Maine Board of Pesticides Control

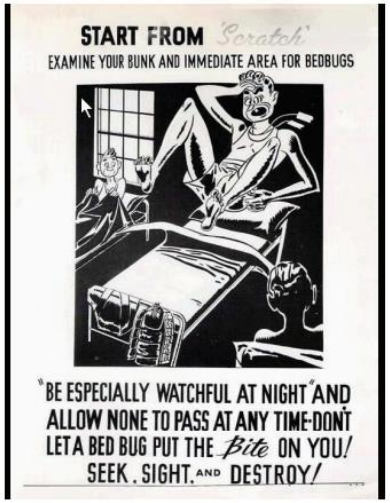
2014 BPC Update

287-2731

www.thinkfirstspraylast.org

Bed bugs - remember the good old days

Fig. 11. Fumigating with hydrogen cyanide. The operator is opening a can of Zyklon discoids in an army barracks infested with bed bugs during WWII (courtesy of E.J. Gerberg).



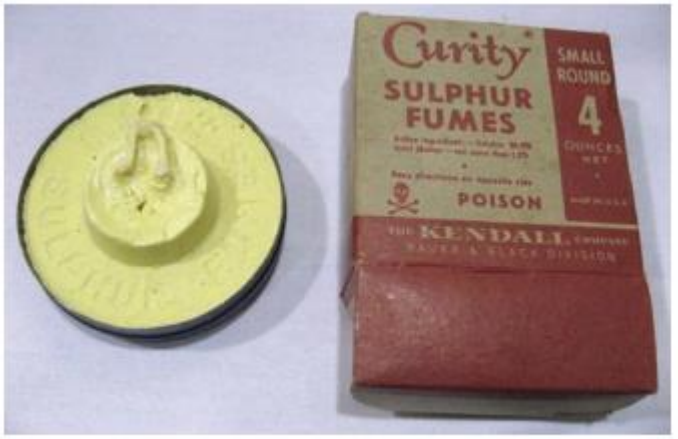
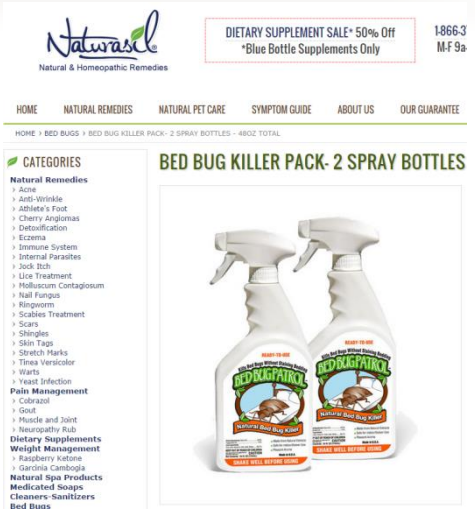


Fig. 10. Sulfur often was used as a fumigant for bed bugs. Ready-made candles were a convenient form for use by householders.

Images from http://entsoc.org/PDF/2011/AE-Potter-spring2011.pdf

Bed Bug Issues

- We have seen a number of cases involving hotels/motels where proprietors have applied pesticides without a license
- We have also seen a number of landlords doing the same
- We appreciate all you can do to educate these folks about the licensing requirements and we do take anonymous complaints



PCT
PEST CONTROL TECHNOLOGY
MARKET LEADERSHIP

BED BUGS SUCK!

Make Money with *ActiveGuar*

Wednesday, September 24, 2014

[Bed Bug Supplement] Natural Pesticides for Bed Bug Control: Do They Work?

SUPPLEMENT - BED BUG SUPPLEMENT

Researchers at Rutgers University tested nine commonly available biopesticides against a field strain of bed bugs.

NARINDERPAL SINGH, CHANGLU WANG AND RICHARD COOPER | March 26, 2013

In recent years, there has been a movement of "green pest management," focused on the use of natural and low-toxicity materials instead of conventional synthetic insecticides. The resurgence of bed bugs further bolstered enthusiasm for natural products. In particular, essential oil-based pesticides, referred to in this article as biopesticides, flourished in the consumer market.

Many natural pesticides qualify for exemption under section 25(b) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), where manufacturers are not required to provide efficacy data for registration. With lax regulation and a low cost of development, manufacturers can roll out new products quickly, making bold claims such as, "the best bed bug treatment you can get on the market today," or that a consumer can "create a barrier against bed bugs." One product promises "the same results delivered by pest control service without evacuation."

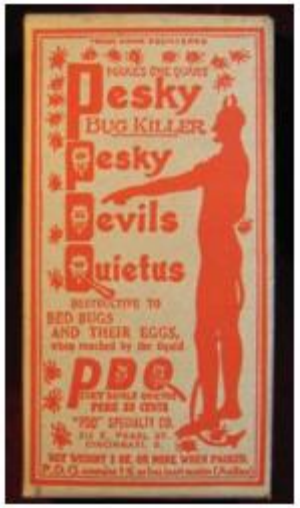
These products are rarely adopted by PMPs because until present, there has been no scientific data supporting such claims. Meanwhile, the public often falls victim to the lure of such

