



# *Pesticide Notes*

A bi-monthly newsletter from the  
**Michigan State University**  
**Pesticide Education Program**



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## New Bulletins from the Pesticide Education Program

The feature article of this issue is a new bulletin, MSU Extension Bulletin E-2182, *Reading a Pesticide Label*, developed by the Pesticide Education Program. This bulletin provides a more detailed sample pesticide label and explanation of how signal words are determined, Worker Protection Standards, and pesticide classification. The target audience for this bulletin is both general use and restricted use pesticide applicators and registered technicians. Because of the increased demand for Spanish language materials, this bulletin will be available in Spanish within the next 2 months.

The Pesticide Education Program has also developed a bulletin targeted at homeowners using pesticides on their garden, home, and pets (MSU Extension Bulletin E-2725, *What Does A Pesticide Label Say?*). This bulletin defines a pesticide, a pesticide label, signal words, why it is important to read a pesticide label, and how to tell a legal pesticide from an illegal pesticide. There is also a sample pesticide label that details and explains the important parts of a pesticide label.

These new pesticide bulletins are available free of charge to Michigan residents from the MSU Bulletin Office (517-355-0240).



### Chemical Update

The following information provides registration status of particular pesticides and should not be considered as pesticide recommendations by MSU Extension.



#### Chemical Update

*Products are listed by trade name with active ingredient name and manufacturer following. Please note that multiple manufacturers may make the same product. A change in the registration, formulation, or label of a product from one manufacturer **may not apply** to the same product made by another manufacturer. If you have any doubts about the status of a pesticide, please read a current label and/or check with the manufacturer directly.*

#### Residue Tolerances:

##### Insecticides

- Bio Mite (gerani oil/citronellol; Natural Plant Products)—petitioned for exemption from a tolerance. Product designed to control mites in hort/ag crops.
- Confirm (tebufenozide; Rohm & Haas)—residue tolerance established on tree nuts at 0.1 ppm.
- Danitol (fenprothrin; Valent)—residue tolerances established on cukes and squash at 0.5 ppm, based on work by the IR-4 Project.
- Karate (lambda-cyhalothrin; Zeneca)—residue tolerances proposed on stone and pome fruits, and canola seed.
- Trigard (cyromazine; Novartis)—residue tolerances established on green onions at 0.1 ppm, tomatoes and radish at 0.5 ppm, potatoes at 0.8 ppm, lima beans, peppers, cukes, and mushrooms at 1 ppm, dry onions at 2 ppm, and leafy vegetables at 7 ppm.

##### Herbicides

- Discover (clodinafop-propargyl; Novartis)—residue tolerance proposed in wheat.
- Liberty (glufosinate; Aventis)—residue tolerances established on canola and sugarbeets.

##### Fungicides

- Acrobat (dimethomorph; AmCy)—residue tolerance proposed on imported grapes and raisins.
- Flint (trifloxystrobin; Novartis)—residue tolerance proposed on fruiting vegetables, potatoes, sugarbeets, and wheat.
- Mancozeb—time-limited tolerance of 2 ppm extended on ginseng. Tolerance now expires Dec. 2001.
- Rally (myclobutanil; Rohm & Haas)—residue tolerances established on asparagus (0.02ppm), caneberries (2 ppm), cucurbit vgs (0.2 ppm), currants (3 ppm), gooseberry (2 ppm), mint (3 ppm), snap beans (1 ppm) strawberry (0.5 ppm), tomato (0.3 ppm). Tolerances established as a result of the IR-4 Program.
- Ronilan (vinclozolin; BASF)—residue tolerance proposed on canola and succulent beans.



## Label Additions/Changes:

### Insecticides

- Admire (imidacloprid; Bayer)—grape phylloxera suppression added to the label.
- Avid (abamectin; Novartis)—aphids, thrips, and whiteflies on ornamentals added to the label.
- Cinnamite (cinnamaldehyde; Mycotech)—use on roses (greenhouse, beds, and container) added to the label, based on work by the IR-4 Project.
- Confirm (tebufenozide; Rohm & Haas)—use on cranberry and turnip added to the label.
- Gaucho 480F (imidacloprid; Gustafson)—seed treatment on barley, canola, corn, sorghum, and wheat added to the label.
- Phaser (endosulfan; Aventis)—application to potato via chemigation added to the label.
- Success (spinosad; Dow AgroSci)—use on corn vgs, dry beans, peas, potatoes, tuberous vgs, and tree farms added to the label.
- Ultra Fine Spray Oil (mineral oil; Sunoco)—control of mites on cranberry added to label.



