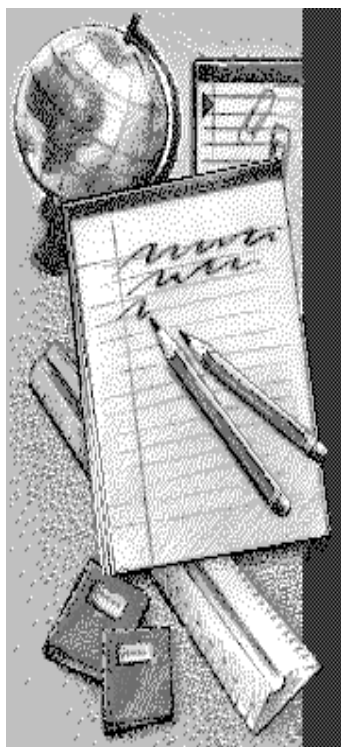


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The Pesticide Education Program would like to welcome *Larry Swain* to his new position in the Pesticide Section at the Michigan Department of Agriculture. Larry was formerly a pesticide inspector in MDA's Southfield Office. He now fills a new position in Lansing as Community Outreach Program Manager handling statewide community pesticide programs, including urban education and outreach, structural IPM, and IPM in schools. I have enjoyed working with Larry over the last year on projects related to urban IPM and pesticides, and look forward to drawing on his expertise to improve how the Pesticide Education Program addresses urban issues.

FYI, we are in the process of **updating our mailing list**. The last page of this issue has a change of address form and contact numbers. Please mail, email, fax, or phone, with changes to your mailing address, to remove yourself from our list, or to add someone else.



Michigan Department of Agriculture Pioneers Student-Assisted Integrated Pest Management Program

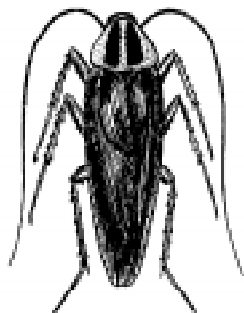
Larry Swain, Michigan Department of Agriculture Pesticide and Plant Pest Management Division

The Michigan Department of Agriculture Pesticide and Plant Pest Management Division has initiated a pioneering student-assisted integrated pest management program at Detroit's Lewis Cass Technical High School. The goals of the program are to encour-

age student involvement in schools where pests may be creating an unhealthy environment that is not conducive to learning and to protect students in schools from the overuse of pesticides. The Cass Tech Urban Environmental Stewardship Program, initiated in May of this year, is described as a fact-finding problem-solving program.

Students at Detroit's Lewis Cass Technical High School are the first class in Michigan to develop and implement an Integrated Pest Management Program (IPM) for their school. A research team of students and teachers has been assembled to manage the program. Larry Swain of MDA is the community program manager responsible for guiding the students and teachers in developing the IPM plan.

The students will focus on biological control and habitat modification for the control of German cockroaches. The program includes a strong educational community outreach component designed to inform parents of potential health problems associated with pesticides. In addition, information on integrated pest management techniques will be distributed to students and the community. This information will address habitat modification and sanitation



practices as tools to help prevent and suppress pests.

A team of students consisting of 16 members has been divided into three teams: research, outreach, and evaluation. Each sub team is responsible for implementing certain program objectives. The research team is responsible for reviewing relevant literature to establish experimental methods and controls and for collecting data during testing. The outreach team will use the data collected to develop and conduct presentations and workshops on IPM in urban schools. The evaluation team will inspect controlled sites and identify all pests found and conditions conducive to their activity.

At the current stage of the program, students have performed an inspection of the school to identify cockroach habitat and plan to lay out monitoring traps to determine the level of infestation. Eventually, a parasitic wasp will be released as a biocontrol for the German cockroach. Student response to the program has been enthusiastic. Once completed, the students look forward to implementing their IPM program in other Detroit-area schools. The Michigan Department of Agriculture will follow-up with an evaluation of the program and also plans to expand the program to other schools throughout the state.

For further information on the Cass Technical Environmental Stewardship Program contact Larry Swain at:

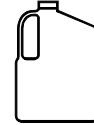
Michigan Department of Agriculture
Pesticide and Plant Pest Management Division
P.O. Box 30017,
Lansing, MI 48909
phone: 517-241-2976
email: swainl@state.mi.us





Chemical Update

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



INSECTICIDES:

Acephate 75SP (acephate)—Requested Label Deletions

Micro Flo Co. requested that the EPA delete from the label use on pastures and rangelands. Unless withdrawn, this will be effective on 10-14-98 (Federal Register, 4/17/98).

Asana (esfenvalerate)—Tolerances Requested

DuPont has petitioned the EPA to establish tolerances for Asana on sorghum, sugarbeets, and head lettuce (EPA Notice, 3/17/98).

Bay-KBR-3023 (propidine)—Registration Application

The EPA received an application from Bayer to register this new active ingredient. It is applied directly to human skin to repel mosquitoes, ticks, biting flies, gnats, chiggers and fleas (Ag Chem News, 5/15/98).

Baythroid (cyfluthrin)—Proposed Tolerances

Bayer, as a result of the IR-4 Project, has proposed to the EPA that residue tolerances on dried hops be established at 20 ppm and that the established tolerance on fresh hops be removed. Comments were due by 5-15-98 (Ag Chem News, 5/15/98).

Bidrin (dicotophos)—Requested Label Deletion

Amvac requested that the EPA delete from the label use on soybeans. Unless withdrawn, this will be effective on 10-14-98 (Ag Chem News, 5/15/98).

Capture (bifenthrin)—Extended Tolerances

The EPA extended the time-limited residue tolerances on cucurbits to cover a specific exemption until 4-30-99 for FMC's Capture (Ag Chem News, 5/15/98).

Confirm (tebufenozide)—Proposed Tolerances

The EPA received a petition to establish residue tolerance in pome fruits at 0.2 ppm, walnuts at .02 ppm, and wet apple pomace at 0.8 ppm for Rohm & Haas' Confirm. Comments were due by 4-27-98 (Ag Chem News, 5/15/98).

Orthene (acephate)—Requested Label Deletions

Valent requested that the EPA delete from the label use on pastures and rangelands. Unless withdrawn, this will be effective on 10-14-98 (Ag Chem News, 5/15/98).

