, I won’t have to.

The first of the two externalities — releasing dubious chemicals into the environment — is the inevitable result of using them on your lawn; you can’t negate this negative externality without rewriting the laws of nature. But the second externality — the depressing effect on local property values — results from something that may be mutable: prevailing opinion about what makes for an attractive lawn. The preference for Wimbledonlike lawns is not, I submit, a law of nature.

I mean, sure, an expanse of green probably does appeal to the typical human’s sense of beauty. But so does a snowcapped Alpine peak — and I’m definitely not putting one of those in my front yard. The question isn’t whether carpets of green are intrinsically attractive, but whether the more natural alternative — my front yard — is intrinsically *unattractive*.

I think not. If it were, why would hikers pause, look out on an unruly expanse of earth and reflect on how great it feels to escape civilization for the great outdoors? Moreover, given our species’ long history of traversing various unkept landscapes, how could natural selection have imbued us with an intense aversion to them?

So I think it’s possible in principle to engineer a new ethos that allows us to fight chemical negative externalities without creating aesthetic and hence financial ones. Maybe someday suburban neighborhoods will consist of lawns that look like mine, and everyone will admire them.

The first step is for you to look at your neighborhood anew. Next time you see an unblemished expanse of grass, think about the chemicals that probably got dumped in your vicinity to create it. Are you grateful for that?

And next time you see a yardful of sprouting dandelions, note that they look remarkably like things we call “flowers.” And later, when the flowers turn into fluff balls, look closely at one of those fluff balls and ask yourself whether it’s really so unattractive. Meanwhile, absorb the fact that the lawn you’re looking at is doing nothing to harm pets, toddlers or people in general.

Wouldn’t you like to live next to a yard like that? How much would that be worth to you?

Postscript: *Though I’m obviously not the first to jump on the wild-lawn bandwagon, my cursory*

Googling hasn't unearthed a single group to steer readers to — or, for that matter, a catchy name or acronym for the movement. (Such as GWOTWOW: Global War On The War On Weeds.)

Commenters are encouraged so submit nominees. Meanwhile, here are a few links to relevant sites or organizations: [SafeLawns.org](#), run by Paul Tukey, who has been described as “the godfather of organic lawn care”; the [National Coalition for Pesticide-Free Lawns](#) (where “pesticides” include both herbicides and insecticides); and — if you want to go well beyond benign neglect and turn your lawn into a sea of beautiful wildflowers — there's [this](#).

May 3

A GREEN THUMBS-UP: Gardeners tout eco-friendly practices as good for the yard, and the soul

BY CASSANDRA SPRATLING

DETROIT -- Start talking about a green lawn, and most people think you're talking about the color of the grass.

But Lillian Dean of Huntington Woods, Mich., is not most people.

When Dean talks about a green lawn and garden, she's not just talking about aesthetics. She's talking about an environmentally friendly space where grass, flowers, trees and vegetables grow in healthy soil that doesn't harm the Earth.

"Step-by-step, the idea that environmental responsibility rests with every person is being infused in our society," says Dean, coordinator of Healthy Lawns and Gardens for the Southeastern Oakland County (Mich.) Water Authority.

"People are looking for things they can do, both as families and individuals. I'm seeing it across the spectrum of ages."

As spring yard cleanups and early garden work begin, local gardeners and landscape enthusiasts are grappling with the notion of green gardening, perhaps the biggest gardening trend of the past decade and the most challenging. How do you get your flowers and yard to look good without the aid of pesticides and other harsh chemicals?

It takes lots of dedication and education.

"It's important because when pesticides and harmful chemicals get into our air and water, it affects our health and quality of life," says Dean, 63. "The truth is that pesticides kill pests, and they have different degrees of toxicity to humans, to birds, to pollinators, bees and butterflies, to aquatic life and other animals.

"Some people are very, very sensitive to even small levels of pesticides in the air or soil," she says. "Others can tolerate a bit more."

It's a message Dean has been spreading for more than a decade. But in recent years, there's been evidence that Michiganders are not only hearing the message of experts like Dean, but also heeding it.

