



Pesticide Notes

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



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In This Issue

Feature Article

Crop Profiles 2

Chemical Update

Proposed/Established Tolerances 4
Label Additions/Changes 4
Label Deletions/Cancellations 4
Section 18s and 24c's 4
Miscellaneous 4
Voluntary Cancellations 4

News Extras

OSU Study Identifies Major Concerns of Ag Pilots 7
Pesticides Found in Amniotic Fluid 7
Weed Control Ends Up in Hot Water 7
Michigan Groundwater Stewardship Program
 Summary of Outcomes for 1995 to 1998 8
GMO Watch 9

Food Quality Protection Act Information 9

Resources 9

Pesticide Education and PIAP Staff Directory 10



Crop Profiles

Courtesy of Mississippi State University Extension

Only a few days left until August 3, 1999 when the first group of pesticide tolerances must be reviewed by EPA. EPA has admitted it will not be able to reach its goal of reassessing all OP, carbamate, and B2 carcinogen tolerances by that date, but the agency expects to still have 1/3 of the 9,000 tolerances reviewed—just not necessarily the “Worst-First.”

Crop Profiles

The Food Quality Protection Act instructs USDA and EPA to obtain pesticide use and usage data on major and minor crops. Of particular importance at this time are use and usage data for the organophosphates, carbamates and possible carcinogens (B1's and B2's). These classes of pesticides have been identified as top priority at EPA for the tolerance reassessment process. These same pesticides are also vital to the production of many of our crops. Because some of these uses may be canceled, it is important to identify where we stand now, where we need to be in the future, and what research efforts are needed to get us there as far as pest management practices are concerned. In order to better understand where future research efforts should lead, it is necessary first to identify areas of critical need (i.e., those crops or situations where few if any alternative control measures are available to producers). To help USDA and EPA obtain this information Crop Profiles are being



prepared. It is the intent that crop profiles provide the complete production story for a commodity, including current pest management practices, and look at current research activities directed at finding replacement strategies for the pesticides of concern.

Every state has been instructed to compile crop profiles. The national website is <http://ipmwww.ncsu.edu/opmppiap/subcrp.htm>. As crop profiles are completed in all states, they become available on the national website. Currently, completed crop profiles for asparagus, blueberries, cabbage, and cucumbers in Michigan are available at the site. Lists of profiles in progress can also be found at the site.

What Are Crop Profiles

Crop Profiles are summaries of pest management methods utilized on an individual crop within a state. They explain how crops are grown and why certain pesticides are important. They provide information on current pest problems, pest management methods used, crop production data and key references and contacts. The information contained in crop profiles may be critical for protecting the pesticide registrations.

The thought that EPA may cancel a pesticide without being fully aware of producer impacts is a common fear in the agricultural community. This concern is especially strong among the minor crop growers who may have few if any alternatives to the cancelled pesticides. This is where transition strategies come into play.

Transition Strategies

Some cancellations can be expected. When this occurs critical pesticide uses will have to be identified quickly, research efforts made to



identify or develop new pest management technologies, activities at EPA that will result in new registration and the time frame required for transition to these new pest management strategies.

The April 8, 1998 memorandum from Vice President Gore emphasized that FQPA should be implemented in a way that would ensure that affected pesticide users have the time, the technical assistance and the support they need for transition to new and effective pest management tools. USDA and EPA will be working together to develop strategies that allow growers to transition to new pest management methods.

A transition strategy is a method to buy some time. It is a process to identify critical uses of pesticides (those uses that if cancelled, leave growers few if any alternatives for pest control). It is a process to pinpoint those areas where the cancelled pesticides play a vital role in IPM and resistance management programs. It is a process that identifies pest management tools both chemical and non-chemical that may be available in the future. The transition strategy will also indicate the time needed until a pest management tool will be available on a commercial scale.