Prentox (piperonyl butoxide)—Requested Label Deletions

Prentiss Inc. requested that the EPA delete from their label uses on dogs and cats for Prentox Pyronyl Crop Spray and Prentox Pyronyl Oil. Unless withdrawn, this will be effective on 10-14-98 (Federal Register, 4/17/98).

Provado (imidacloprid)—Extended Tolerances

The EPA has extended time-limited residue tolerances on cucurbits at 0.2 ppm until 3-31-99 for Bayer's Provado (Ag Chem News, 5/15/98).

Pylon (AC 303, 630)—New Miticide

American Cyanamid is developing this new miticide in conjunction with Olympic Horticultural Products for use on ornamentals (Ag Chem News, 5/15/98).

Seven (resmethrin)—Requested Label Deletions

IQ Products Co. requested that the EPA delete from their label all pet care uses for CSA Aerosol Insecticide Formula Seven. Two other trade names for this product are Bugout Flying Insect Spray and Bugout Foaming Wasp and Hornet Spray. Unless withdrawn, this will be effective on 10-14-98 (Federal Register, 4/17/98).

Steward (indoxacarb/DPS MP062)—Proposed Tolerances

DuPont proposed to the EPA to establish residue tolerances on pome fruits at 2 ppm, brassica vegetables at 10 ppm, leaf lettuce at 20 ppm, fruiting vegetables at 0.7 ppm, sweet corn at 0.02 ppm, sweet corn forage at 20 ppm, and sweet corn fodder at 25 ppm. The EPA received an application from DuPont to register this new active ingredient for agricultural crop use to control certain pests. Comments were due by 5-18-98 (Ag Chem News, 5/15/98).

SpinTor (spinosad)—New Registration

The EPA has accepted the registration for Dow AgroSciences' SpinTor for insect control on a number of crops including apples, almonds, citrus, cole brassica crops, fruiting vegetables, and leafy vegetables. The product will not be available for sale within the Midwest in 1998. Small sample product will be available and limited large acre validation tests have been planned on apple, cole, and fruiting vegetable crops (Dow AgroSciences Announcement, 4/24/98).



Success (spinosad)—Label Addition

Use on leafy vegetables, apples and cole crops was added to the label of Dow AgroSciences' Success (Ag Chem News, 5/15/98).

Success/Tracer (spinosad)—Tolerances Established

The EPA established residue tolerances on apples at 0.2 ppm, fruiting vegetables (except cucurbits) at 0.4 ppm, cole crops, leafy vegetables, head and stem vegetables at 10 ppm, and leafy vegetables (except cole crops) at 8 ppm for Dow AgroSciences' Success/Tracer (Ag Chem News, 5/15/98).

Supracide (methidathion)—Requested Label Deletion

Novartis requested that the EPA delete from their label use on sorghum, sunflower and nursery stock. Unless withdrawn, this will be effective on 10-14-98 (Ag Chem News, 5/15/98).

Warrior 1EC (lambda-cyhalothrin)—Label Addition

Use on leaf lettuce, and brassica cole crops (broccoli, cauliflower, cabbage, and Brussels sprouts) was added to the label of Zeneca's Warrior 1EC (Ag Chem News, 5/15/98).

HERBICIDES:**Axion (fluthiamide/metribuzin)—New Registration**

The EPA registered Bayer's Axion for use on corn and soybeans for preemergence grass and broadleaf weed control. It can be applied early preplant, preplant surface, preplant incorporated, preemergence, or burndown. It can also be mixed with liquid fertilizers or impregnated on dry fertilizers (Ag Chem News, 5/15/98).

Caparol (prometryne)—Tolerance Established

The EPA established residue tolerance on carrots at 0.1 ppm for Novartis' Caparol (Ag Chem News, 5/15/98).

Dimension (dithiopyr)—New Label

Rohm & Haas' Dimension has a new label allowing its use on sod farms. Sod should be established at least six months prior to application (Ag Chem News, 5/15/98).

Equinox (tepraloxymid)—New Herbicide

BASF is developing this new herbicide for post-emergence grass control in soybeans (Ag Chem News, 5/15/98).

Liberty (glufosinate-ammonium)—Label Additions

The control of 9 annual grasses, 22 additional broadleaf weeds, and 13 additional perennial weeds was added to the label of Agr Evo's Liberty (Ag Chem News, 5/15/98).

Roundup Ultra (glyphosate)—Label Additions

Control of quackgrass, downy brome, and cheatgrass in dormant alfalfa was added to the label of Monsanto's Roundup Ultra (Ag Chem News, 5/15/98).

Select (clethodim)—Tolerances Established

The EPA established time-limited residue tolerances on alfalfa forage at 6 ppm, alfalfa hay at 10 ppm, tomatoes at 1 ppm, tomato paste at 3 ppm, and tomato puree at 2 ppm for Valent's Select. The tolerances expire 4-30-01 (Ag Chem News, 5/15/98).

FUNGICIDES:**Allegiance (metalaxyl)—New Seed Treatment**

Gustafson recently introduced this new formulation as a seed treatment to control Pythium on corn, beans, cotton, and numerous other crops. It may be combined with other fungicides (Ag Chem News, 5/15/98).

Elite (tebuconazole)—New Import Tolerance

Japan recently implemented an import tolerance for Bayer's Elite. U.S. cherry growers can now use Elite on cherries exported to Japan (Ag Chem News, 5/15/98).

Magnate 500 EC (imazalil)—New Seed Treatment

Makhteshim-Agan sells this new formulation as a seed treatment on wheat and barley (Ag Chem News, 5/15/98).

Pirron (piperalin)—New Expanded Label

Se Pro obtained a new expanded label for Pirron so that it can now be used on any ornamental greenhouse crop (Ag Chem News, 5/15/98).

Vanguard (cyprodinil)—Tolerance Established

The EPA established residue tolerances on stone fruit at 2 ppm for Novartis' Vanguard (Ag Chem News, 5/15/98).

Tilt (propiconazole)—New Label

The Michigan Department of Agriculture approved a '24C' label for Tilt on wheat that allows for Tilt application until flowering. Applicators using Tilt after stage 8 must have a copy of the new 24C label (MDA, 5/11/98).

MISCELLANEOUS:**Apogee/Baseline (prohexadione-calcium)—New Growth Regulator**

BASF is expected to receive registration on apples next year for this new growth regulator. Apogee will be sold to manage the tree canopy to require less pruning and Baseline will be sold to shape the canopy for harvest (Ag Chem News, 5/15/98).



