EPA and FDA, in cooperation with EPA Regional Offices, USDA, and the state regulatory officials, have been investigating reports that the restricted-use pesticide zetacypermethrin (registered by FMC under the trade names Fury and Mustang) has been illegally applied to 6,458 acres of wheat in Arkansas and 18,271 acres in Mississippi to control a serious outbreak of armyworms. Zetacypermethrin is not registered for use on wheat, and therefore no wheat tolerances are established.

Preliminary reports indicate that a company representative allegedly recommended that if zeta-cypermethrin is applied to wheat at one-half the rate on the cotton label (it is registered for use on cotton), no residues would be detected. The states, however, investigated these reports and found residues well above the tolerance for cotton. In the past 2 weeks, EPA has participated in numerous meetings and conference calls to determine the dimensions of the misuse, to coordinate a response within EPA and with the other concerned federal agencies, and to work with states and regional and field offices of FDA to make sure the adulterated wheat does not move off the farms. On June 11, a letter co-signed by EPA's Office of Enforcement and Compliance and Assurance (OECA) and FDA was sent out to EPA Regions and the states for distribution to farmers, warning them not to move the contaminated wheat into the market or feed it to animals.

In an incredible feat of coordination among federal and state agencies and the registrant, an agreement was reached and signed on Thursday, June 14, whereby the registrant (FMC)—through contract with a competent third party that has been agreed upon by all signatories (EPA, FDA, and registrant)—will (1) notify all affected growers of the company's plans to purchase their adulterated wheat; (2) purchase all wheat from the growers identified by the state regulatory officials, based at the Commodity Credit Corporation marketing-assistance loan rate for the county where the wheat was produced; (3) notify FDA and EPA immediately of growers refusing to sell their adulterated wheat; (4) monitor the harvest to ensure that the adulterated wheat does not enter interstate commerce; (5) store the wheat in segregated and secured facilities (either on the growers' farms or in contracted commercial facilities); and (6) be responsible for ensuring that this wheat not be released into interstate commerce unless and until FDA, in consultation with EPA and USDA, provides clearances following review of results after testing using FDA approved methods.
EPA’s Health Effects Division (HED) conducted a dietary-exposure analysis using the Agency’s Dietary Exposure Evaluation Model (DEEM) to assess the risk from acute and chronic dietary exposure to residues in food, including wheat, from the use of zeta-cypermethrin. This analysis took into consideration all potential dietary exposures from currently registered uses, pending uses, and illegal applications, as well as drinking water exposure, and assumed tolerance-level residues and 100% crop treated (worst-case assumptions). Based upon the results of the DEEM analysis, HED concluded that the residues of zeta-cypermethrin in/on wheat and its processed commodities do not pose a dietary risk once the levels in the raw agricultural commodity (RAC) fall below the detection limit of 0.02 ppm. That determination was transmitted as well to FDA in a letter from EPA on June 14.

Although we now have agreement and a plan as to the Fury-treated wheat in Mississippi and Arkansas, the tale is far from over! The state of Tennessee and EPA Region 4 are currently investigating reports of zeta-cypermethrin misuse on corn, soybeans, milo (sorghum), and bermudagrass grown for hay and pastures. Fortunately, these crops are not scheduled for harvest for at least a couple of months. Stay tuned! (Source: Wilfred Burr, USDA Office of Pest Management Policy, “6/21/01 Newest News” e-mail message.)

The moral?

Always compare the advice you receive against the label that comes with the pesticide you intend to use. Regardless of what someone tells you about pesticide uses and rates, THE PESTICIDE LABEL IS THE LAW, and you will be judged against it. Fortunately, in this case, it appears that the adulterated/contaminated wheat may be salvaged, or at least the growers will not lose 100% of their crop revenue. However, a rescue such as this should never be assumed. Considering the larger picture, the publicity surrounding off-label applications serves only to further erode public confidence in the safety of our food supply and the integrity of U.S. agriculture.

You may remember...