- https://www.pctonline.com/pct0313-biopesticides-testing-bed-bugs.aspx

NATURAL PESTICIDES AND TWO SYNTHETIC INSECTICIDES THAT WERE USED IN BIOASSAYS			
No.	Product Trade Name	Active Ingredients	Manufacturer/Distributor
1	EcoRaider	Geraniol (1%), Cedar Extract (1%) and Sodium Lauryl Sulfate (2%)	Reneotech, North Bergen, N.J.
2	Stop Bugging Me	2-Phenethyl Propionate (3%), Cinnamon Oil (0.1%), Eugenol (0.5%), Geraniol (0.2%) and Sodium Lauryl Sulfate (0.5%)	Rocasuba, Mashpee, Mass.
3	Bed Bug Patrol	Clove Oil (0.003%), Peppermint Oil (1%) and Sodium Lauryl Sulfate (1.3%)	Nature's Innovation, Buford, Ga.
4	Bed Bug Bully	Mint Oil (0.25%), Clove Oil (0.3%), Citronella Oil (0.4%) and Rosemary Oil (0.4%)	Optimal Chemical, Tamarac, Fla.
5	Bed Bug Fix	2-Phenethyl Propionate (2%), Geraniol (1%), Cedar oil (0.3%), Eugenol (0.3%) and Citronella Oil (0.2%)	NuSafe Floor Solutions, Walton, Ky.
6	Rest Assured	2-Phenethyl Propionate (2%), Geraniol (1%), Sodium Lauryl Sulfate (1%) and Eugenol (0.3%)	ES & P Global, Miami, Fla.
7	EcoEXEMPT IC2	Rosemary Oil (10%) and Peppermint Oil (2%)	EcoSMART Technologies, Franklin, Tenn.
8	Green Rest Easy	Sodium Lauryl Sulfate (5%), Cinnamon Oil (4%), Lemongrass Oil (0.3%), Clove Oil (0.3%) and Peppermint Oil (0.3%)	RMB Group, Stuart, Fla.
9	Essentria	2-Phenethyl Propionate (3%), Geraniol (2%), Rosemary Oil (1.5%) and Peppermint Oil (1.5%)	Envincio, Cary, N.C.
10	Bed Bug 911	Sodium Lauryl Sulfate (3%), Sodium Chloride (1%) and Citric Acid (0.2%)	Bedbug 911, Brooklyn, N.Y.
11	Eradicator	Sodium Lauryl Sulfate (1.5%), Sodium Chloride (0.5%) and Potassium Sorbate (0.06%)	Visionbay, Norcross, Ga.
12	Temprid SC	Imidacloprid (21%) and Beta-Cyfluthrin (10.5%)	Bayer Environmental Science, RTP, N.C.
13	Demand CS	Lambda-Cyhalothrin (9.8%)	Syngenta Crop Protection, Greensboro, N.C.

Results of the study

- EcoRaider and Bed Bug Patrol were the most effective biopesticides in both tests
  - EcoRaider caused 100 percent mortality after 10 days in both tests
  - Bed Bug Patrol caused an average of 92 percent and 91 percent mortality after 10 days in the first and second experiment, respectively
  - Neither of these two products caused more than 75 percent mortality at three days after treatment
- Other natural pesticides including: Essentria, Green Rest Easy, Eradicator, Bed Bug 911, Rest Assured, Bed Bug Fix, Stop Bugging Me and EcoEXEMPT IC2 caused less than 50 percent mortality after 10 days
- The mortality in the untreated control in all experiments was less than 5 percent at 10 days after treatment



Images from http://entsoc.org/PDF/2011/AE-Potter-spring2011.pdf

Four Sizes Available

Image Gallery

Click Button for Images of Each Size

bed bug 911

Bed Bug 911 Unscented Natural Bed Bug Spray

No Odors, No Stains, Eliminates Bed Bugs on Contact!
Safe to Spray Anywhere, Even on Your Pillow!

Options

- Item No. 4221, 3 oz TSA Approved Travel Size, Each, $5.95
- Item No. 4221-4PK, 3 oz TSA Approved Travel Size, 4-Pack, $19.99
- Item No. 4221-12, 3 oz TSA Approved Travel Size, 12-Pack, $53.99
- Item No. 4223, 24 oz Bottle, Each, $19.95
- Item No. 4223-4PK, 24 oz Bottle, 4-Pack, $69.99
- Item No. 4224, 128 oz Gallon Refill, Each, $69.95
- Item No. 4224-4PK, 128 oz Gallon Refill, 4-Pack, $249.99

Enter Quantity of Selected Option --> 1 Add to Cart

FREE GROUND DELIVERY!
Orders $50+, Within Contiguous US

Guaranteed Factory New! No Returns/Refunds Once Items Shipped

Description

Entomologist Tested to Eliminate Bed Bugs

Bed Bug Exterminator is scientifically proven to effectively eradicate bed bugs, dust mites, fleas, and many other insects on contact. Attacks and destroys insects without toxic and ineffective pesticides. Use for active outbreaks and prevention. Bed Bug 911 Exterminator is an natural, biodegradable, 100% green product that effectively eradicates bed bugs. The natural ingredients in Bed Bug 911 Exterminator eliminate bed bugs, dust mites and other insects. This spray is safe to spray on your pillow and won't leave any odor or stains. Great to use at home as well since it will not disperse bed bugs into the walls; rather, it will eliminate any bed bugs it comes in contact with. Bed Bug 911 Exterminator provides DIY extermination that is safe and effective.

Bed Bug 911 Natural Bed Bug Spray:

- Non toxic, 100% green product, unscented & stain free.
- Uses natural ingredients to actively exterminate bugs.
- Safe around children, pets, homes and hospitals.
- Use on luggage, mattresses, linens, bed spreads, pillows, furniture, and flooring.
- Made in the USA.

https://www.youtube.com/watch?v=7UA4AMbO7dk

FTC Takes Action Against Companies Marketing Allegedly Unproven Natural Bed Bug and Head Lice Treatments

Cedar, Cinnamon, Lemon Grass, Peppermint, and Clove Oil? There's No Proof They Will Eradicate Bed Bugs, Agency Says

FOR RELEASE

September 10, 2012

TAGS: Consumer Protection

The Federal Trade Commission filed deceptive advertising charges against two marketers of remedies for bed bug infestations, who allegedly failed to back up overhyped claims that they could prevent and eliminate infestations using natural ingredients, such as cinnamon and cedar oil. One marketer also allegedly made misleading claims that its products were effective against head lice.