Monsanto—Roundup-Ready Lettuce

It has been reported that the University of Florida has developed Roundup-Ready lettuce varieties under a research initiative by Monsanto (Ag Chem News, 5/15/98).

Novartis Seeds—Conditional Registration

The EPA has granted a conditional registration for Attribute sweet corn seed with Yield Guard insect protection developed by Novartis. This is the first *B.t.* sweet corn seed available to protect against corn earworm and European corn borer (Ag Chem News, 5/15/98).

MICHIGAN SECTION 18 EXEMPTIONS

The following is a list of Section 18 exemptions granted by the Environmental Protection Agency (EPA) for emergency uses of restricted-use pesticides in Michigan.

Apples—Use of Mycoshield Terramycin (oxytetracycline) was granted on 4/24/98 to treat 5,000 acres for control of streptomycin-resistant fire blight.

Apples—Use of Confirm 2F (tebufenozide) was granted on 3/26/98 to treat 30,000 acres for control of oblique-banded leafroller.

Asparagus—Use of Bravo Ultrex (chlorothalonil) was granted in late May 1998 to treat 12,000 acres for control of purple spot.

Potatoes—Use of Acrobat MZ (dimethomorph), Curzate M-8 (cymoxanil), and Tattoo C (propamocarb hydrogen chloride) was granted on 4/22/98 to treat 58,000 acres for control of late blight.

Tomatoes—Use of Dual/Dual 8E (metolachlor) was granted on 3/24/98 to treat 2,055 acres for control of nightshade.



News Extras



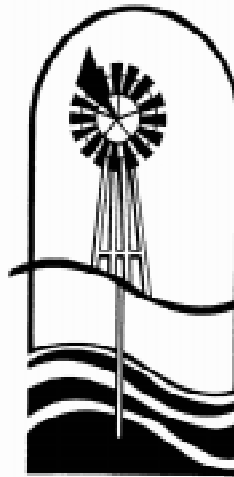
The Michigan Emergency Tube Project

The Michigan Groundwater Stewardship Program (MGSP), MSU Extension Pesticide Education, and Michigan State Police Emergency Management Division have been meeting for several months to explore ways to implement the Ontario Emergency Tube project in Michigan. The emergency tube is a weather-resistant container placed on the farm site that provides vital information about the farm to emergency crews. The tube includes a reflective label for quick detection at night. This information will help ensure the safety of the crews, minimize property damage, protect other residents, and protect the environment.

One of the objectives of the Michigan Emergency Tube Project is to encourage farmer compliance with SARA Title III requirements. The SARA Title III bulletin and the Michigan Firefighter Right-To-Know Planning Guide are being integrated into a new publication. The new publication will provide the basis for the development of a site emergency plan to be placed in the Michigan Emergency Tube and installed on individual farmsteads. The new publication will be available through Extension.

For additional information on the Michigan Emergency Tube Project contact:
Allen Krizek, MSUE-MGSP, Michigan Department of Agriculture, P.O. Box 30017, Lansing, MI 48909, phone 517-373-9813.

Michigan Groundwater Stewardship Program



The Michigan Groundwater Stewardship Program (MGSP) is a statewide environmental program administered by the Michigan Department of Agriculture under the authority of the Groundwater and Freshwater Protection Act (P.A. 247) of 1993. Cooperating agencies include the USDA Natural Resources Conservation Service, Michigan State University Extension, and Soil Conservation Districts.

The mission of the MGSP is to provide information and assessment tools for pesticide and nitrogen fertilizer users which help them identify risks to groundwater associated with their pesticide and nitrogen fertilizer use practices and to coordinate local, state, and federal resources to help reduce those risks.

This mission is backed by a belief that the MGSP should be voluntary, locally driven, address the concerns of individuals, and maintain a focus on real-world situations and the financial and technical constraints which drive real-world decisions. The Groundwater Stewardship addresses only risks to groundwater associated with pesticide and nitrogen fertilizer use. However, it is wide in scope, addressing many uses of these materials including agricultural, turfgrass, and household uses



through a variety of programmatic models, including grants for cost-share and technical support. Other MGSP sponsored programs include Clean Sweep, Container Recycling, Michigan Emergency Tubes, and Spill Response.

Funds for the MGSP come from industry-supported pesticide and fertilizer registration and tonnage fees.

The following is a list of the total number of MGSP items or practices the MGSP has cost-shared with farmers for fiscal years '95 through '98 (1998 numbers were estimated).

MGSP Cost-Sharing Totals for Years 1995-1998*

Item or Practice	Total
Abandoned Well Decommissioning	3,318
Anti-backflow Devices	3,111
Clean Sweep (pounds) of chemical collected	209,100
Closed Pesticide Injection System	35
Container Recycling	407,000
Cover Crops (acres)	14,496
Emergency Pesticide Spill Kits	659
IPM Pest Scouting (acres)	11,527
Rotational Grazing (acres)	4,267
Irrigation Scheduling	48
Irrigation System Scheduling	25
Mix/Load Nurse Tanks/Transfer Pump	450
Permanent Pesticide Mix/Load Pad	46
Permanent Pesticide Storage Facility	52
Pesticide Application Calibration	471
Pesticide Application Foam Maker	99
Pesticide Container Rinse Nozzle	595
Pesticide Storage Impervious Surface (retro fit)	5
Portable Pesticide Mix/Load Pad	175
Seasonal Pesticide Storage	113
Sprayer Nozzles	557
Switch to Custom Pesticide Application	282
Water Tests Pesticide MS/GC	2,290

*1998 numbers were estimated.

Novartis to Terminate Production of OPs

Novartis announced that it plans to reduce its line of insecticides from 26 to 11 active ingredients, ending the company's production of several older organophosphate pesticides (OPs) including dichlorvos, disulfoton, formothion, isazofos, monocrotophos, and phosphamidon. Novartis believes its future marketing prospects for these products is limited, owing partly to market share erosion by generic brands and also because some countries have imposed bans or restrictions on their use.

A schedule for terminating production of the OPs has not been released, but Novartis says the process has already begun and will be carried out on a country by

country basis (Pesticide Action Network North America (PANNA) Update, 4/1/98).