United States v. Roggy (D. M N): F. George Roggy, owner of Fumicor, Inc., of Edina, M N, was sentenced in St. Paul to 5 years in prison for unlawfully applying an unapproved pesticide, Dursban, on 19 million bushels of oats used by General Mills in the production of 160 million boxes of breakfast cereals. The sentence followed Roggy’s November 15, 1994, criminal conviction by a jury on one count of misusing pesticides, one count of adulterating food, and 11 counts of mail fraud. Following the prison term, Roggy also received 3 years of supervised release, including 200 hours of community service in which he will lecture the community on the hazards of pesticides.

Fumicor was under contract with General Mills to apply the approved pesticide Reldan on oats stored by General Mills at grain elevators in the port of Duluth–Superior. Roggy submitted to General Mills invoices totaling $166,120 that showed he had used the approved pesticide Reldan to spray the grain. By knowingly making the illegal switch from Reldan to the unapproved and less expensive Dursban, Roggy saved over $85,000. General Mills, which subsequently destroyed the grain and cereal, suffered a loss in excess of $140 million as a result of the fraud. (Source: http://es.epa.gov/oeca/accomplish/appendix/criminal.html) As of February, 2001, General M ills was still battling an insurance company in the M innesota State Court of Appeals to recover losses due to the misuse. (Source: http://www.lawlibrary.state.mn.us/archive/citappub/0102/c2001428.htm)

Methyl parathion misuse. Between 1991 and 1997, Ruben Brown of Bellwood, IL, applied methyl parathion (a restricted-use agricultural insecticide) in hundreds of houses, apartments, and commercial buildings in Chicago and in at least 20 suburbs from Bolingbrook to Schaumburg. He also sold the chemical in unmarked jars. In December 1997, Brown was sentenced to 2 years in federal prison. In addition to Chicago, misuses of methyl parathion have been reported in Arkansas, Louisiana, Michigan, Mississippi, Ohio, Texas, and Tennessee. To date (5/1998), EPA has spent more than $79 million to cope with hazards at these sites. (Source: http://www.epa.gov/region5/news98/98opa125.htm) Many other individuals in the previously mentioned states have since been fined and imprisoned, either for conspiring with Ruben Brown or for independently making similar, off-label applications. (Bruce E. Paulsrud)

Methyl Bromide Phaseout Status

On June 13 and 14, 2001, Pete Caulkins and Rick Keigwin from EPA’s Registration Division participated in a workshop co-sponsored by USDA and EPA where reports were presented on the status of the methyl bromide phaseout. Growers representing various commodity groups (including strawberries, tomatoes, tree nuts, tree fruits, nurseries, and forestry) presented their perspectives on the methyl bromide phaseout and their experience working with emerging alternatives. The consensus among many grower groups was that sufficient economic and viable alternatives do not currently exist to easily replace the use of methyl bromide. Proceedings from the 2-day workshop will be available soon (presumably via the EPA Web site and phone numbers listed below). Representatives from EPA’s Biological and Economic Analysis Division, as well as the agency’s Office of Atmospheric Programs also participated in the workshop. (Source: Wilfred Burr, USDA Office of Pest Management Policy, “6/21/01 Newest News” e-mail message.)

Methyl bromide, a pesticide widely used in agriculture for soil fumigation
and for storage and structural treatments, was officially listed as an ozone-depleting chemical in 1992. Under the Montreal Protocol, governments have agreed international phaseout schedules. Industrialized countries will phase out methyl bromide by 2005, with interim reductions, while developing countries will freeze supplies by 2002, cut supplies 20 percent by 2005, and phase out the pesticide by 2015 (allowing for permitted exemptions). (Source: http://www.gtz.de/proklima/methyl1.htm)

The EPA recognizes the importance to the agricultural community of the pesticidal activity of a material like methyl bromide and will strive to assist current users with the transition to alternative pest-control tools. In this regard, EPA is working closely with the U.S. agricultural community on research into alternatives to methyl bromide. Both EPA and USDA are working with scientists and farmers to ensure that economically viable and environmentally sound alternatives are in place and available as soon as possible. The EPA Office of Pesticide Programs has committed to accelerate paperwork on alternatives to methyl bromide. Both EPA and USDA are working with scientists and farmers to ensure that economically viable and environmentally sound alternatives are in place and available as soon as possible. The EPA Office of Pesticide Programs has committed to accelerate paperwork on alternatives to methyl bromide. Both EPA and USDA are working with scientists and farmers to ensure that economically viable and environmentally sound alternatives are in place and available as soon as possible.