In one of the two cases, RMB Group, LLC and its principals have agreed to settle the charges relating to their "Rest Easy" bed bug products. In the case against Cedarcide Industries, Inc. and others, challenging their marketing of "Best Yet!" bed bug and head lice treatments, the defendants have not settled, and the FTC is beginning litigation against them.

What is the Maine registration status for these (25B) products

Registered

- Green Rest Easy – Registered
- Essentria – 9 products all registered
- Eradicator Multi-Purpose Insect Spray
- Bed Bug Fix RTU Insecticide (Spray)
- EcoRaider – *Registration in progress*

Not Registered

- Bed Bug 911 – never registered
- Rest Assured - never registered
- Bed Bug Bully - never registered
- Bed Bug Patrol Luggage Spray RTU – last reg 2011
- Bed Bug Patrol Natural Bed Bug Killer RTU – last reg 2012
- EcoExempt IC2 Insecticide Concentrate – last reg 2011
- Stop Bugging Me – 4 products all last reg in 2012

EPA-Registered Bed Bug Products

EPA has developed a search tool that can help you choose an EPA-registered bed bug product that meets your needs. The products listed in this search tool are those that can be purchased by any consumer. There are other products that are only available for purchase and use by specially trained individuals. You can search for a product by its:

- Name
- Company
- EPA-registration number
- Where you can use the pesticide
- Pesticide type

Resources

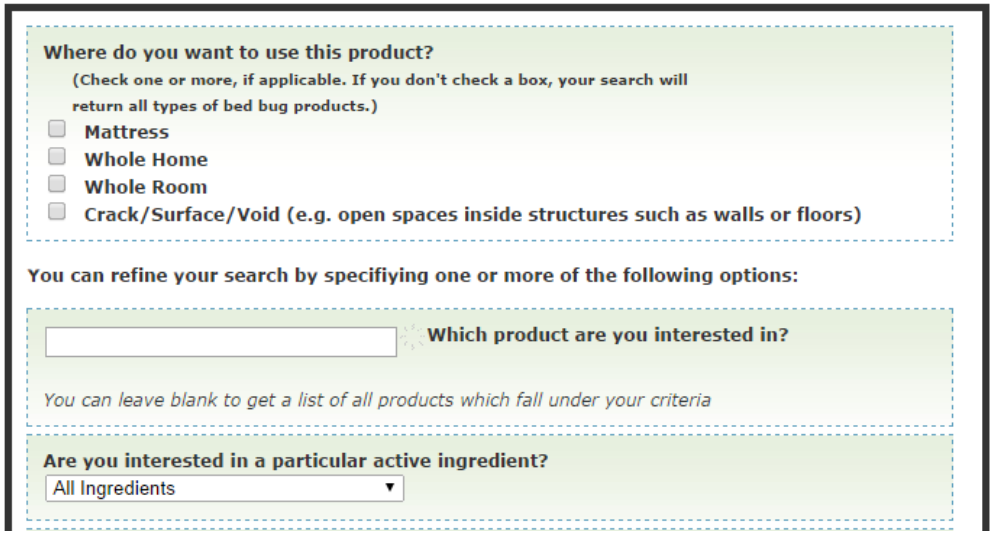
- Bed Bug Main Page
- Top Ten Bed Bugs Tips
- Joint Statement on Bed Bug Control

Bed Bug Search Tool

Enter the information as described in each section. The results will depend on how broadly or narrowly you define your categories.

As with all pest control situations, be sure to use a product that fits your needs, never use products indoors that are not approved for indoor use, and ensure that label directions are followed. For example, be sure to consider where you want to treat your bed bug infestation.

Foggers and bug bombs ***should not*** be used as the only method to attempt to control bed bugs.



http://cfpub.epa.gov/oppref/bedbug/

Pollinator Protection

- Bee kills are in the news! Legislators are asking for bans or moratoriums all over the country
- All applicators must be extremely careful
- This case involved “Safari” which is dinotefuran

Tuesd

Portland Tribune

Pesticide causes largest mass bumblebee death on record

Created on Friday, 21 June 2013 11:00 | Written by Lori Hall |

0 Comments

Toll climbs to 50,000, affected 300 wild colonies

by: LORI HALL - Crews of three to four used boom lifts to drape large pieces of netting over the trees.

Tens of thousands of bumblebees and other pollinators were found dead under trees at the Target store in Wilsonville on Saturday. The discovery was a strange and ironic start to National Pollinator Week, a symbolic annual event intended to raise public awareness about the plight of bees.

The massive bee kill was documented on Monday by Rich Hatfield, a conservation biologist with the Portland-based Xerces Society for Invertebrate Conservation. Several shoppers at the store called him to report that there were dead and dying bees all over the parking lot. Specifically, the bees were clustered under dozens of European linden trees. The Xerces Society is internationally known for its work on bee conservation

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Earl Blumenauer proposes moratorium on use of pesticides harming bees

Created on Friday, 12 July 2013 15:30 | Written by Steve Law |

0 Comments

by: LORI HALL - Nets were placed over European linden trees near Wilsonville Target after massive bumblebee deaths there traced to pesticide.

U.S. Rep. Earl Blumenauer, D-Portland, introduced a bill in the U.S. House of Representatives on Friday that would place a national moratorium on the use of certain pesticides suspected of harming bees.

Blumenauer’s measure would restrict use of neonicotinoid pesticides, a class that includes the chemical compound suspected of causing the massive bumblebee deaths near the Target store in Wilsonville last month. An estimated 50,000 bees died on or around European Linden trees near the store that state agriculture inspectors determined had been sprayed with an insecticide known as dinotefuran, sold commercially as Safari.

The ag department later announced temporary restrictions in Oregon on the sale of 18 pesticides that contain dinotefuran.

In April, the European Union created continent-wide restrictions on the use of bee-harming pesticides. A majority of member nations voted to place a two-year ban on the use of three neonicotinoids suspected of doing harm to bees, according to the

What a PMP should do to reduce or prevent pollinator harm?