USDA Releases Pesticide Data Program Report for 1996 Residues on Fruits and Vegetables

As part of the U.S. Department of Agriculture's 1996 Pesticide Data Program (PDP), pesticide residues were detected on 72% of fruits and vegetables sampled by 10 states. However, nearly all the residues fell below EPA tolerance levels, according to a report released by USDA March 20, 1998. Included in the testing were 575 whole milk samples and 340 wheat samples; 18% of the milk samples and 91% of the wheat samples had at least one pesticide residue.

Samples were collected and analyzed from January through part of September and in December 1996 from 10 states—California, Colorado, Florida, Michigan, New York, North Carolina, Ohio, Texas, Washington, and Wisconsin. Fourteen commodities were sampled from the 10 states: fresh apples, carrots, grapes, oranges, peaches, spinach, sweet potatoes, and tomatoes; processed apple juice, and canned and frozen green beans, sweet corn, and sweet peas; and wheat and whole milk.

Overall 71.8% of the fruit and vegetable samples and 91% of the wheat samples analyzed by the PDP contained at least one pesticide residue. The 1996 study found a total of 243 presumptive violations in 198 samples. Presumptive violations mean that either a residue is found which exceeds the tolerance level or that there is no tolerance for that particular crop. The PDP found that for certain commodities, post-harvest applications "contribute significantly to the number of residues detected." Most post-harvest applications are either fungicides or growth regulators. Thiabendazole, diphenylamine, o-phenylphenol, dicloran, and imazalil were the five most commonly detected fungicides, accounting for 21% of the residue detections in fruits and vegetables.

The most frequently found pesticides found on wheat in the study were chlorpyrifos, chlorpyrifos methyl, and malathion. Pre- and post-harvest uses of these three pesticides accounted for 90% of the 593 residue detections on the 340 wheat samples.

The testing program found that 45% of fruits and vegetables sampled contained more than one pesticide residue. Residues of DDE (a metabolite of DDT) were found in about 11% of the 4,831 fruits and vegetables screened, even though DDT has been prohibited in the United States since 1972, attesting to the persistence of DDT in the environment. DDE was also found on 58% of the spinach samples (Pest. & Tox. Chem. News, 4/9/98).

EPA Urged to Adopt Tougher Measures to Protect Children from Pesticides

A coalition of environmental, health, consumer and other groups has petitioned the EPA to boost measures to



protect children from pesticides. This action has also been recommended in a newly released Natural Resources Defense Council (NRDC) report, *Putting Children First: Making Pesticide Levels in Food Safer for Infants & Children*. The NRDC report cites growing evidence that children have daily exposure to pesticides in their food, tap water, household carpets, and toys and reviews evidence that children are more susceptible to being poisoned by these chemicals—particularly organophosphates and carbamates.

The report recommends the following:

- strong and immediate implementation of the FQPA tenfold children's safety factor,
- convening of an independent blue ribbon panel of pediatric specialist and toxicologists to determine within 60 days what toxicity and exposure data is needed to justify departure from use of the tenfold safety factor; and
- finalizing of the more stringent, revised data requirements and toxicity testing guidelines to make sure that fetuses, infants, and children are totally protected (Pest. & Tox. Chem. News, 4/9/98).

Section 18 Emergency Exemption Requests Increase Dramatically

The Office of Pesticide Programs (OPP) received 323 Section 18 emergency exemption requests in the second quarter of this fiscal year—a sharp increase over last year's requests. EPA officials described the trend as "worrisome." OPP received a total of 365 requests under Section 18 of the Federal Insecticide, Fungicide & Rodenticide Act (FIFRA) in just the first two quarters of this year, compared to an average yearly total of 400 requests. Of the 365 requests, OPP has issued 71 exemptions and denied 11; 272 requests involving 72 chemical/crop combinations are pending.

Assistant Administrator Lynn Goldman said she believes that people are submitting Section 18 exemption requests earlier to give OPP more lead time. "Some, I believe will be withdrawn because the emergency won't develop." Goldman added that this causes a problem for the agency by having to expend resources on "emergencies that never develop." Goldman said that the agency plans to work with the states on the problem.

Erik Olsen of the Natural Resources Defense Council questioned whether Section 18 requests are being used as a replacement strategy for Section 3 re-registration, since the "hurdles that have to be jumped are not as high in the Section 18 review process." Goldman said the agency shares the concern that Section 18s are being used in place of Section 3 registrations. "We are watching this very carefully because we do not want to see Section 18s used to circumvent" the registration policy, she warned (Pest. & Tox. Chem. News, 4/9/98).

EU Fails to Repeal Import Ban on *Bt*-corn in Austria, Luxembourg

The European Commission (EC) last week failed to repeal the import ban on genetically engineered *Bt*-maize, or corn, declared a year ago by Austria and Luxembourg. Austria and Luxembourg initiated the ban out of concern for possible effects of *Bt*-maize on human health or the environment. In an April 15 vote, the Commission was not able to get the required majority of European Union nations to compel Austria and Luxembourg to allow Novartis *Bt*-maize into their territories. Austria, Greece, and Luxembourg objected to the EC proposal, while Belgium, Denmark, France, and Ireland abstained.

The Novartis maize is engineered to produce the bacterium *Bacillus thuringiensis*, which acts as an insecticide. The corn also contains a gene that confers tolerance against the herbicide glufosinate, and a gene that confers resistance against the antibiotic ampicillin (Pest. & Tox. Chem. News, 4/9/98).

EPA and Canadian PMRA Complete First Joint Review to Register New Reduced-Risk Pesticide

The EPA and the Canadian Pest Management Regulatory Agency (PMRA) working together on their first joint review conducted under the North American Free Trade Agreement (NAFTA) have registered a new reduced-risk fungicide. The EPA has approved the product for use in the U.S. on a broad range of fruit and nut crops, including almonds, grapes, apples, pears, peaches, cherries, nectarines, and plums, prunes, and other crops. The new product was developed by Novartis and will be marketed by its trade name, Vanguard. The active ingredient of Vanguard is cyprodinil.

The review of cyprodinil was expedited under NAFTA because it is a reduced-risk product that is less toxic to humans than several other fungicides currently used on fruit and nut crops. Under NAFTA, EPA and Canada are seeking to jointly review and register reduced-risk pesticides on an expedited basis, and to provide regulatory consistency across borders (EPA Notice, 4/22/98).

EPA Promotes Safer Use of Insect Repellent DEET

New labeling requirements to ensure the safe use of insect repellents containing DEET are being issued by the EPA as a result of a comprehensive review of the most recent health and safety data available. The active ingredient (N,N-diethyl-meta-toluamide) is the most widely used insect repellent, used by approximately one-third of the U.S. population each year. Based on its review, the EPA determined that DEET, if used as directed, will not pose significant health risks to consumers.