The EPA has published 30 case studies describing potential alternatives to methyl bromide. The full text of all of these documents are online (http://www.epa.gov/docs/ozone/mbr/) or can be ordered free by calling (800)296-1996 or (301)614-3396. (Source: http://www.epa.gov/docs/ozone/mbr/)

Relating to soil fumigation, the University of Illinois Extension Pesticide Applicator Training Program is developing a soil fumigation training manual to help Commercial, Commercial Not for Hire, and Public applicators prepare for the Soil Fumigation category exam. This manual will be available to applicators and other interested persons this fall through your University of Illinois Extension office and will replace the old "Soil Disinfection: Methods and Materials" booklet. (Bruce E. Paulsrud)

Agrichemical Container Recycling Schedule

Once again this summer, the Illinois Department of Agriculture (IDoA) is offering numerous sites throughout Illinois where you can drop off your empty 2.5-gallon pesticide containers. This year, there are 53 single-day sites (July 9 through August 16) and six year-round sites across Illinois. For date and location information, call the Pesticide Hot Line at (800)641-3934 or visit IDoA’s Web site at www.agr.state.il.us/recycle.html.

Why recycle? When you recycle empty pesticide containers, you are helping to protect the environment by diverting potential waste to the production of useful products. Furthermore, you are helping to reduce the spread of your local landfills. Plastic from pesticide containers can be recycled into a number of products, including pallets, new pesticide containers, fuel for cement kilns, fence posts, roadside sign posts, guard rails, drainage tile, sewage tile, and hazardous waste drums.

Safe and successful recycling tips:

- **Protection:** Always wear protective clothing while rinsing containers.
- **Empty:** Completely empty the pesticide container.
- **Clean:** Triple-rinse or pressure-rinse the container immediately after use to prevent drying or caking of formulation residues.
- **Inspect:** Inspect the container inside and around the spout threads to ensure that it is free of formulation residues. Clean but stained containers are acceptable.

- **Remove:** Discard the cap, foil seal, and label from the container because they are not accepted for recycling.
- **Puncture:** Render the container unusable by puncturing it.
- **Type accepted:** Only 2.5-gallon containers made from high-density polyethylene (HDPE) #2 plastic are acceptable for recycling. The sites are not able to accept or recycle mini-bulk and other large containers.
- **Keep the container dry:** The recycler will not accept a container with liquid in it—keep containers out of the rain. (Bruce E. Paulsrud)

Pesticide Disposal Options

Disposing of pesticide concentrate that is no longer needed or legal to use can be a burden, but safe disposal options are available to you. The first step is to store the product in a safe place (away from children, potential flooding sites, etc.) for future, proper disposal or collection. Be sure the container is labeled and in good condition.

One method to get rid of excess pesticide concentrate is to contact the pesticide manufacturer to see if they will take it back. Another method is to contact other possible users of the pesticide to see if they have a use for it. For legal reasons, never sell a pesticide unless you are a licensed dealer. Both of these suggestions are based on the assumption that the pesticide is in the original, fully labeled container. Keep in mind that you may apply a pesticide to a labeled site even if the pest is absent.

Pesticides with outdated labels (labeled uses have changed or the pesticide has been taken off the market) can usually still be used until supplies are exhausted. This means that for most pesticides with outdated labels, you can legally use up the pesticide according to the label on the container. There are exceptions to the rule because for some pesticides the U.S. Environmental Protection Agency

---

Information from various sources including EPA and Illinois Department of Agriculture.
With commercial agricultural or structural pesticide collection programs, there may be a period before the collection time when anyone wanting to dispose of pesticides must declare which pesticides and how much of each they will be bringing to the collection site. This advance notice allows the sponsoring agency to work with the commercial waste collector to get the maximum amount of pesticide disposal for the money. In this process, some pesticides or pesticide formulations may be refused.

The most expensive option is to contact a waste hauler/collector. Large disposal and transport fees are involved. Even a few small containers with transport fees are likely to cost about $1,000. Your local waste hauler may be able to dispose of certain pesticides; if not, they should be able to refer you to a company that can deal with the waste. These may include:

- PD C Laboratories, (309)688-0760, Peoria
- Onyx Environmental Services, (618)271-2804, Sauget, IL
- Heritage Environmental Services, (317)243-0811, Indianapolis

If you contact a commercial waste collector, they will ask you to submit an inventory of chemicals. They will then provide you with a price quote and set up a collection date and time.