### Herbicides

- Nortron (ethofumesate; Aventis)—control of bluegrass in sugarbeet added to label.
- Roundup (glyphosate; Monsanto)—cut stump applications in forestry site prep and renovation added to label.
- Select (clethodim; Valent)—received label to tank mix with Betamix or Betanex on sugarbeets in Michigan (and several other states).
- Select (clethodim; Valent)—received label to tank mix with Buctril on seedling alfalfa in Michigan (and several other states).

### Fungicides

- Bayleton 50 (triadimefon; Bayer)—control of gray spot in turf added to label.
- Bravo Ultrex (chlorothalonil; Zeneca)—control of black knot of cherry and plum added to the label.
- Champ 2F (copper hydroxide; Agtrol)—grape phomopsis control added to label.
- Cleary 3336 (thiophanate methyl; Cleary)—can add use on begonias to the label, based on work by the IR-4 Project.
- Daconil Ultrex (chlorothalonil; Zeneca)—added control of algae to the label.
- Topsoin M (thiophanate; Elf Atochem)—suppression of vine decline in cukes added to the label.

## Label Deletions/Cancellations:

### Insecticides

- Reldan (chlorpyrifos methyl; Dow Agro)—company requested cancellation of product on barley, oats, rice, sorghum, and wheat.
- Tetramethrin (Aventis)—company requested that EPA delete greenhouse uses from all product labels, effective 11/27/00. High cost of re-registration cited as reason.

## New Registrations:

### Insecticides

- Anvil (phenothrin; Clarke Mosquito Control)—new formulation to control adult mosquitoes.
- Danitol (fenpropathrin; Valent)—registration to control grape berry moth, leafhopper, and Japanese beetles on grapes plus apple maggot, leafhoppers, mites, and plum curculio on apples in Michigan.
- Virosoft CP4 (granulosis virus; BioTepp)—application made to EPA to register this new microbial insecticide to control codling moth (*Cydia pomonella*) in apples.

### Fungicides

- Evolve (thiophanate-methyl + mancozeb + cymoxanil; Gustafson)—received registered as seed treatment on potatoes to control dry rot, stem canker, scurf, and late blight.
- Gavel (zoxamide + mancozeb; Rohm & Haas)—*expected* registration for potato late blight control, 2001 season.
- Messenger (Harpin protein; Eden BioSci.)—received registration for use on field crops, ornamentals, trees, and turf to control various pathogens. EPA exempted Harpin from establishment of tolerances on crops.

(Source: EPA Press releases, Federal Register Notices, *Ag. Chem. News*, 6/15/00 & 7/15/00)



## Long List of Pending Cancellations

Manufacturers have requested that the following pesticide registrations be cancelled. The cancellations will be effective 180 days after June 14<sup>th</sup>, unless a request is withdrawn by December 11, 2000. The registrant name and active ingredient are listed in parenthesis following the trade name (Fed. Reg. 14 June, 2000).

### Insecticides

- 88 Farm Bin Spray Improved Methoxychlor (Douglas Products; methoxychlor)
- Bt-Xtra (Dekalb Genetics; Bt subsp. kurstaki CryIA (c) delta-endotoxin)
- Dycarb 76 Wp Insecticide for Horticulture Plants (Scotts-Sierra Corp.; bendiocarb)
- Dylox 6.2% Insecticide Granules (Bayer; trichlorfon)
- Ferti-Loam Improved Rose Spray (Brazos; methoxychlor)
- Larvin 3.2 Thiodicarb Insecticide Aqueous Flowable (Rhone-Poulenc; thiodicarb)
- Ortho Home Orchard Spray (Scotts; methoxychlor)
- Reldan F and 4E (Dow AgroSciences; chlorpyrifos-methyl)
- Unicorn Flea & Tick Powder for Dogs and Cats #3 (Unicorn Labs; methoxychlor)
- Unicorn Flea and Tick Powder I (Unicorn Labs; methoxychlor)