The new labeling requirements are intended to ensure the safe use of DEET. Companies that make and distrib-



ute DEET products will no longer be able to claim that their products are "child safe." New labels will direct parents to not allow children to handle DEET products. Currently "child safe" claims are allowed on products containing 15% or less of the active ingredient DEET. New directions for use will also include the following statements: do not use on hands or near eyes and mouth of young children; do not use under clothing; avoid over application of this product; wash treated skin with soap and water and wash treated clothing.

DEET is registered by EPA for both human and veterinary uses to prevent bites from mosquitoes, ticks, and other biting insects that may transmit disease. Manufacturers must incorporate the new labeling requirements within two years. More information on DEET and other insect repellents is available on the EPA website: <http://www.epa.pesticides>. (EPA Press Advisory, 4/24/98).



Compliance with Federal Pesticide Record-Keeping Requirements

A penalty matrix has been developed to define and standardize the assessment of civil penalties for certified applicators who have failed to comply with the federal pesticide record-keeping requirements. Certified private applicators are subject to a civil penalty through either a Settlement Agreement or Administrative Hearing when they:

1. Fail to maintain the required records of federally restricted-use pesticides.
2. Deny access to the required record information for inspection to the designated USDA, state or tribal agency representative.
3. Deny access to the required record information to a licensed health-care professional or person under their direct supervision for providing medical treatment or first aid to an individual who may have been exposed to a restricted-use pesticide.

(Federal Pesticide Recordkeeping Program Newsletter, April 1998).

MSU Research Finds DDT By-Products Degrade Naturally in Marine Sediments

Scientists at Michigan State University's Center for Microbial Ecology have proved that DDE, a byproduct of DDT, is destroyed by bacteria in marine sediments. The results, which overturn conventional wisdom about the pesticide, are published in the May 1, 1998 issue of *Science*. The study, conducted by MSU researchers and MBI International, found that DDE, like some other by-products of DDT, is being naturally degraded in oxygen-free ocean sediments off the coast of southern California. In the past it has been thought that DDE is not degraded further in the environment.

Biodegradation of DDT compounds was confirmed in laboratory experiments directed by Dr. James Tiedje, Dr. John Quensen, and Dr. Mahendra Jain, who found significant concentrations of a decomposition product known as DDMU. This substance, which is not listed as a priority pollutant, was shown to be created almost entirely by the bacterial breakdown of DDE.

"These findings are important because it suggests that the problem products from DDT use may not persist forever," said James Tiedje, director of the MSU Center for Microbial Ecology. "These results also indicate the need to re-evaluate environmental risk assessment and remediation decisions which assume natural decay of DDT-related compounds does not occur." (Press Releases, 4/30/98).

Rid-A-Bird, Inc. Requests Cancellation of Perch 1100 Solution

The EPA received a request from Rid-A-Bird Inc. for voluntary cancellation of all uses of Rid-A-Bird Perch 1100 Solution containing the active ingredient fenthion. The effective date of this cancellation is March 1, 1999.

The Perch 1100 Solution is currently registered for control of starlings, English sparrows, and pigeons at the following sites: in and around farm buildings and feed lots, building tops and structural steel, inside other buildings, power plants and sub-stations, storage yards, loading docks, and bridges. The EPA believes that this product may pose a significant risk to non-target species feeding on pest species killed by the product. This concern is supported by numerous incidents in the United States involving mortality to non-target species such as barn swallows; crows; screech, short-eared, and great-horned owls; kestrels; sharp-skinned, Cooper's, and red-tailed hawks; peregrine falcons; and bald eagles.

After March 1, 1998, Rid-A-Bird, Inc. may not distribute or sell Perch 1100 Solution except for the purposes of recall or disposal. Other persons (sellers, users, distributors) other than Rid-A-Bird, Inc. may continue to sell or use the product until October 1, 1999.

Rid-A-Bird, Inc. has agreed to seek an experimental use permit (EUP) to conduct experiments necessary to support an application for registration of a perch product containing the new active ingredient CPT. CPT is expected to reduce secondary poisoning. Available data indicates that CPT is less toxic to most birds of prey than is fenthion (EPA Notice, 4/8/98).



EPA Investigates Safety of Its Offices After Misuse of Rid-A-Bird

The Environmental Protection Agency in Kansas City is investigating its own office for worker safety after possible misuse of Rid-A-Bird. About 35 to 40 workers on the third floor of the Kansas City regional office have been working elsewhere since May 12 after a pest-control company sprayed the chemical fenthion to get rid of birds nesting above a false ceiling. Fenthion is contained in a product called Perch 1100 Solution, made by Rid-A-Bird, Inc.


EPA spokesman, Dale Armstrong said that fenthion is meant for outdoor application in a tray, not for spraying indoors. Within minutes after the application, the third-floor workers complained of an odor and were allowed to go home.

The pesticide-use section of the Kansas Department of Agriculture, which has regulatory authority, is investi-

gating the actions of Trehey Termite & Pest Control of Kansas City, Kansas. (Adapted from *The Kansas City Star*, 5/26/1998, Matt Campbell).

Organic Spray Removes Contaminants from Produce

Organiclean is a new product being marketed to supposedly remove contaminants from produce. The product is a naturally derived liquid made from fruit extracts and a coconut-based cleaning agent designed to “enhance the removal of surface pesticides, chemicals, dirt and other harmful substances from produce.” The product is sprayed-on and rinsed with no soaking or scrubbing required. Organiclean claims there is no residual after-taste or smell. (Adapted from *The Detroit News*, 5/26/98, Kate Lawson).

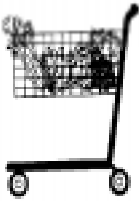


Food
Water
Home
Garden

Residue Cup

Food Quality Protection Act Information

For more information, contact a regional MDA office or Dr. Christina DiFonzo, MSU
Pesticide Education Program (517) 353-5328.



Endocrine Disruptor Update

EDSTAC—the Endocrine Disruptor Screening and Testing Advisory Committee—is still debating a working definition of “endocrine disruptor,” despite the fact that it is due to release an endocrine disruptor screening program in August 1998. The debate is not surprising, based on the discussions surrounding scientific evidence for endocrine effects. A recent issue of *Pesticide and Toxic Chemical News* (April 23) reported examples of what it termed the “crumbling guesswork” in the endocrine question.