Transition Strategies are needed because EPA may propose that a pesticide or a critical use of a pesticide be cancelled due to unacceptable risks. We may not be able to prevent the cancellation but we can negotiate with EPA for a phase-out period. Rather than an immediate cancellation the opportunity for a transition period exists and will be essential for the continued successful production of some commodities. The transition strategy will help identify where these phase-out periods are needed, the time required for that phase-out or transition period to occur, and any interim steps that will be needed to successfully make the transition.

What Does a Transition Strategy Look Like?

There are 3 sections to the strategy:

1. **Product Information**—Product information identifies the pesticides used to control individual pests on that commodity. The specific pesticides are identified by class

and blanks indicate where no alternatives exist. The national usage data (percent crop treated) for the pesticides used on the crop are also listed.

2. **Pest Management Information**—Pest management information identifies pest management practices used to control individual pests on that commodity. IPM, cultural practices, resistance management concerns, etc. are listed here.
3. **Pipeline Information**—Pipeline information is probably the most important section. It tells us what pest management tools are being developed at the research level. This may include information from IR-4 projects, IPM research, land grant institutes, commodity or food processors, or independent researchers. The pipeline will also identify pesticides involved in pre-registration activities at EPA including tolerance petitions, tolerance proposals and acceptances, Section 18 registrations, EUP's and applications for registrations.

Where Will Information for the Transition Strategies Come From?

The information will come from many sources including crop profiles, National Agricultural Statistics Service (NASS) data, Pesticide Impact Assessment Program (PIAP) assessments, state reports, commodity group information, Extension Service reports, the Office of Pest Management Policy's pipeline database, EPA sources, USDA program information, the Internet, research from land grant institute, etc.

In summary the transition will:

1. highlight those pesticide uses and pest management practices that are considered critical to crop production,
2. be a key element in developing phase out time frames for when EPA proposes cancellations of critical use pesticides, and
3. identify which crop/pest combinations need future research in order to fill the gap created by these cancellations.





Chemical Update

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



Products are listed by trade name with active ingredient name and manufacturer following. Please note that multiple manufactures 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.

Proposed/Established Tolerances:

Insecticides

- Thiamethoxam (Novartis)—proposed residue tolerances on fruiting vegetables at 0.25 ppm; head and stem brassica vegetables at 1 ppm; leafy brassica greens at 2 ppm; cucurbits at 0.2 ppm; leafy vegetables, tuberous and corm vegetables at 0.02 ppm; barley hay at 0.05 ppm; barley straw at 0.03 ppm; pome fruit at 0.2 ppm; wheat forage at 0.5 ppm; wheat hay, barley grain, wheat grain, sorgum grain at 0.02 ppm; and milk and 0.02 ppm.

Herbicides

- Permit (halosulfuron; Monsanto)—residue tolerances on corn, sweet corn, and sorghum have been established.
- Touchdown (sulfosate; Zeneca)—established residue tolerances on pome fruits and wheat.

Label Additions/Changes:

Herbicides

- Envoy (clethodim; Valent)—as a result of the IR-4 Project, use on loostribe has been added to the label.
- Puma IEC (fenoxaprop-p-ethyl)—registered for use on winter and spring wheat and barley to control annual grasses.
- Touchdown (sulfosate; Zeneca)—use on stone fruits, apples, crabapples, pears added to the label. Also labeled for use on wheat for burn down weed control and post-emergence spot treatments.

Label Deletions/Cancellations

Insecticides

- Bidrin (dicofenofos; Amvac)—residue tolerances on pecans will be revoked since no registration exists.

- Monocrotophos—EPA will revoke residue tolerances on potatoes and tomatoes since the product is no longer sold in the U.S.

Section 18s and 24c's:

Herbicides

- Starane (fluroxypyr; Dow AgroSciences)—A specific exemption was granted in Michigan for use on field corn and sweet corn to control volunteer potato (expires 12-01-99).

Miscellaneous:

- **Farmland Industries**, agricultural coop, is negotiating with Cenex Harvest States Coop to merge the two into a \$20 billion corporation.