- Read and follow label directions!
- Understand the fate of each pesticide you use outdoors
- Develop and follow BMPs (above and beyond the label directions)

Some clues are found on the label

ImiBloc™ 70 DF GROUP 4 INSECTICIDE

Termiticide/Insecticide

Not For Use in New York State

For use by individuals/firms licensed or registered by the state to apply termiticide products. States may have more restrictive requirements regarding qualifications of persons using this product. Consult the structural pest control regulatory agency of your state prior to use of this product. For prevention or control of subterranean termites, drywood termites, dampwood termites, carpenter ants, and other wood-infesting insects.

ACTIVE INGREDIENT	
IMIDACLOPRID – 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine	70.0%
OTHER INGREDIENTS	30.0%
TOTAL	100.0%

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Contact the Rocky Mountain Poison Center at 1-866-673-6671 for emergency medical treatment information.	
NOTE TO PHYSICIAN: No specific antidote is available. Treat symptomatically.	

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300.

UPI
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
1-800-438-6071

EPA Reg. No. 70506-158
EPA Est. No. 61842-CA-001
Net Contents: 10 ounces

Whenever you see this…

ENVIRONMENTAL HAZARDS

This product is highly toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Apply this product only as specified on this label. Extreme care must be taken to avoid runoff. Apply only to soil or other fill substrate that will accept the solution at the specified rate. Do not treat soil that is saturated or frozen, or in any conditions where runoff or movement from the treatment area (site) is likely to occur.

This product is highly toxic to bees exposed to direct treatment or residues on blooming plants/crops or weeds. Do not apply this product or allow it to drift to blooming plants/crops or weeds if bees are foraging in or adjacent to the treatment area.

Other label "Red Flags"

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

NOTE: Not For Use in New York State

Do not apply this product, by any application method, to linden, basswood or other *Tilia* species in the State of Oregon.

Treat soil, turf or non-flowering ground cover next to the structure where ants are trailing or may find food or harborage. Do not allow product to contact plants in bloom if bees are foraging in the treatment area. Apply to flower, shrub or ornamental plant beds next to the structure where ants may find food or forage. To control ants tunneling in soil apply a 0.05% to 0.1% solution as a drench or soil injection at intervals to establish a continuous treated zone. Treat along the edge of walls, driveways or other hard surfaces where ants are tunneling beneath the surface.

PRECAUTIONS FOR APPLICATIONS

After treatment, plug and fill all holes in concrete slab areas of the building with a suitable sealant.

Do not apply solution until location of heat pipes, ducts, water and sewer lines and electrical conduits are known and identified. Take care to avoid puncturing and injection into these structural elements.

Do not plant for the purpose of consumption, edible plants into the treated areas of soil.

Neonicotinoids Aren't the Only Pesticides Feeling Pressure

Any pest management professional who relies on the outdoor use of pesticides may be in for a bumpy future.

Bee health has focused attention and regulatory change on neonicotinoid pesticides, but "we believe that the conversation will become more use-pattern oriented over the coming years, and ultimately impact other chemistries as well," said Gene Harrington, vice president of government affairs at the National Pest Management Association, in an email to NPMA committee members.

All pesticides applied outdoors have potential to come under scrutiny, said Rick Bell, vice president of government affairs and industry stewardship, Arrow Exterminators, Atlanta. That includes products for perimeter and mosquito control. It could be a "tsunami" if people turn their focus to other pesticide products used outdoors, he said.

NPMA's Gene Harrington says other chemistries may be affected in the future as the debate over bee health continues to evolve.

In July, the European Union voted to restrict the use of fipronil as a seed treatment for two years, saying the pesticide poses an acute risk to Europe's honey bee population.

Fipronil is undergoing registration review by the U.S. Environmental Protection Agency, a process that should be complete by 2017. Karen Reardon, communications director for Responsible Industry for a Sound Environment, said fipronil is not facing the same scrutiny by EPA as neonicotinoids and doesn't expect the agency to impose pollinator protection language. Pest management professionals' use patterns of fipronil are not attractive to pollinators, she said.

Sulfoxaflor, a recently registered agricultural chemical that will have some ornamental applications, also is taking heat. National beekeeping organizations and beekeepers filed suit against EPA in an attempt to get the pesticide's registration repealed. Plaintiffs claim sulfoxaflor is "highly toxic" to honey bees and other insect pollinators.

Gary Hamlin, public affairs manager at Dow AgroSciences, said sulfoxaflor has the most "bee protective label" of any insecticide registered by EPA in recent years.

A new study by researchers at the U.S. Department of Agriculture and University of Maryland found 35 different pesticides in pollen samples, and that low levels of pesticide exposure from crop pollination make honey bees more susceptible to the deadly gut parasite, *Nosema ceranae*. Pollen samples contained an average of nine different pesticides from classes of oxadiazines, neonicotinoids, carbamates, cyclodienes, formamidines, organophosphates and pyrethroids. Most frequently found in the samples were fungicides.

Not just neonicotinoids

10058333

LESCO CrossCheck plus MULTI-INSECTICIDE

Net Contents: 1 Gallon
#091624

To control pests indoors and outdoors on residential, institutional, public, commercial, and industrial buildings, greenhouses, food handling establishments, and lawns, ornamentals, parks, recreational areas and athletic fields.

When used as a termiticide, individuals/firms must be licensed by the state to apply termiticide products. States may have more restrictive requirements regarding qualifications of persons using this product. Consult the pest control regulatory agency of your state prior to use of this product.

Provides up to 1 month residual control of house flies. Kills fleas for up to 3 months.

EPA Reg. No. 279-3206-10404
EPA Est. 70815-GA-001

Active Ingredient:	**By Wt.**
Bifenthrin*	7.9%
Other Ingredients:	92.1%
	100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

Environmental Hazards

This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters. Care should be used when spraying to avoid fish and reptile pets in/around ornamental ponds.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow to drift to blooming crops if bees are visiting the treatment area.