1) *Synergistic activity*—used to justify testing mixtures of chemicals. Synergistic effect was based on a 1996 study at Tulane University in which single chemicals had no estrogenic effect, but combinations did. Those results could not be repeated in other laboratories, and the Tulane researchers eventually retracted the study in 1997.

2) *Low-dose activity*—used to justify changes in EPA testing programs. Male mice fed tiny doses of a plasticizer (a compound that improves flexibility of plastic) had changes in their prostate glands. This study could not be repeated.

3) *Sex-reversed fish in England*—often cited as evidence that common household products like soap and shampoo are endocrine disruptors. Male fish downstream from an English sewage plant began to “feminize.” Scientists speculated that soaps and detergents from the plant were acting as endocrine disruptors. Researchers later discovered that hormone products in human birth control pills in the sewage were the likely culprit.

4) *Breast cancer debate*—used as evidence of endocrine disruption in industrialized countries. Women in industrialized countries have a higher rate of breast cancer, often blamed on exposure to chlorinated hydrocarbons like DDT and chlordane that accumulated in fat. Scientific evidence, however, is not so clear cut. A recent report that measured levels of organochlorines and pesticides in women with breast cancer did not find a correlation between the two. Some researchers attribute higher breast cancer rates in industrialized countries to diet (high fat intake, meat based diet), better detection of cancer in developed countries, and a longer life span.

There are obviously many questions remaining to be solved before a screening program can be put in place. Recent discussions focus on whether laboratory bioassays really predict the endocrine disruption potential of a chemical. Some scientists say that the lab tests being proposed will generate a high number of false positives. If a chemical is found in lab tests to be an “endocrine disruptor,” how will the lab results relate to effects in humans and wildlife? Another issue is the feasibility and cost of screening. Under EDSTAC’s current proposed screening schedule, between 10,000 and 15,000 chemicals will be screened initially, both pesticides and industrial chemicals (remember, the Safe Drinking Water Act also mandates testing for potential endocrine disrupting compounds in drinking water, hence testing of many industrial compounds). That number could increase to 70,000 chemicals or mixtures of compounds. The cost of



screening has been estimated at \$150,000 to 2 million per compound. But, despite the examples of “guesswork” given above, the high potential cost, and uncertainty of lab testing results, scientific studies continue to suggest that endocrine disruption is a real phenomenon that we are just beginning to recognize—the issue is not going to go away.

EPA/ USDA Responds to Criticism Over FQPA

After letters from congressional leaders and Vice-President Gore, in which EPA was criticized for a myriad of issues, including default assumptions, sound science, moving too fast with FQPA implementation, ignoring USDA and growers, and transparency of decision making, EPA and USDA are responding. Lynn Goldman, EPA Assistant Administrator, said that EPA recognized the potential impacts of FQPA on agriculture, and that it would work with USDA, growers, registrants, and researchers in implementing FQPA.

To that end, EPA and USDA has formed a joint federal advisory committee to help make decisions on the use and fate of organophosphates (OPs). The group is projected to meet 4 times over the next several months. There are 61 nominees to the committee, split as follows: 11 congressional reps.; 10 agriculture/farmer reps.; 8 environmental/ consumer/farm worker organizations; 6 from universities; 6 from state and local agencies; 6 from food processing; 2 from the EPA Scientific Advisory Panel; 1 each from the structural pest control industry, FDA, USDA, Centers for Disease Control, an EPA regional office, and EPA Headquarters. Dr. Mark Whalon, from the MSU Pesticide Alternatives Lab, is one of the university members. The committee is supposed to disband in several months after it has advised EPA on the OP issue.

What will the federal advisory committee accomplish? That is hard to say. With so many members, and such a range of views, the committee is unlikely to come to any kind of consensus. And there are many committees already advising EPA on FQPA issues. It is difficult to see what this new group will contribute, outside of being a quick way of addressing Vice-President Gore’s directive that EPA open its decision-making process to stakeholders.

Meanwhile, USDA is still trying to fill positions in its Office of Pest Management, an office it formed last year to work closer with EPA on FQPA implementation issues. Ten people are expected to work out of the office, although only half of the positions have been filled thus far. USDA is redirecting money to fund the office, which is working to compile “crop profiles.” These profiles, being developed at universities, are each supposed to include a narrative about a crop, and information on pesticide use, alternatives, and efficacy. In Michigan, Lynnae Jess of the National Pesticide Impact Assessment

Program (NAPIAP) is working on crop profiles for apples, cherries, blueberries, and potatoes. Other USDA activities related to FQPA include: expanding pesticide use surveys; expanding surveys on food consumption of kids; additional residue testing of foods eaten by kids; prioritizing IR-4 work to focus on safer alternatives for the riskiest pesticides; and providing additional grant money to work on pesticide alternatives and IPM.

EWG Releases Report Critical of Government Pesticide Policies

On May 21, the Environmental Working Group (EWG) released a report entitled “Same as it Ever Was,” which details its analysis of federal agency data, programs and regulations. In the introduction to the report, EWG writes that:

“On June 25, 1993, the Clinton-Gore Administration made headlines when it announced a bold new national policy to cut pesticide use in agriculture and make the protection of children the paramount consideration in federal pesticide regulation...This report examines what has happened in the five years since the policy was announced, based on an extensive Environmental Working Group review of federal agency data and actions. We conclude that the U.S. government has done almost nothing materially to reduce pesticide use or to lower children’s exposure to pesticides during the past 5 years. By nearly every measure, children and the rest of the population are no better off today than they were five years ago with respect to the risks posed by pesticide use and exposure. We can find no compelling evidence that the government intends to take, or will take, actions to reduce significantly either pesticide usage or risks before the end of the Clinton-Gore Administration, despite powerful new regulatory tools Congress provided when it unanimously passed the Food Quality Protection Act in July, 1996.”

Specific Points made in the report include:

- Farmers are using more pesticides, not cutting back.
- Children’s exposure to pesticides in food is not reduced.
- Water supplies are still contaminated with pesticides.
- The Administration has taken only one pesticide, phosdrin, off the market.
- The government allowed a record number of new pesticides (81) onto the market.
- The Administration has stymied sustainable agriculture.