(Source: *Ag. Chem News*, 6/15/99)

Voluntary Cancellations:

The following registrations are being voluntarily canceled by their manufacturer. The manufacturer (registrant) name is given first, followed by the product. Please note that cancellations are for *specific products* from *specific manufacturers*, not all products containing the same active ingredient.

Effective November 22, 1999, unless the cancellation request is withdrawn:

American Cyanamid

- Ala-Scept Herbicide (alachlor)
- Ala-Scept ESC Herbicide

AMREP Incorporated

- AMREP 5006
- Misty Anti-Crawl II Residual Insecticide

AMVAC Chemical

- Lindane 12.5% Concentrate
- Lindane 12.5% Insecticide
- Lindane 1-E
- 20% Lindane EC
- Royal Brand Lindane 25-W

Amway

- D-15 Insect Repellent (DEET)

Bacon Products Company

- Eagles-7 Mange Treatment (lindane)

Baker Petrolite Corporation

- Magnacide 4551

Bayer

- Mira Insect Repellent Sprays for horses



Black Flag

- Black Flag Insect repellent Spray
- Screen Insect repellent

Celex

- Insect Repellent 3 (DEET)

Contact Industries

- Contact Insect Repellent

Dow AgroSciences

- Chlorpyrifos Technical

Drexel Chemical Company

- Drexel Lindane 20%EC
- Falls Lindane 20% EC

ELF Atochem

- Deco Salt No. 35

Hartz Mountain Corporation

- Hartz Flea and Tick Repellent for Cats III
- Hartz Flea and Tick Repellent for Dogs III

Helena Chemical

- Agco Methomyl 2 Insecticide Dust

Hysan/ AMP

- Adios II Insect Repellent

Imperial Incorporated

- Garden Weeder containing Dacthal
- Imperial garden Weed Preventer
- Imperial 5% Dacthal

McLaughlin Gormley King

- Personal Repellent Formula 5731

Monsanto

- Ramrod + Altrazine Flowable Herbicide
- Ramrod + Altrazine DF Herbicide

PBI/ Gordon Corporation

- Bug Stop Lotion
- Bug Stop Pump Spray

Platte Chemical Company

- Best Garden Weeder
- Clean Crop Lindane 25 Seed Treater
- Clean Crop Lindane 25WP Dyed Seed Treater
- Clean Crop Lindane 75WP Undyed Seed Treater
- Dichlorobenil 2G
- Dicofol
- Lindane 400 Undyed Flowable Liquid

Prentiss Incorporated

- Lindane
- Prentox Lindane 20% EC
- Prentox Lindane 25W
- Prentox 20 Lindane EC

Rainbow Technology

- Rainbow Jungle Formula Insect Repellent

Realex

- Real Kill Insect Repellent Spray

Regwest Company (agent for Assoc. Registrations)

- Deet Plus Composite Spray
- Deet Plus Insect Repellent

- Insect Guard
- Insect Guard II
- Mosquito Guard

Rhone-Poulenc

- Iprodione HG Fungicide
- Iprodione Lawn & Ornamentals Fungicide
- Rovral 30 Flowable Fungicide

Rohm and Haas

- Kelthane 35 Ag Miticide

S.C. Johnson and Son

- 6017 Formula 3 Insect Repellent
- 6017 Formula 13 Insect Repellent
- 6017 Formula 14 Insect Repellent
- 6017 Formula 15 Insect Repellent
- Deep Woods Off Formula VIII
- Formula 6099 #2 Insect Repellent
- Formula 6099 #8 Insect Repellent
- Formula 6099 #9 Insect Repellent
- Formula 6099 #10 Insect Repellent
- Formula 6099 #12 Insect Repellent
- Insect Repellent 1994 DJDL
- Johnson Wax 6017 Formula 7 Insect repellent
- Maximum Strength Deep Woods Off
- Maximum Strength Deep Woods Off II
- Maximum Strength Pump Spray Deep Woods Off
- Off Liquid Insect Repellent
- Off Pressurized Insect Repellent
- Off Insect Repellent Formula VI
- Off Insect Repellent Formula 1990 #1
- Off Formula III Liquid Spray Insect Repellent
- Unscented Deep Woods Off for Sportsmen Insect Repellent