**Sewer Line Root Control: New Category and Study Manual**

What are your plans for this summer? Do they include commercially controlling tree roots within sewer lines by using pesticides? If so, you should be aware of a new law in Illinois pertaining to this.

First of all, you should know that anyone wishing to use a herbicide, fumigant, or other pesticide in Illinois to control tree roots in sewers—for hire or as part of their job—must be certified by the Illinois Department of Agriculture.

The new law provides for an additional technical category of licensure available to pesticide applicators, called Sewer Line Root Control. Pesticide applications of this nature were previously included in the Rights-of-Way Pest Control category. Applicators currently licensed under the Rights-of-Way category will be grandfathered in until their current certification license expires. Certification licenses are valid with the state for a period of 3 years. New applicants must successfully pass a 100-question General Standards exam and a 50-question Sewer Line Root Control category exam, which is based on sewer root management.

Management of tree roots in sewers involves an Integrated Pest Management (IPM) approach. Sewer root IPM includes carefully selecting tree species and planting sites near sewer lines, maintaining the integrity of the lines to prevent root penetration, mechanically cutting and removing tree roots within sewer lines, and using pesticides to kill roots within the sewer lines and to help prevent regrowth into the lines.

University of Illinois Pesticide Applicator Training (PAT) specialists have prepared a new study manual containing this basic information, which is needed to become a certified sewer line root control applicator in Illinois. The Sewer Line Root Control manual sells for $8.00 and can be ordered three ways:

By phone: (800)644-2123 or (217)244-2123
By mail: University of Illinois, PAT Program 1201 S. Dorner Dr. Urbana, IL 61801
By fax: (217)244-3469
Currently, training for Sewer Line Root Control is not available at PAT clinics. For information about testing or licensing, please contact the Illinois Department of Agriculture at (800) 641-3934. Enjoy your summer! (Michelle Wiesbrook)

Pesticide Update

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

**Agronomic**

ADAGE 5FS (thiamethoxam)-Syngenta-Added to their label the control of wireworms and aphids on cotton, barley, sorghum, and wheat.

APPEAL (fluthiacet-methyl)-Kumiai-This product will be marketed in the United States by Entek Corp. for use on corn and soybeans.

FORAM SULFURON Aventis- A new herbicide being developed for use on corn.

FUEGO (triasulfuron/dicamba)-Syngenta-This is a twin-pack combination being marketed for use on pastures to control broadleaf weeds as a post-emergence herbicide.

PICO (picolinafen)-BASF-Being introduced this year for use on winter cereals. [herbicide]

**Fruit/Vegetable**

ACROBAT 5OWP (dimethomorph)-BASF-This new formulation will be available this year for use on potatoes and tomatoes. It replaces the Acrobat MZ formulation, which will no longer be sold. [fungicide]

BIO CONTROL (petroleum oil)-UAP- A new formulation of oil that recently received EPA registration on citrus and pome fruits. [insecticide]

CHECKMATE DBM -F (pheromone)-Concep Inc.-A new mating-disruption pheromone to control the diamondback moth on cole crops.

DANITOL (fenpropathrin)-Valent-Added to their label the control of the glasswinged sharpshooter on grapes and citrus and the control of spiders and stink bugs on tomatoes.

ENVADOR (spirodithofen)-Bayer- A new miticide being developed for use on citrus, grapes, and pome fruits.

ESTEEM ANT BAIT (pyriproxyfen)-Valent-Added to their label the use on bearing nut crops and nonbearing olives, stone fruits, and pistachios. [insecticide]

FULFILL (pyremethrin)-Syngenta-Registration is expected in late summer to control aphids on leafy vegetables and cole crops.

FURY (zeta-cypermethrin)-FM C-Registration is expected this spring on sweet corn and head, stem, and leafy brassica crops. [insecticide]

GAVEL (zoxamide/mancozeb)-Rohm & Haas-Being developed to control early and late blight on potatoes.

MAVRIK (tau-fluvalinate)-Wellmark-Added to their label the use on containerized nursery stock. [insecticide]

MAXGUARD (bifenthrin)-Scotts- A new formulation used to control various insects in home lawns.