TERMIDOR® SC
TERMITICIDE/INSECTICIDE

ACTIVE INGREDIENT:

fipronil: 5-amino-1-(2,6-dichloro-4-(trifluoromethyl) phenyl)-4-((1,R,S)-(trifluoromethyl)sulfinyl) -1-H-pyrazole-3-carbonitrile	9.1%
OTHER INGREDIENTS:	90.9%
TOTAL:	100.0%

One gallon of Termidor® SC termiticide/insecticide contains 0.8 lb of fipronil.

EPA Reg. No. 7969-210 **EPA Est. No.**

Cross Check Plus - Trunks only?

MOSQUITO CONTROL

To control adult mosquitoes outdoors on residential, institutional, public, commercial and industrial buildings, and lawns, ornamentals, parks, recreational areas and athletic fields.

Apply LESCO CrossCheck Plus Multi-Insecticide for mosquito control at an application rate of 0.33 to 1.0 fluid oz. LESCO CrossCheck Plus Multi-Insecticide per gallon of water (0.07 to 0.22 lbs. bifenthrin/acre), and apply at the rate of one gallon of dilution per 1,000 square feet as a general spray (refer to the LESCO CrossCheck Plus Multi-Insecticide Dilution Chart). Use the high rate for residual control of mosquitoes. Use this product for control of mosquitoes that may potentially transmit malaria, and arboviruses (West Nile fever, dengue fever, Eastern equine encephalitis, and St. Louis encephalitis).

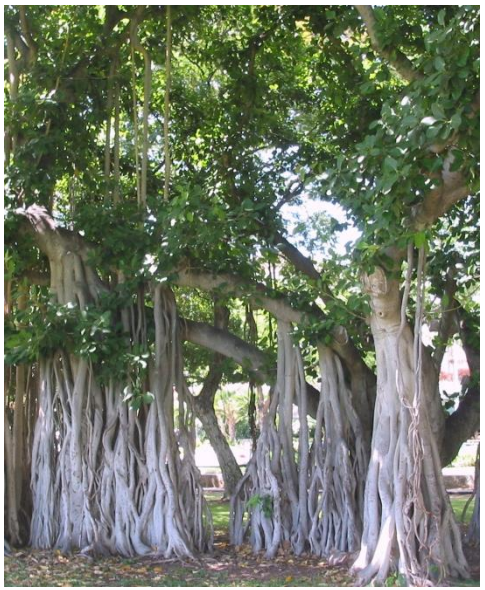
Apply as a residual spray to outside surfaces of buildings including but not limited to, exterior siding, foundations, porches, window frames, eaves, patios, garages, refuse dumps, lawns such as grass areas adjacent to or around private homes, duplexes, townhouses, condominiums, house trailers, apartment complexes, carports, fence lines, storage sheds, barns, and other commercial, residential and non commercial structures, soil, trunk of woody ornamentals, trees, shrubs, ground cover, bedding plants, foliage plants, flowers, non-bearing fruit and nut trees urban areas, parks, campsites, athletic fields, playgrounds, recreational and overgrown waste areas, roadsides and other areas where mosquitoes are found. May also be applied to non-bearing crops or perennial crops that will not produce harvestable raw agricultural commodities during the season of application.

Use the high rate for heavy pest infestation, quicker knockdown, or longer residual control. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure, or if there are signs of renewed insect activity. For the lower use rates, repeat application should be limited to no more than once per seven days. For the high use rate of 1.0 fluid oz. LESCO CrossCheck Plus Multi-Insecticide per gallon of water, do not apply more than once per four weeks.

Apply with hand-held and back pack sprayers or mist blowers, ground sprayers, power sprayers, truck mounted hydraulic sprayers or mist blowers. Do not apply by air or with hand held or truck mounted cold aerosol ULV sprayers and thermal fogging devices. For best results apply when the mosquitoes are most active. Application during the cooler hours of the night or early mornings is recommended.

Do not apply more than 1.0 fluid oz. of LESCO CrossCheck Plus Multi-Insecticide per 1,000 square feet (equivalent to 0.22 lbs. bifenthrin/acre) per application.