- Unicorn Equine Spray and Rub-On (Unicorn Labs; methoxychlor + pyrethrins)

### Fungicides

- Captan 7.5 Dust (AMVAC; captan)
- Flowable Captan Seed Protectant (Pioneer Hi-Bred; captan)
- Orthocide Garden Fungicide (Scotts; captan)
- SMCP TTC Turf Fungicide (Verdant Brands; PCNB)

### Herbicides

- Acclaim 1EC, 0.5 WE, and 0.75EC Herbicides (Agrevo; fenoxaprop-ethyl)
- Buctril + Atrazine Gel (Rhone-Poulenc)
- Trific 60-DF (CENEX/Land-O-Lakes Ag; trifluralin)

### Miscellaneous

- M-5-3 (Buckman Labs)
- Durham Duratex H. R. Granules (AMVAC)
- Durham Duratex Granules I and Duratex Granules 2 (AMVAC)
- Muralo Lumber Jacket Stain and Wood Preservative (Muralo Co.; tributyltin)
- Prometryne 80W (Makhteshim-Agan; prometryn)
- Sprout Nip Ag (Platte Chemical; chlorpropham)



## News Extras



### Chlordane Still Adding Zest to Food

Twelve years after most uses were banned, chlordane is still showing up. Researchers tested a dozen fresh vegetables. Produce growing in direct contact with soil had the highest chlordane levels. This included beets, carrots, lettuce, potatoes, spinach, and squash. Beans and eggplant also absorbed chlordane into the edible portions. Chlordane is a bioaccumulative organochlorine insecticide, so trace amounts ingested on food can remain in the human body. With a half-life of over 20 years and widespread use in its hey-day, its no surprise that chlordane is still adding zest to our food (*J. Ag. & Food Chem.*, 5/15/00).

ingredient is foramsulfuron, a herbicide developed by Aventis. Joint reviews allow countries to share data and work, and theoretically make pesticide registration more efficient (*Pest & Tox. Chem. News*, 5/4/00).

### Clean Sweep Stats

Volume of pesticides collected nationally in 1995:  
< 5 million pounds

Volume of pesticides collected nationally in 1999:  
15 million pounds

Greatest volume of collections in 1999:

Texas at 2.5 million pounds

Other states:  
Minnesota (1.5 million) and  
California (1.3 million)



### Global Harmony and Pesticides

For the last few years, the US EPA has conducted joint reviews of pesticides with Canada. Now, the Agency is in a pilot project with Germany, the first joint review of a pesticide with a European country. The pesticide active



## Risk Communication in Food Safety


A conference on risk communication in food safety, sponsored by MSU's National Food Safety and Toxicology Center (NFSTC), was held at the Kellogg Center, July 11-12. The keynote speaker was Dr. Peter M. Sandman, the creator of the "Hazard + Outrage" formula for risk communication. Dr. Sandman is the preeminent risk communication speaker, educator and consultant in the United States. In addition to being a full-time consultant, he is also a Professor of Human Ecology at Rutgers and a Professor of Environmental and Community Medicine at the Robert Wood Johnson Medical School.

Dr. Sandman explained that the correlation between real hazard and public concern is quite low (around 0.2). In the case of GMOs, for example, although the actual harm to people and the environment is calculated to be low, public concern and outrage is quite high. In situations such as this, people "think" the hazard is high whether it is or not. This leads to the Risk=Hazard + Outrage formula. In order to reduce risk in situations where public concern is high and hazard is low, it becomes important to manage the outrage (rather than the hazard). The opposite is true where real hazard is high and outrage is low. Dr. Sandman explained that outrage is the *cause* of hazard misperception.

There are a number of things that people from industry, government, and universities can do to manage outrage. Dr. Sandman gave a list of "Twelve Principle Outrage Components" which would leave the public to

believe something is "risky." If a new product or technology, for example, is "coerced" rather than accepted by the public "voluntarily," it would more likely be perceived as risky. Other adjectives that would lead to perception of high risk include "industrial" (vs. natural), "exotic" (vs. familiar), "unknowable" (vs. knowable), "controlled by others" (vs. individually controlled), "morally relevant" (vs. morally irrelevant), among others. In the case of GMO's for example, it is felt that industry coerced the public into accepting GMO's into the food supply. GMO's are also considered industrial, exotic, unknowable, controlled by others, and morally relevant, all leading to the perception of risk. Dr. Sandman described strategies for shifting the public's perception of risk over to the "safer" adjectives—i.e., voluntary, natural, familiar, knowable, etc. For further information, a number of training videos and publications are available from Dr. Sandman. The web site is [www.psandman.com](http://www.psandman.com).