Scotts Company

- Fertilizer Plus Lawn Disease Preventer
- Lawn Disease Control Plus Fertilizer

Sherwin Williams

- 878 Insect Repellent Spray

Southern Ag Insecticides Incorporated

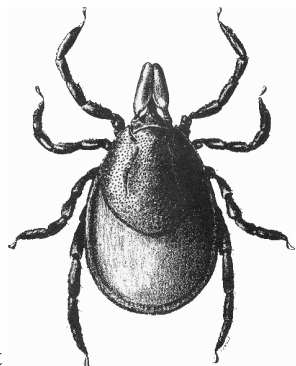
- SA-50 Brand Home Garden Weed Granules with Dacthal

Spectrum

- Cutter Insect Repellent
- Cutter Insect Repellent Formula MMII
- Cutter Insect Repellent #10
- Cutter Insect Repellent #10G
- Cutter Insect Repellent #10GE
- Cutter Insect Repellent #10/10/40PS
- Cutter Insect Repellent #10/10/40PSE
- Cutter Insect Repellent #30CRE
- Cutter Insect Repellent #CN003



- Cutter Insect Repellent #CN0004
- Cutter Insect Repellent #CTRO12
- Cutter Insect Repellent #CA23e
- Cutter Insect Repellent #CC129
- Cutter Insect Repellent 30P
- Cutter Insect Repellent 30T
- Cutter Insect Repellent Spray
- Cutter Original Insect Repellent Spray Formula MM1
- Cutter Original Insect Repellent Pump Spray
- Unscented Cutter Insect Repellent #CS301
- Cutter Evergreen Scent Insect Repellent Spray
- Cutter Evergreen Insect Repellent #10E
- Cutter Evergreen Scent Insect Repellent Spray Formula M
- Cutter Evergreen Scent Insect Repellent Pump Spray
- Cutter Evergreen Scent Insect Repellent Cream
- Cutter Evergreen Scent Insect Repellent Cream Formula M
- Cutter Insect Repellent Cream Formula MM
- Cutter Insect Repellent Stick
- Cutter Evergreen Scent Insect Repellent
- Cutter Insect Repellent—Tick Repellent—Formula MMII



State Chemical Mfg.

- State Formula 254 IRS Insect Repellent Spray

Sureco Incorporated

- SMCP Granular Hy-Kil-4 Non-Selective Weed and grass Killer

Tender Corporation

- Ben's Backyard Formula Tick and Insect repellent
- Ben's Wilderness 50% Formula Tick and Insect Repellent

Unicorn Labs

- Martin's Bombane Jet Stream
- Martin's Cube Powder 5% Rotenone
- Martin's Rotenone Powder
- Martin's US-EQ 335 Screw Worm Remedy for Horses and Mules

Van Diest Supply Company

- Cornbelt Dacthal 5G

Waterbury Companies

- Baygon Crack and Crevice Insecticide

Watkins Incorporated

- Watkins Insect Repellent, Formula 50

Voluntarily deleted as of June 18:

Cheminova

- Nufos 15G, use on popcorn

Microflo Company

- Chlorpyrifos 4lb AG, use on popcorn
- Chlorpyrifos 15G, use on popcorn

Effective December 20, 1999, unless the cancellation request is withdrawn:

AgrEvo

- SBP-1382 Insecticide Aqueous Pressurized Spray 0.25% for House and garden, pet uses

Exxon

- Orchex 796, use on cranberries

FMC Ag Products

- Thiodan Pyrenone EC, use on broccoli

Gowan

- Gowan Endosulfan, uses on alfalfa forage, sugar beet, and sunflower

Helena Chemical

- 2,4-D 2-Ethyhexyl Ester 4, aquatic non-food uses
- 2,4-D 2-Ethyhexyl Ester 6, aquatic non-food uses