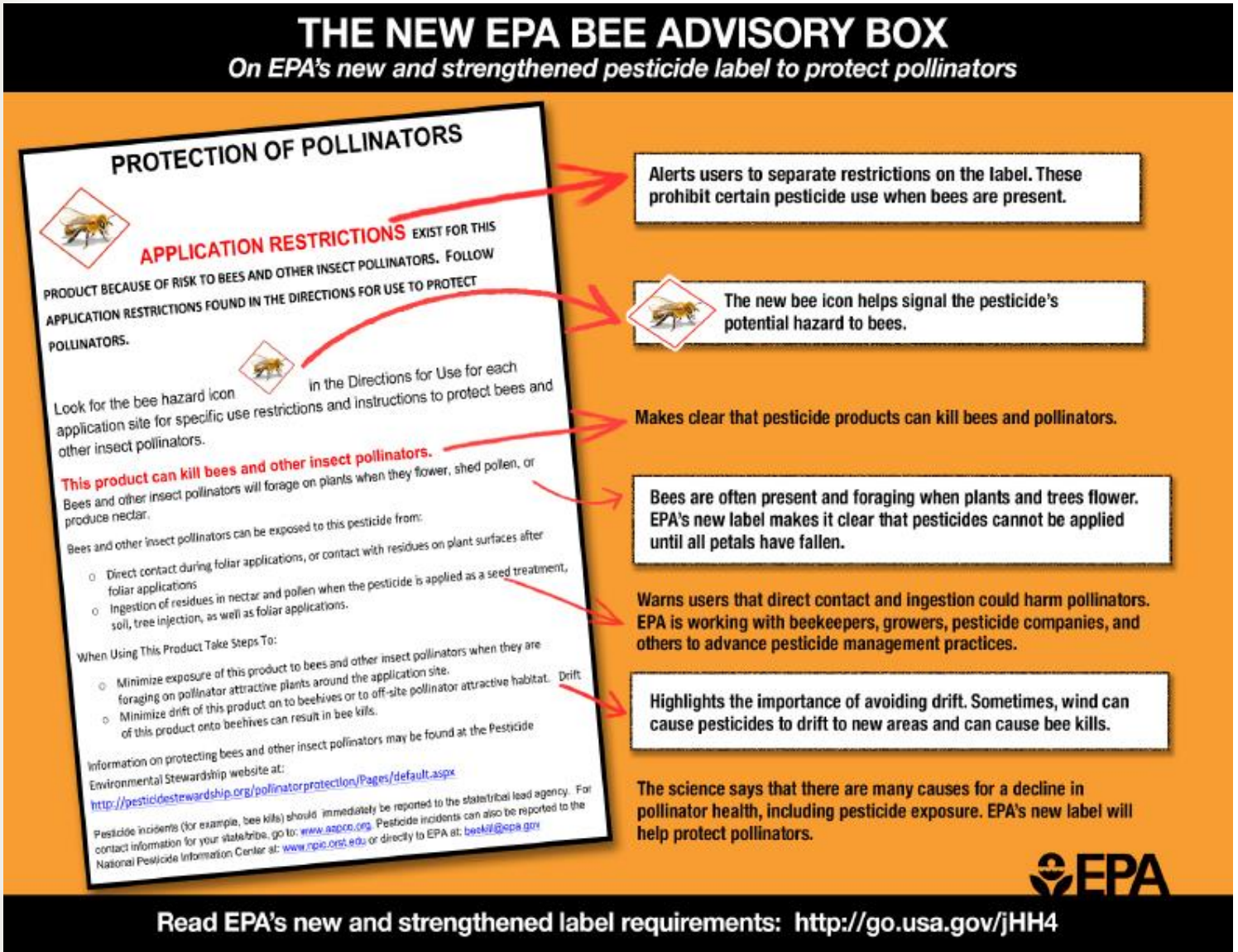
Do not apply when wind speed exceeds 10 MPH.



Look for the bee icon on new labels

- Products with acute or residual toxicity to pollinators will have the bee icon on their labels
- The new warnings will be next to that icon

Pollinator Protection



PROTECTION OF POLLINATORS

APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.

Look for the bee hazard icon  in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at:
http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov

New use directions – Non-Ag products

3. **Non-Agricultural Products:**

Do not apply [insert name of product] while bees are foraging. Do not apply [insert name of product] to plants that are flowering. Only apply after all flower petals have fallen off.

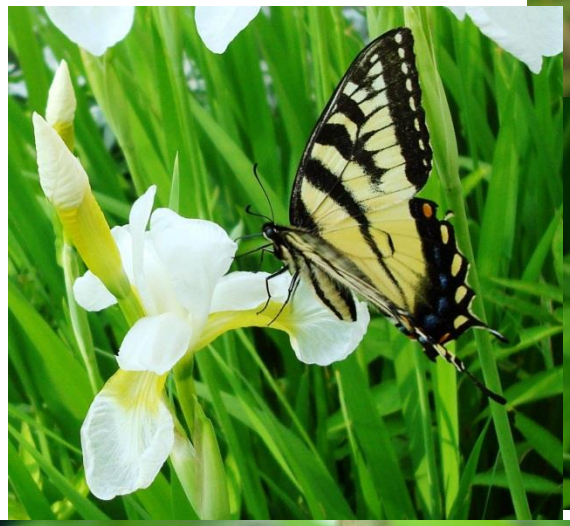
Even pesticides approved for organic grower use can be highly toxic to pollinators

Toxicity of Common Organic-Approved Pesticides to Pollinators

PESTICIDE	NON-TOXIC	LOW TOXICITY	HIGHLY TOXIC
Insecticides/Repellants/Pest Barriers			
Bacillus thuringiensis (Bt)			
Beauveria bassiana			
Cydia pomonella granulosis			
Diatomaceous Earth			
Garlic			
Insecticidal Soap			
Kaolin Clay			
Neem			
Horticultural Oil			
Pyrethrins			
Rotenone			
Sabadilla			
Spinosad			
Herbicides/Plant Growth Regulators/Adjuvants			
Adjuvants			
Corn Gluten			
Gibberellic Acid			
Horticultural Vinegar			
Fungicides			
Copper			
Copper Sulfate			
Lime Sulfur			
Sulfur			

Soaps and Oils, only when directly sprayed upon the pollinator

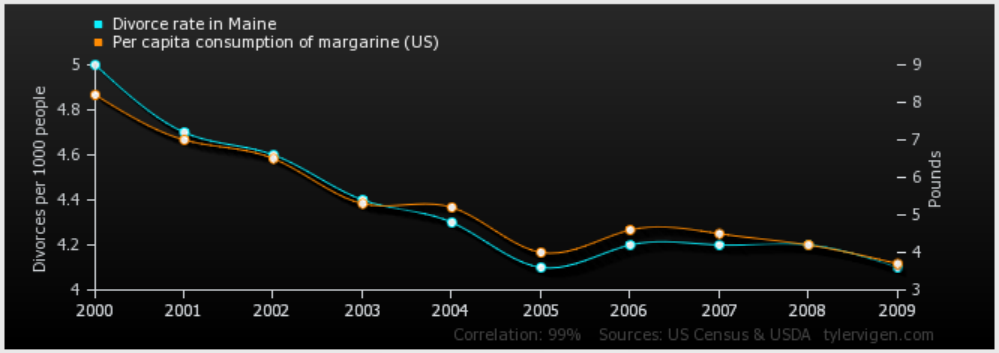
Keep in mind – Pollinators are not just honeybees



Don’t over interpret study results reported in the news!