EWG's recommendations:

- The Administration must indicate publicly how it intends to reduce exposure to organophosphate insecticides in accord with Food Quality Protection Act mandates.
- Parents or anyone else concerned about pesticide exposure must assume that the government...will not act any time soon to reduce the risks of pesticides. Parents in particular should take steps to reduce children's pesticide exposure through food, water, in the home and at school.
- Socially responsible companies should modify their products and services to help consumers reduce pesticide risks.
- Food companies in general, and baby food companies in particular, should accelerate and document efforts to reduce pesticide residues in food.
- Garden supply stores and pest control services should voluntarily phase out the sale and use of organophosphate insecticides.
- Pesticides that contaminate drinking water sources should be banned.
- Consumers concerned about pesticide levels in food or water can express their opinions directly to EPA by calling 1-800-858-7378.

You can download a complete copy of *Same as it Ever Was* at the following web site:
<http://www.ewg.org/pub/home/reports/sameasiteverwas/>

Gianessi Speaks at IR-4 Conference

Leonard Gianessi, from the National Center for Food and Ag Policy (NCFAP), spoke at the Michigan IR-4 Conference in East Lansing on April 24. Gianessi is funded equally by registrants and EPA to collect and analyze pesticide use and usage data for FQPA implementation. He spoke specifically about the potential impacts of loss of organophosphates (OPs) and carbamates to Michigan. Groups providing usage data for his analysis include the Cherry Marketing Institute, Michigan Apple Committee, Michigan Blueberry Association, Michigan Asparagus Growers, Concord Grape Growers, Mint Growers, and Michigan State University

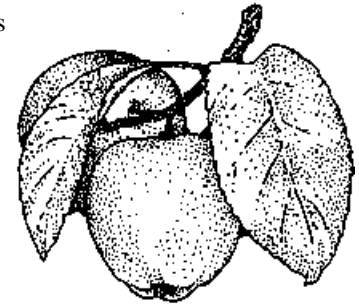
According to NCFAP's analysis, 65% of Michigan insecticide treated acres are treated with OPs, 17% with carbamates, and 18% with other products. To illustrate the importance of OPs, Gianessi discussed specific examples of impacts on Michigan crops if OPs were lost.

Mint Maladies: Mint flea beetle is an important pest of mint in Michigan. Without control, flea beetle activity can reduce yields from 44 lbs. per acre down to 3 lbs. per acre. The OP malathion has been for mint flea beetle control since the 1970s; it provides about 80% control at a cost of \$4 per acre. The only alternative is another OP,

methomyl, which also provides nearly 80% control, but at a cost of \$22 per acre.

Not-So-Sweet Cherries: Michigan produces 250 million pounds of cherries each year. A complex of several maggot species attack the crop, and OPs are the major means of maggot control. Part of the reason for using OPs is that there are tight federal standards for maggots in cherries—essentially a zero-tolerance. If any maggot infested fruit is found in an orchard, the cherries are not harvested. Thus, OPs are needed to meet strict guidelines imposed by other branches of the government.

Ailing Apples: A complex of pests, including maggots and leafrollers, also attack the apple crop in Michigan. OPs provide a relatively inexpensive, broad-spectrum control for these insects. OP replacements cost considerably more. Gianessi estimates that replacement of OPs with a control program based on pyrethroids would cost about \$76 more per acre, with a 20% reduction in yields. Replacing OPs with a pheromone program would cost \$216 more per acre, with a 10% reduction in yield. Pheromones are not as broad spectrum as OPs, and require more and better management than OP use.



Beans and Borers: The European corn borer can be a pest in green bean production, feeding on and in the pod and causing unacceptable damage to fresh market produce. Acephate (Orthene), an OP, provides good control of the corn borer. Non-OP replacements, Sevin (a carbamate) and Esfenvalerate (a pyrethroid) are available. However, these compounds provide only medium to poor control.

Grape Gripes: OPs are used in Michigan to control grape berry moth in vineyards. At first, pheromones appear to be a viable control option; researchers in New York reported excellent results with pheromones in their state. However, fruit entomologists in Michigan note that the many alternate hosts of berry moth in our state means heavy migration of the pest from wild grape, which actually limits the effective use of pheromones in Michigan.



Ode to Onions: Onion maggot, a major pest in Michigan onion production, can be controlled with the OP insecticide chlorpyrifos (Lorsban). One Lorsban application, at a cost of \$18 per acre, results in 95% control of the maggot. The only available non-OP alternative is permethrin, a pyrethroid. Six applications of permethrin



are needed, at a cost of \$88 per acre, for only 50% control.

Blue Times for Blueberries: Michigan is the leading producer of blueberries in the U.S., with 18,000 acres grown in the state. Michigan blueberry producers face several major pests, including blueberry maggot and fruitworm. The OP Guthion is used now, and is critical, for controlling these pests. If OPs and carbamates were lost, and growers were forced to use *Bt* to control such pests as fruitworm, Gianessi estimates it would cost \$13 more per acre, yield would decrease by 12%, resulting in a \$215 loss per acre.

Gianessi also used Japanese beetle, a new major pest of the blueberry industry, to illustrate FQPA impacts. Phosmet, the OP currently used for beetles, gives 90% control. Alternatives include methomyl (an OP), Sevin (a carbamate) and imidacloprid (a chloronicotinal), all of which provide 80% to 90% control. However, there are problems that preclude the use of these alternatives. Methomyl is very toxic to beneficial insects. Sevin has a long pre-harvest interval, and cannot be used close to harvest. Imidacloprid is not registered for use on blueberries.

Gianessi says he does not know what EPA will do over the next year, but he urged university, commodity, and agribusiness groups to keep collecting use data, and to look ahead to the B2 carcinogens (EBDC fungicides are a big part of that group) in 1999.

FQPA Impacts

MIAMI. After detecting a small infestation of Mediterranean fruit fly near the Miami Airport in April, state officials sought EPA permission to spot spray malathion on a small number of acres. EPA did not want to grant the request because the risk cup for malathion was overflowing. Activists in Florida also protested against the use of malathion due to possible environmental and health effects. Marcia Mulkey, Director of the EPA's Office of Pesticide Programs, went to Florida to talk to Agriculture Department officials, and eventually gave permission. Due to the early detection, only thirty-seven acres were then sprayed with 34 ounces of malathion. State officials were disappointed in EPA's slow response, and wondered how 34 ounces of materials would contribute significantly to the risk cup. They also questioned what alternatives could be used if they are denied use of malathion in the future. The Florida Department of Agriculture tries to prevent Med fly introduction with quarantines, and traps extensively to detect infestations quickly. When Med fly is detected, malathion is sprayed to kill most flies, then sterile flies are released to control any escaping flies. (adapted from Pest/Tox Chem News, April 16, 1998)

WASHINGTON D.C. Over the first two quarters of this year, EPA has received 365 Section 18 requests. This is in comparison to an annual (4-quarter) average of 400 requests. EPA calls the trend "worrisome."