This was the first risk communication conference sponsored by NFSTC. The conference was well attended by people from industry, academia, government agencies, and Extension. Conference breakout sessions allowed people from these various backgrounds to dialog with each other and to develop ideas for communicating risks about pesticides, GMO's, food labeling, and other concerns. However, it was noted that no representatives of activists groups were present at the conference. It is hoped that they will be present at the next risk communication conference sponsored by NFSTC.



Food  
Water  
Home  
Garden

Residue Cup

## Food Quality Protection Act Information



## FQPA Reassessment May Cost Grain Industry Reldan

The manufacturer of Reldan has requested that EPA cancel registrations for this product. As part of an FQPA reassessment of organophosphates, EPA asked Dow AgroSciences to perform additional neurotoxicity studies on the active ingredient, chlorpyrifos methyl (CM). Dow said that the cost of the extra testing (estimated at \$6 million) would exceed profits from the sales of Reldan, and therefore the company requested the cancellation.

Reldan was registered nearly 15 years ago for use directly on barley, oats, rice, sorghum and wheat, as well as on bins, trucks, and wagons that hold these grains. Wheat accounts for about 80% of Reldan use. Reldan is an important alternative for malathion, which has had resistance problems. However, EPA's reassessment pointed out concerns for occupational exposure of loaders and

applicators, as well as chlorpyrifos methyl residues on grain. For example, the USDA/PDP study in 1996 found 73% of wheat samples had detectable residues of CM, although the residues were below tolerance levels.


It is not yet clear if EPA will accept the cancellation, or if public comment will change the fate of this OP (*Fumigants & Pheromones*, Spring 2000; MSU Bulletin E-1582).



## Canadian Panel Urges FQPA-like Changes in Pesticide Regulations


Pesticide rules in Canada may change based on a report given in May to the House of Commons. The report, written by the Environment and Sustainable Development Committee, calls for revision of Canada's Pest Control Products Act to enact tougher restrictions on pesticides. Particularly under the gun are pesticide uses for "aesthetic" purposes (for example, lawn care products). Many of the committee's recommendations mirror what is happening in the U.S. under the Food Quality Protection Act.

- Protect kids and other vulnerable groups.
- Add a 10x safety factor to tolerances.
- Subject inert ingredients to same tests as active ingredients.
- Reassess currently registered pesticides.
- Fund more research on pesticides, especially those that bioaccumulate or are neurotoxins.
- Require more and better studies on the impacts of pesticides on the environment.
- Give support and additional funding for organic ag.



## GMO's

### (Genetically Modified Organisms)




## Voluntary GM Food Labels Proposed

In May, the Food and Drug Administration said it will propose guidelines for voluntary labeling of foods containing transgenic ingredients. The proposal will come out in fall of 2000. FDA is also proposing that companies producing transgenic food/feed products must consult the agency prior to release, and submit information about safety and labeling. To this point, consultation with FDA has been voluntary (*Pest. & Tox. Chem. News*, 5/4/00).

product, called "Messenger," works by turning on the natural defenses of plants. These natural defenses make plants systemically resistant to bacterial, virus, and fungal pathogens, as well as nematodes. Harpin protein is produced naturally by *Erwinia amylovora*, the bacterium that causes fire blight. Using genetic engineering, the gene for Harpin was inserted into a weak strain of *E. coli* bacteria so it could be produced on a commercial scale. The *E. coli* bacteria are eventually killed and the Harpin protein is extracted to make Messenger. While systemic resistance is not total, Harpin can reduce disease symptoms and improve yields. Other expected benefits of Harpin are low mammalian toxicity, quick degradation, lower residues, and action against multiple pests.