Attendance at workshops Dean organizes is rising. A recent two-hour workshop drew more than 100 people to the Oak Park (Mich.) Community Center. "It used to be you had to push your way in. Now, people are really open to hearing about it," she says.

Retailers, manufacturers and lawn service companies are also responding to consumer demands for environmentally healthy products and services.

Several southeast Michigan retailers post stickers alerting buyers that certain fertilizers are Earth-friendly.

There are three keys to environmentally friendly lawns and gardens, Dean and others say. Mow so the grass is at least 3 inches high and leave the clippings where they fall; use fertilizer that's free of pesticides and contains slow-release nitrogen and low or no phosphorous, and water your garden appropriately in the early morning hours, with small amounts of water, several times a week.

Michigan State University Extension turf specialist Ron Calhoun says that people striving for green yards need accurate information. He says using synthetic fertilizers in a yard instead of an organic variety doesn't automatically spell doom for the waterways.

"What matters most is using the proper product at the proper time at the proper rate, no matter what it is," Calhoun says.

"One of the simplest, smartest things you can do when applying fertilizer is get any rogue particles off the sidewalk, driveway and street and back on the lawn. Fertilizer granules on these surfaces can easily get washed into the storm drain and can end up polluting rivers and lakes.

"On the other hand," he says, "a dense lawn, as a result of proper mowing, fertilization and irrigation, will effectively limit sediment movement in urban landscapes."

People striving for healthy lawns without pesticides and other chemicals need patience, Calhoun says.

"Unfortunately, dramatic results don't occur overnight. We know that proper lawn care practices will reduce broadleaf weed populations by 60 percent to 75 percent over four to six years. Most folks are not patient enough to wait for these results. It does work, but it takes time."

Rick Thomas, a lawn and garden manager at Ace Hardware in Troy, Mich., says he still sees the greatest demand for quick fixes and fast-acting chemicals.

But, he says, there's a growing market of products for people willing to put in the time. "There are a lot of products available now that didn't exist even a few years ago."

Dean makes it a point to include native plants in her yard. They have roots that help nourish the lawn and attract beneficial insects. A swamp milkweed, with its clusters of tiny purple-pink flowers, attracts Monarch butterflies and hummingbirds.

Two bins of compost help fertilize her yard. And a rain barrel -- purchased last year -- captures and filters rain she uses to water her garden. But, Dean cautions, rain barrels don't necessarily cut your water bill.

"They're more a gardener's convenience because you can simply dip out the water you need, and they're cute," she says. "They're kind of a badge of honor."

Amy Lumley of Oak Park, Ill., says her friends call her yard, which attracts a variety of birds and butterflies, a nature center.

She fertilizes her lawn, flowers and vegetables with compost and incorporates a variety of native plants. She also has a rain garden.

Growing in popularity, rain gardens are shallow depressions in the ground that are designed to funnel rain water runoff into the garden instead of into drains and sewer systems.

For Lumley, gardening in an eco-friendly way is not just good for the environment, it's soothing to her soul.

"I come home from work, have a beverage and just sit in the yard and unwind as I listen to the birds," Lumley says. "To me that's very healing to the spirit."

In Royal Oak, Mich., Barbara Johnson is also a green gardening fan; some might even call the 78-year-old a pioneer in the field.

Johnson was first introduced to healthy gardening by her mother. Now her yard includes composting bins, several native plants, two rain gardens and an assortment of roses and shrubs. And if someone pulls up beside you to tell you you're cutting your lawn too short, it just might be Johnson, a retired elementary school teacher who readily admits she'll stop and teach a mini-lesson to folks she sees abusing their lawns.

"I don't buy fertilizer," she says. "My plants make their own food. And I don't get weeds or unwelcome insects."

Distributed by McClatchy-Tribune Information Services.

Find this article at:

http://www.kjonline.com/reallife/a-green-thumbs-up-gardeners-tout-eco-friendly-practices-as-good-for-the-yard-and-the-soul_2010-05-01.html