Handy Guide to FQPA Acronyms

ACRONYM—"a word formed from the first-letters of other words" (Webster's Dictionary), or "a word formed to save me the trouble of typing the name of incomprehensible government programs and regulations over and over again" (DiFonzo). FQPA, like an issue, is surrounded by dozens of acronyms that tend to muddy the waters for those not following it closely. Based on a helpful email from Cindy Baker, Communications Specialist at Gowan, below is a list of important acronyms related to FQPA.

ACPA, American Crop Protection Association: A national organization of pesticide manufacturers and distributors. ACPA is active in legal, legislative, and communication issues.

ARRI, Alliance for the Responsible Regulation of Insecticides: Coalition of pesticide registrants, including AmCy, AmVac, Bayer, Cheminova, Dow AgroSciences, Dupont, FMC, Gowan, ISK, Novartis, Rhone Poulenc, and Valent. APRI is working on many issues, but focusing on OPs and carbamates.

EWG, Environmental Working Group: An environmental organization that has published a number of major reports on pesticides, most recently "Overexposed: OP Insecticides in Children's Food," which called for the immediate ban of five OPs. An influential group, EWG presented its report to the Scientific Advisory Panel (SAP).

ILSI, International Life Sciences Institute: Scientific group under contract with EPA. ILSI evaluated common mechanisms of action in OPs.

IWG, Implementation Working Group: A task force made up of such groups as ACPA, MCFA, National Food Processors, Farm Bureau, and more. IWG has various subgroups examining various FQPA issues, like Section 18s, pesticide-use data, etc. One of its major projects is developing a "road map," a document to show how to implement FQPA in a way that will lessen the impact on American agriculture. Rather than sit and complain about FQPA and EPA, IWG is trying to give ideas on how to meet FQPA provisions in a reasonable manner.

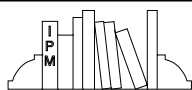
MCFA, Minor Crop Farmers Alliance: A group of people and organizations involved in minor crops production (not pesticides).

PPDC, Pesticide Program Dialog Committee: A committee of "stakeholders" formed by EPA to give input on pesticide issues, now advising EPA on FQPA issues. PPDC includes scientists, pesticide registrants, and environmentalists.

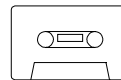


SAP, Scientific Advisory Panel: A committee of scientists whose purpose is to advise EPA. The SAP reviews scientific decisions and gives EPA its opinion—

for example, SAP reviewed the study done on common mechanism of toxicity of OPs.



Resources



New Performance Standard for Tractor Cabs

The Certification and Worker Protection Branch of EPA, and the American Society of Agricultural Engineers (ASAE), have developed a performance standard for enclosed tractor cabs. The new Standard, S525 (Agricultural Cabs - Environmental Air Quality, Part 1: Definitions, Test Methods, and Safety Practices; and Part 2: Pesticide Vapor Filters - Test Procedure and Performance Criteria), is available from the ASAE, 2950 Niles Road, St. Joseph, MI 49085-9659. 616.429-0300. hq@ASAE.org

The S525 describes the specifications and criteria to be satisfied in order for the cab to receive approval as an enclosed cab. For enclosed cabs that have been certified to offer respiratory protection, the Worker Protection Standard permits operators to not wear respirators during application of products that bear a respirator requirement. The State of California's Environmental Protection Agency/Department of Pesticide Regulation is maintaining a list of the enclosed cabs offering respiratory



protection equivalent to that of an organic vapor-removing cartridge respirator. New cabs certified by the manufacturer to meet the S525 Standard will be added to the Cal-DPR list. New cabs that meet the certification standard will have a sticker on the front cab window.

For a copy of the current Cal-DPR list of enclosed cabs acceptable for respiratory protection, contact Sandy Perry at perrys@msue.msu.edu or 517-432-5999. The Cal-DPR list includes 4 cabs (Nelson Spray Cab, Lift-Top Cabs - "C" or "D", Pureair Model 8000 Cab, and John Deere 4700 Sprayer). The air purification system maintenance, positive pressure, cleaning schedule and how to do documentation are detailed for each cab.

Safety Aspects of DEET

The latest issue of the Journal of American Mosquito Control Association contains a review of the pharmacokinetics, formulation, and safety aspects of DEET (Vol. 14(1):12-27, 1998). Tables are provided that describe the transdermal absorption of DEET and the reported severe adverse human effects. The vast majority of human effects from DEET use are attributed to severe overuse (daily use or very high concentrations) on skin or ocular exposure. Combined effects of DEET with other topical insecticides (possible Gulf War Syndrome) are also discussed.

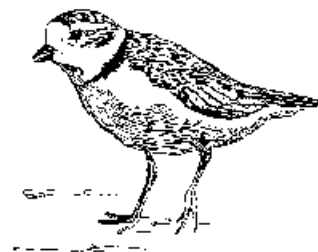


Federal Pesticide Record-Keeping Requirements Homepage

The Pesticide Record-Keeping Program has a homepage. The homepage provides information regarding the Program, record-keeping requirements, and links to other useful sites. The address is <http://www.ams.gov/science/sdpr.htm>. Comments are welcome.

Endangered Species Protection Program (ESPP) Homepage

The EPA has an Endangered Species Protection Program Homepage at <http://www.epa.gov/oppppsps1/endorsement/>. County bulletins are available from the homepage with instructions on how to determine the pesticide-use limitations for protecting endangered species for individual counties in the United States. For example, Kirtland's warbler habitat is identified on maps for 11 counties in Michigan along with the limitations for using pesticides in the areas indicated on the map.



Mailing List Update

Please change add delete my name on your mailing list.

Name _____

Address _____

Return form to Carolyn Randall, Pesticide Education Program, B18 Food Safety & Toxicology Bldg, Michigan State University, East Lansing, MI 48824-1302, or Fax: 517-353-4995, or email randallc@msue.msu.edu.

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