## Harpin Happenings: Bioengineered Protein Stimulates Systemic Resistance


A Washington company, Eden Biosciences, was awarded a conditional registration in April for a new biochemical pesticide using Harpin protein. The new



## Pesticide Applicator Recertification Seminars

This partial listing of recertification seminars was provided by MDA. Certified applicators and registered technicians may earn recertification credits by attending these programs. For additional information, call the MDA Lansing office at (517) 373-1087.

**NOTE:** Renewal of pesticide applicator certification credentials can be done by taking the appropriate exam(s) or by obtaining the necessary number of recertification credits by attending approved seminars.



Date	Seminar	Location	Credit	Category	Phone#
8/7	Fruit Spray Update	Paw Paw, MI	1	Priv, 1C	(616)657-7745
8/8	IPM Update Session	Centreville, MI	1	Priv, 1A, 1B	(616)467-5511
8/8	MABA/Novartis CCA-Day 1	Lansing, MI	4	ComCore, 1A, 1B	(810)667-4716
8/8	IPM Update for Fruit Growers	Old Mission, MI	1	Priv, 1C	(616)922-4620
8/9	MABA/Novartis CCA-Day 2	Lansing, MI	1	ComCore, 1A, 1B	(810)667-4716
8/9	2000 IPM Training Program	Flint, MI	4	ComCore, 7A, 7E	(517)373-1087



8/10	Custom Applicator Training	Coldwater, MI	2	Priv,1A	(517)235-3527
8/14-15	CPS-Excellence in Application	Champaign, IL	6	ComCore,1A,1B	(517)671-0129
8/15	IPM Update Session	Centreville, MI	1	Priv,1A,1B	(616)467-5511
8/15	2000 IPM Training Program	St Joseph, MI	4	ComCore,7A,7E	(517)373-1087
8/15	Integrated Plant Health Management	Tipton, MI	2	ComCore,3B	(734)971-0079
8/21	Fruit Spray Update	Benton Harbor, MI	1	Priv,1C	(616)657-7745
8/22	IPM Update Session	Centreville, MI	1	Priv,1A,1B	(616)467-5511
8/22	Farrowing Management	Stanwood, MI	1	ID	(231)592-0792
8/23	2000 IPM Training Program	Grand Rapids, MI	4	ComCore,7A,7E	(517)373-1087
8/24	Beet And Bean Research Tour	Saginaw, MI	2	Priv,1A	(517)799-2233
8/28	Whitmire MicroGen Inst of Tech-Day 1	Boston, MA	4	ComCore,7A,7C	(800)777-8570
8/28	Integrated Plant Health Management	Novi, MI	2	ComCore,3B	(734)971-0079
8/29	Innovative Farmers of SC MI Tour	Burlington, MI	2	Priv,1A	(616)781-0785
8/29	Whitmire MicroGen Food Safety	Boston, MA	2	7A	(800)777-8570
8/29	Whitmire MicroGen-Ants/Invaders	Boston, MA	2	7A	(800)777-8570
8/29	IPM Update Session	Centreville, MI	1	Priv,1A,1B	(616)467-5511
8/29	Whitmire MicroGen-Insects/Health	Boston, MA	2	7A,7C,8	(800)777-8570
9/6	Integrated Plant Health Management	Midland, MI	2	ComCore,3B	(517)799-2233
9/11	Fruit Spray Update	Benton Harbor, MI	1	Priv,1C	(616)657-7745
9/13	2000 IPM Training Program	Southfield, MI	4	ComCore,7A,7E	(517)373-1087
9/19-13	Basic Food Plant Sanit. & Pest Mngt.	Philadelphia, PA	8	ComCore,7A,ST	(913)782-7600
9/21	2000 IPM Training Program	Mt Pleasant, MI	4	ComCore,7A,7E	(517)373-1087
10/3	Home Depot Staff Training	Sterling Heights, MI	1	ComCore,7A	(810)531-3312
10/11	2000 IPM Training Program	Southfield, MI	4	ComCore,7A,7E	(517)373-1087
10/10-11	Basic Food Plant Sanitation/Pest Mgt	Chicago, IL	8	ComCore,7A,ST	(913)782-7600
10/17	Home Depot Staff Training	Commerce Twp, MI	1	ComCore,7A	(810)531-3312

Instructions for recertification training seminar attendance and training seminar dates are posted at the MDA website:  
<http://www.mda.state.mi.us/industry/schedule.html>

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