- Correlation ≠ causation

Divorce rate in Maine
correlates with
Per capita consumption of margarine (US)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Divorce rate in Maine *Divorces per 1000 people (US Census)*	5	4.7	4.6	4.4	4.3	4.1	4.2	4.2	4.2	4.1
Per capita consumption of margarine (US) *Pounds (USDA)*	8.2	7	6.5	5.3	5.2	4	4.6	4.5	4.2	3.7

Correlation: 0.992558

Permalink - Mark as interesting (1,565) - Not interesting (367)

http://www.tylervigen.com/

Association vs. Cause & Effect

- No matter how "good" the stats look, causal association cannot be determined through one study alone
- Weight of the evidence
  - Number of studies?
  - Quality?

Association

- An association between an exposure and an outcome is said to exist when one is found more commonly in the presence of the other

Determining Causal Relationship

- Time sequence
- Statistical association
- Strength of the association
- Dose-response relationship
- Consistency of the association
- Coherence
- Predictive performance
- EPI evidence in agreement with animal toxicity studies

Legislature approves new mosquito management rules

- **Found in Title 7 and 22**
  - It is the policy of the State to work to find and implement ways to prevent mosquito borne diseases in a manner that minimizes risks to humans and the environment.
  - Based on monitoring, DHHS may declare a mosquito-borne disease public health threat
  - State may undertake emergency activities to reduce disease-carrying mosquito populations

Legislature approves new mosquito management rules

- State shall use a combination of:
  - the lowest risk, most effective integrated pest management techniques
  - science-based technology, and
- shall consult with officials from affected municipalities to decide how to manage the problem

Legislature approves new mosquito management rules

- DACF is the lead agency on mosquito management
- DACF not BPC can conduct or contract for mosquito management activities
- Must study; plan and arrange for cooperation between towns and state agencies

Legislature approves new mosquito management rules

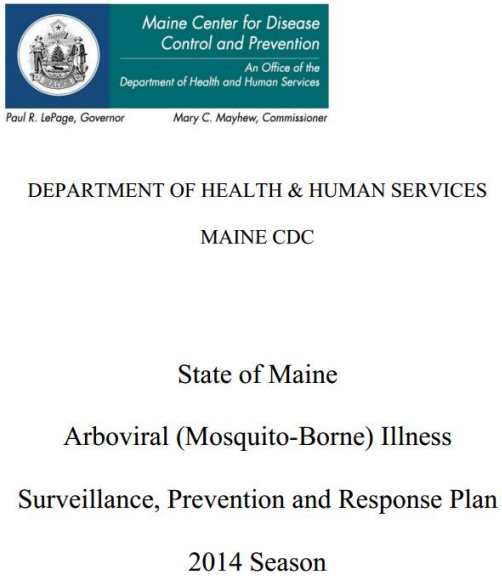
- DACF must also:
  - Consult with U-Maine to develop plans
  - Disseminate public information on mosquito reduction strategies
  - Implement a mosquito management response plan

Legislature approves new mosquito management rules

- The Legislature also started a “Maine Mosquito Management Fund”
  - They kicked in all of $500 to start the fund
  - Allows the DACF to take in monies and then provide grants to towns or U-Maine, etc.

Legislature approves new mosquito management rules

- DHHS is the lead agency for monitoring and declaring a public health threat
  - The Maine CDC shall create and maintain an arboviral illness surveillance, prevention and response plan
  - The DHHS Commissioner can declare a public health threat following the plan guidance



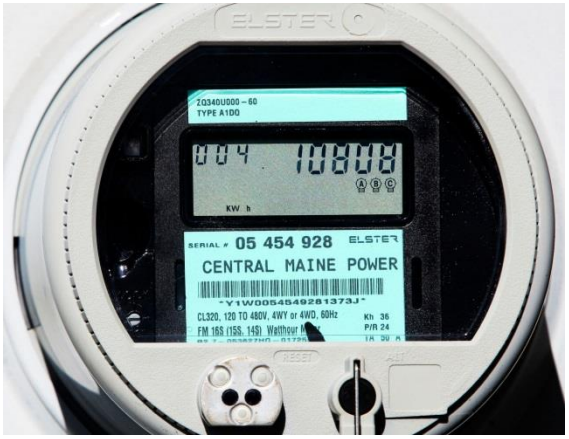
http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/index.shtml

Vector borne disease control rules

- **What areas can a town treat if they have licensed employees or hire a licensed company?**
  - **Town owned property**
  - **When Maine CDC has identified a threat and recommends control, the town can treat private property after providing notice using multiple forms of publicity and providing an "opt out" option for ground based applications**
  - **If done by aerial application, the town must take affirmative steps to avoid treating areas excluded from treatment by BPC policy (farms, fish hatcheries, etc.)**

Current rulemaking proposals

- Chapter 20 - Add a requirement for applicators making outdoor treatments to residential properties to positively identify application sites in a manner approved by the Board.
  - Already in policy.
- Chapter 22 - Eliminate the requirement of identifying sensitive areas for commercial applications conducted under categories 6A, 6B and 7E
  - Applications conducted under category 6A and to sidewalks and trails under category 6B will require the applicator to implement a drift management plan.
- Chapter 28 - Add to the list of categories that require posting: 6B except when making applications to sidewalks and trails, and 7E.
  - Require advance notice be published in a newspaper for applications conducted under 6A, and to sidewalks and trails under 6B.
  - This aligns with the proposed amendments to Chapter 22, eliminating the requirement for mapping sensitive areas, in lieu of posting or public notice.