MILSANAT- Olympic Hort Products-Registration is pending on this new biofungicide, an extract from giant knotweed, for use on ornamentals to control powdery mildew and botrytis.

PROGRASS (etofumesate)-Aventis-Added to their label the use on non-dormant bermudagrass. [herbicide]

STATUE MZ (dimethomorph/mancozeb)-BASF- A new fungicide being developed for use on ornamentals to control downy mildew and phytophthora.

SWITCH (cyprodinil/fludioxonil)- Syngenta- A new combination fungicide being developed for use on ornamentals.
to control botrytis, alternaria, and brown rot.

SYSTAR WD G (thiophanate-methyl)–Regal Chemical–A new formulation for use on turf and ornamentals to control various diseases.

**Structural**

CATALYST (propetamphos)–Wellmark Int’l.–In an agreement with EPA, the company has agreed to eliminate the residential use of this product. Pest-control operators can continue to use it for cockroach management in commercial applications.

DIAZINON–Syngenta/Makhteshim–EPA issued a cancellation order for indoor use of this product. Sales to formulators to use for indoor products are prohibited as of 5-2-01. Retail sales of existing products will be allowed until 12-31-02. (FR, vol. 66, 5-2-01) [insecticide]

**Many**

ACETAMIPRID–Aventis–A new insecticide being developed for use on cotton, citrus, grapes, apples, vegetables, and ornamentals as a foliar spray and seed treatment. It will be sold under the trade names Chipco Tristar, Adjust, Pristine, and Assail.

ACRAMITE (bifenazate)–Uniroyal–Being developed for use on cotton, hops, apples, pears, strawberries, grapes, and stone fruits to control mites.

ACTARA (thiamethoxam)–Syngenta–Received EPA registration for use as a foliar treatment on potatoes, pome fruits, tobacco, fruiting vegetables, and cucurbits. Registration is expected by the first part of next year on leafy vegetables and cole crops. [insecticide]

BENLATE (benomyl)–DuPont–EPA has received a request from the company to cancel the registration for this product. The comment period expired 6-22-01. (FR, vol. 66, 5-23-01) [fungicide]

BOTANIGARD (Beauveria bassiana strain GHA)–M yotech Corp–Label changes include changing the signal word to “caution” and the re-entry interval to 4 hours; deleting chemigation; and adding aerial application. [insecticide]

CONTANS (Caniothyrium minitana strain CON/M/908)–Prophyla–EPA established an exemption from residue-tolerance requirements for this new biofungicide on all food commodities. (FR, vol. 66, 3-28-01)

CONTANS WG (Caniothyrium minitana)–Prophyla–Received EPA approval for this new biofungicide on a wide variety of field crops, vegetables, and ornamentals to control Sclerotinia spp. It will be marketed in the United States by Encore Technologies of M innetonka, M N, which was granted exclusive marketing rights. It is incorporated into the soil and must be applied at least 3 months before outbreak of the disease.

DISYSTON (disulfoton)–Bayer–Due to the high cost of reregistration, the company has requested from EPA to delete from their label the use in greenhouses and on nonbearing fruit trees, strawberries, raspberries, Bermudagrass grown for seed, and triticale. Unless withdrawn, this change becomes effective on 10-22-01. (FR, vol. 66, 4-25-01) [insecticide]

ETHYL PARATHION–Cheminova A/S–EPA received a petition to immediately cancel the use of this product in corn grown for seed and to cancel all their end-use products effective 12-31-02. Sale of existing stock would stop 8-31-03, and all uses of existing stock would end 10-31-03. The comment period expired 6-1-01. (FR, vol. 66, 5-2-01) [insecticide]

GLY STAR 5 (glyphosate)–Albaugh–A new formulation being introduced. [herbicide]

HEXAGON DF (hexythiazox)–Gowan–Removed from their label the statement, “Do not use this product on crops growing in greenhouses.” [insecticide]

LYSO PE & LPE (lysophosphanyl-dithanolamine)–Nutra-Pak Inc–Proposed to EPA to extend until 6-12-03 temporary residue tolerances for this biochemical ripening agent on apples, citrus, cranberries, grapes, nectarines, peaches, pears, strawberries, and tomatoes. (FR, vol. 66, 5-2-01)

MAXFORCE GRANULES (hydramethylnon)–M axforce Professional Insect Control–Added to their label the control of firebrats and silverfish.