Hi-Yield Chemical Company

- Hi-Yield Rotenone 100 Insecticide Dust, all crop uses

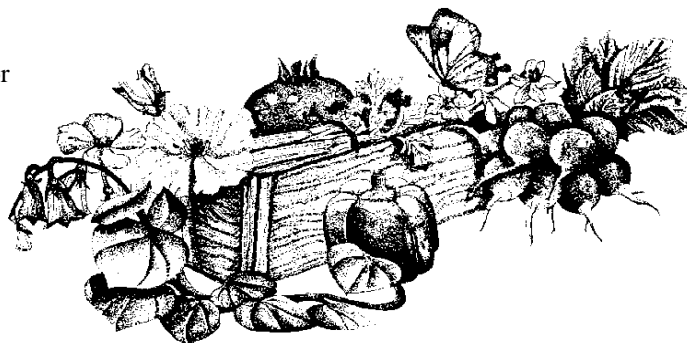
Monsanto

- Partner WDG Herbicide, aerial application

Voluntary Purchasing Group

- 3-Way Dust Garden Insecticide (rotenone), all crop uses

(Source: Federal Register Notices)

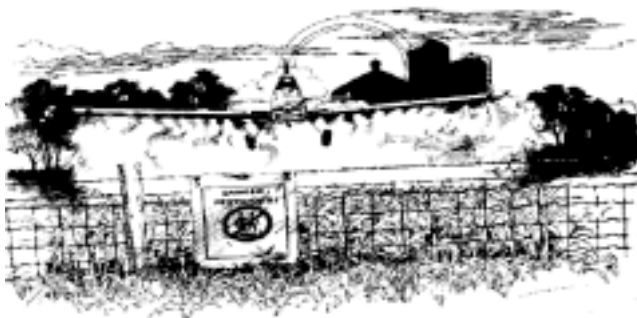




OSU Study Identifies Major Concerns of Ag Pilots

A national study, published in a recent issue of *Agricultural Aviation*, shows that advanced education courses for ag pilots need to address more than just pesticide issues. Dr. Richard Jensen, an aviation human factor professor at Ohio State University, sent an essay-type questionnaire to 1,000 ag pilots in the South, Midwest, and western U.S. The questionnaire gathered information about what topics should be offered in advanced education courses for pilots, and how the courses should be offered, in order to improve training. After the mailing, focus groups of seven to thirteen pilots were held in 8 states to further discuss the questionnaire and exchange ideas. In these discussions, pilots identified major concerns that they would like to see addressed in educational course.

- How to **divide attention** between fly the aircraft close to the ground, spraying, and avoiding obstacles.
- **Keeping focused** on the job despite distractions of family problems, drift complaints, employee problems, etc.
- Understanding the **decision-making process** of when and how to spray, balancing risks and safety with the need to get the job done.
- How to handle **job and family pressures** that may distract a pilot.
- Recognizing and coping with **fatigue**.
- Changing the **"bad attitudes"** (identified as greed, hurrying, macho behavior, and stubbornness) of some pilots.
- Better **knowledge** of math, pesticides, crops, farming, and weather to reduce risk of drift.
- The need for better **communication and social skills** to deal with customers.
- Determining and setting **personal limits**.
- Handling **economic pressures** that may lead to taking short-cuts in time or safety that increase the chance of an accident.
- **Sharing experiences** with other pilots.



- Knowing how, and gaining the courage, to **say "NO"** to a job or flight.
- Motivating all ag pilots to **join** the National Aerial Applicators Association (NAAA).

These concerns can be used to target aerial applicator training, development of extension materials, and research in the future (*Ag Aviation*, May/June Issue).