Current rulemaking proposals

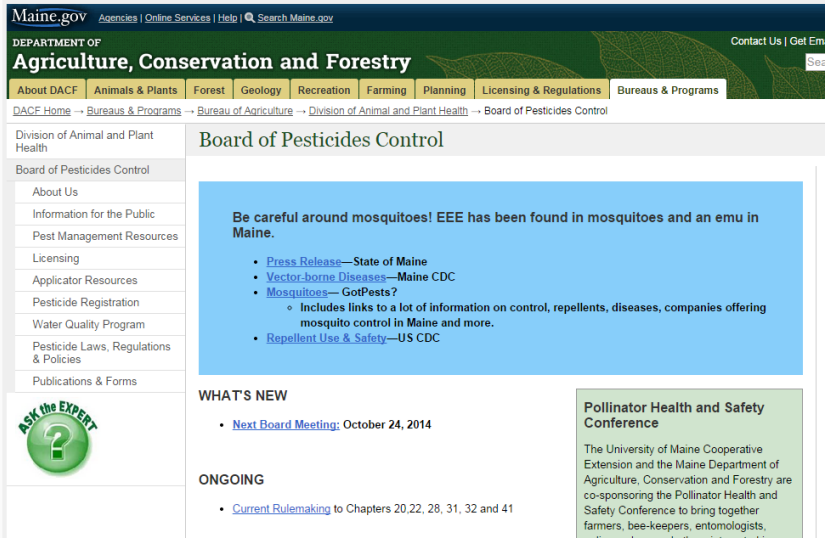
- **Chapter 31** - Three amendments are proposed:
- Clarify that certain applications are exempt from commercial licensing requirements. These are currently in policy:
  - Adults applying repellents to children with the written consent of parents/guardians;
  - Persons installing antimicrobial metal hardware.
  - Exempt aerial applicators certified in other states from passing a written regulation exam and allow for issuance of reciprocal licensing when the staff determines that an urgent pest issue exists and when staff verbally reviews pertinent Maine laws with the applicator

- **Chapters 31, 32 & 33** - Shorten the time period a person must wait before re-taking an exam they have failed to 6 days

- **Chapter 41** - Amend Section 3 to eliminate the restrictions on hexazinone relative to pesticide distributors and air-assisted application equipment

Current rulemaking proposals

- Public hearing was August 8, 2014
  - Board has developed responses to the comments
  - Next step will be to approve the final language at their October 24 meeting in Augusta
  - Final adoption could happen at their December 5 meeting
    - Changes to Chapter 28 are major substantive and have to be reviewed and approved by the Legislature.

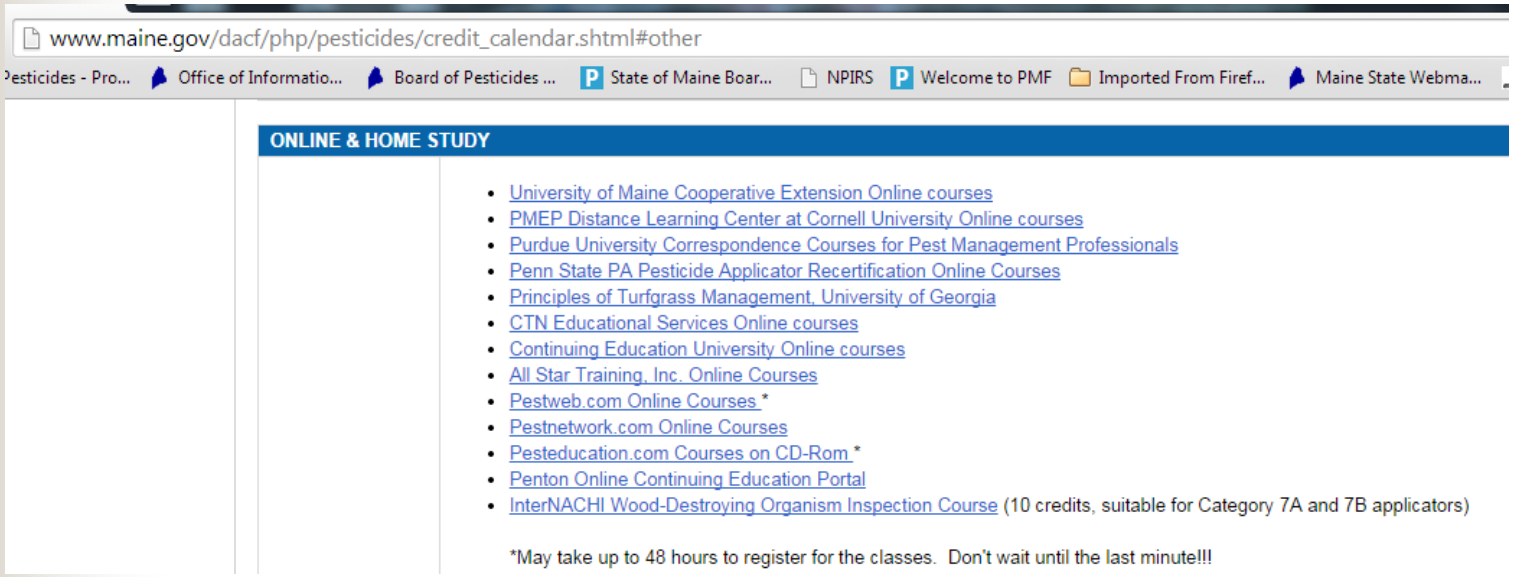


Private Applicator of General Use Pesticides

- Public Law 2011, Chapter 169 requires anyone producing and selling over $1,000 worth of agricultural plants or plant products/year for human consumption to obtain a pesticide applicator license by April 1, 2015
- Growers must obtain an Agricultural Basic, or
- Private Pesticide Applicator license

Online recertification opportunities

- There are over 80 online programs approved
- You can access them from the BPC website
- http://www.maine.gov/dacf/php/pesticides/credit_calendar.shtml#other



BPC phasing out snail mail delivery

- Help us cut costs and
- Help us get training information to you faster
- Please provide us with your current email and update our records whenever your email address changes

That’s All Folks

- Questions