MUSTANG (cypermethrin)–FM C–Registration is expected this spring for use on head, stem, and leafy brassica crops; shallots; leafy vegetables; sugarbeets; and sweet corn. [insecticide]

PLATINUM (thiamethoxam)–Syngenta–Received EPA registration for this soil insecticide on potatoes, tobacco, fruiting vegetables, and cucurbits. Registration is expected next year on leafy vegetables and cole crops.

**Other**

AGRICULTURAL CHEMICALS

BOOK I—INSECTICIDES–Now available, this new edition contains about 15 new insecticide-miticide products. Also, updated information on the older products has been included. The cost is $24.95 plus tax, if applicable, and $5.50 for shipping. Available from Thomson Publications, P.O. Box 9335, Fresno, CA 93791; phone, (559)266-2964; fax, (559)266-0189; or www.agbook.com.

API LIFE VAR (thymol/thyme oil)–As a result of the IR-4 Project, EPA received a petition to exempt this product from residue tolerances on honey and beeswax. It is used to control varroa mites on bees. The comment period expired 5-4-01. (FR, vol. 66, 4-4-01)

AVENTIS–The company has developed Liberty Link cotton, which is tolerant to the herbicide glufosinate-ammonium. Introduction is expected in 2003.
BASF—As of 6-30-03, the company will close the Princeton, NJ, research site purchased from American Cyanamid.

BIO ACT/PL PLUS (Paecilomyces lilacinus)—Prophyta—The company has acquired the rights to this new bionematicide from Gustafson Tech Innovations Corp. They plan to introduce it in 2003 into the North American and European markets to control nematodes on bananas, tobacco, pineapple, vegetables, cocoa, citrus, and coffee.

ECO SOIL SYSTEMS—The company plans to merge with Plant Health Care of Pittsburg, PA. Eco Soil will be the corporate name, and headquarters will be in Rancho Bernardo, CA.

GOWAN—The company has purchased from Aventis CropScience the insecticide Formetanate. Annual sales for the product is about $11 million. It is sold under the trade names Carzol and Dicarzol.

HELENA CHEMICAL CO.—The company has reached an agreement with Entek Corp. to market their Engage (sodium tetra-thiocarbonate) soil fumigant nationwide. It is used to control nematodes, phylloxera, and various fungal diseases.

MON SANTO—The company announced it will stop marketing genetically modified potatoes.

NUFARM—The company has acquired the U.S. division of Agtrol Intl., which manufactures copper- and tin-based fungicides. Agtrol is owned by Phibro Tech. Discussions are under way to purchase the European operation of Agtrol.

SONORA 45C (prometon)—Control Solutions—A new formulation used for total weed control in noncrop areas. One gallon treats 20,000 square feet.

SUMITOMO—The company has purchased from Aventis Environmental Sciences its global household insecticide businesses, which are currently marketed under the Gold Crest line. Products included are bio allethrin, Esbiothrin, Esbiol, Resmethrin, natural pyrethrin, piperomyl butoxide, and the synthetic pyrethroids used as homeowner products. Aventis will continue to sell these products in other markets.

THERMO TRILOGY—The company has been purchased by Mitsui and will be renamed Certis. Headquarters will remain in Columbia, M D. The purchase price was about $25 million.

YARDEX (tau-fluvalenate)—Wellmark Intl.—Expanded their label to include perimeter treatment. [insecticide]

Michelle Wiesbrook, unless otherwise noted, adapted from Agricultural Chemical News, May and June 2001.

The Illinois Pesticide Review is published six times a year. Subscriptions are available by mail for $15. To order (VISA or MasterCard), call (800)345-6087 or (217)333-2666. Make checks payable to the University of Illinois and send to Linda Kennedy, ACES/ITCS Marketing and Distribution, 528 Bevier Hall, MC 184, 905 S. Goodwin, Urbana, IL 61801.

The newsletter is on the Web at http://www.aces.uiuc.edu/~pse/

Copyright © 2001, Board of Trustees, University of Illinois