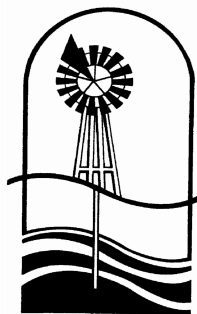
Pesticides Found in Amniotic Fluid

At an Endocrine Society meeting in June, scientists from Cedars-Sinai Medical Center and the University of Calgary reported the first ever detections of pesticides and other industrial chemicals in the amniotic fluid surrounding unborn babies. The study was designed only to identify contaminants in amniotic fluid, not to determine if the chemicals harmed the fetus. The study raises concerns that these chemicals may be endocrine disrupters. The researchers examined the amniotic fluid from 53 women pregnant for 16 to 20 weeks. Thirty percent of the samples had DDE, a breakdown product of DDT. DDE antagonizes testosterone by binding to testosterone receptors. One amniotic sample had a DDE concentration of 0.63 nanograms per milliliter, nearly equal to the amount of testosterone normally found in a female fetus. In addition to DDE, researchers found PCBs and several other man-made industrial and agricultural chemicals. Researchers expect this study to be just the beginning of more intensive work on the impact of amniotic fluid contaminants on developing fetuses and children (Press Release, Cedars-Sinai Medical Center, 6/14/99).

Weed Control Ends Up in Hot Water

A machine that uses hot water to kill weeds is being tested in a small town in North Carolina. The machine, manufactured by a company in New Zealand, heats water to 220 degrees, then sprays it over weeds. The hot water melts the wax covering the leaves, and the weed dies in hours. The machine is very effective in killing weeds growing around concrete, fences, and curbs, where the hot water will not injure other plants. For more information, the manufacturer—Waipuna International—has a U.S. office at 773-255-8355. The machine is expensive, so have a check for \$25,000 at the ready! (Info from *Pest. & Tox. Chem News*, 6/17/99.)





Michigan Groundwater Stewardship Program—Summary of Outcomes for 1995 to 1998

The Michigan Groundwater and Freshwater Protection Act is up for renewal this year. This Act led to the formation of the Groundwater Stewardship Program, operated out of the Michigan Department of Agriculture and funded by a fee on the sale of agricultural chemicals in Michigan. Among other things, the Stewardship program wholly or partially pays for certain practices that protect groundwater or reduce the risk of groundwater contamination. The following is a summary of the projects/practices funded or cost-shared by the Michigan Groundwater Stewardship Program over the last several years.


Project/Practice	FY95	FY96	FY97	FY98	Total
anti-backflow devices		1,459	1,165	571	3,195
calibration of manure spreaders		35	47	5	87
classroom presentations given		60	32	1,992	2,084
Clean Sweep program (lbs collected)	84,100		50,000	122,000	276,100
closed pesticide injection systems		11	10	1	22
containers recycled	103,000	94,000	55,000	50,000	302,000
cover crops (acres)		473	6,853	6,273	13,599
decommissioned abandoned wells	374	945	991	824	3,134
emergency pesticide spill kits		20	286	267	573
evaluations of irrigation systems		2	20		22
Farm-A-Systs	1,750	3,083	1,695	1,042	7,570
Field-A-Systs		3	23	17	43
groundwater stewardship plans		423	1,161	816	2,400
Home-A-Systs			8,559	10,575	19,134
in-field mix/load pads		5			5
IPM scouting (acres)		568		8,140	8,708
irrigation scheduling		12			12
Lake-A-Systs				179	179
Lawn-A-Systs				38	38
leaf tissue analyses (n)		83			83
manure nutrient analyses (n)		193	196	47	436
mix/load nurse tanks, transfer pump		39	227	203	469
nitrogen application rate controller		17	2		19
offset hydrants		3		25	28
permanent mix/load pads		10	18	26	54
permanent pesticide storage facility		2	28		30
pesticide application controllers		10	33	19	62
pesticide application foam marker		29	10	87	126
pesticide container rinse nozzle			250	68	318
plot demonstrations and tours				31	31
portable mix/load pads		59	61	25	145
pre-sidedress nitrate testing (acres)		26,479	26,475	8,345	61,299
pre-sidedress nitrogen equipment			7		7
retro-fit pesticide storage with an impervious surface		2			2
rotational grazing (acres)		340	1,237	1,156	2,733
seasonal pesticide storages			55	39	94
spilt nitrogen application (acres)		1,173	7,285	1,050	9,508
spray nozzles (sets)		19	274	68	361
sprayer calibrated		34	240	61	335
Stewardship Team meetings		108	95	70	273
water tests for pesticides	285	305	850		1,440



GMO Watch

In June, a bill was introduced in the British Parliament to make biotech companies liable for damage caused by transgenic crops. The product liability law

would make companies responsible for impacts on the environmental and human health resulting from the use of genetically modified crops or food.

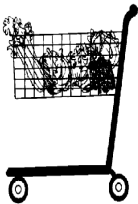


Food
Water
Home
Garden

Residue Cup

Food Quality Protection Act Information

Dr. Christina DiFonzo, MSU Pesticide Education Program



Who cares about Y2K, which is months away...the real question is, are you FQPA compliant? Rumors are flying as **August 3rd, 1999** approaches, the first big due date under FQPA. By then, EPA is supposed to have 1/3 of all tolerances reviewed under new stricter guidelines. While it appears EPA will make this regulatory hurdle (thanks to cleaning out its books, removing many old products and registrations), it will not meet its self-imposed goal of reviewing the “worst-first”—OPs, carbamates, and B2 carcinogens—by that date. That is not necessarily a bad thing, as the Agency continues to evaluate many OPs and carbamates, gathering use and residue information from many sources, plugging the data into models, and asking for public comment on the process. However, rumors of back-room deals between EPA and registrants abound and fears linger that there will be some cancellations or restrictions placed on some insecticides as early as next month. These are just rumors—it remains to be seen what actually comes of this apocalyptic date.

The American Farm Bureau and at least 15 other organizations filed a lawsuit against EPA on June 7 over FQPA implementation. The lawsuit brings nothing new to the FQPA debate, reiterating many of the same themes

we’ve heard over the last 2 years. It asks EPA to specify the information it needs to evaluate pesticides under the new law, to use “sound science” and real world data in decision making, to adopt formal policies for implementing FQPA, and to open the entire process to all stakeholders. This isn’t the end, folks. Look for a lawsuit and/or some sort of big public announcement from environmental groups on August 3rd.

EPA is moving toward a policy to require pesticide registrants to do some additional testing to meet FQPA requirements. FQPA was passed as people became more concerned about subtle, long-term impacts of pesticides—such as endocrine disruption and developmental neurotoxicity—especially on children. Under a draft proposal released in late June, EPA would require registrants to perform several new kinds of tests on pesticides, especially OPs and carbamates, which are known to affect the nervous system of insects. The new tests would evaluate the impact of the pesticide on the nervous system of adult and developing fetal animals (so-called “developmental neurotoxicity”) as well as impacts on the immune system. The policy is out for public comment (some information from *Pest. & Tox. Chem News*, 6/24/99).



Resources



Recognition and Management of Pesticide Poisonings. New 5th Edition, 236 pgs. Targeted towards health professionals, but contains valuable information for anyone dealing with pesticides. Focus is on acute poisoning, particularly OPs and pyrethroids. To order, call the EPA Office of Prevention, Pesticides, and Toxic Substances (OPPTS) at 703-305-7666 for a bound copy, or download free from the internet at <http://www.epa.gov/pesticides/safety/healthcare>

Check out the following biocontrol websites:

Insect Ecology and Biocontrol Lab

www.ent.msu.edu/biocontrol

Michigan State University Biological Control Program

www.cips.msu.edu/biocontrol

Midwest Biological Control News

www.wisc.edu/entomology/mbcn/mbcn.html

The Purple Loosestrife Project at Michigan State Univ.

www.msue.msu.edu/seagrant/pp/



Pesticide Education and PIAP Staff Directory

Pesticide Education Program www.pested.msu.edu

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