



Pesticide Review

News
About
Pesticides &
Regulations

March 2006

Volume 19, No. 2

- 1 Container Recycling—Saving Money and the Environment
- 2 Participation in Pesticide Reregistration Reviews
- 4 Formosan Termites in Mulch?
- 4 Solid-Wood Packaging Treatments
- 5 Pesticide Updates
- 5 Public Comment Period for Carbofuran Now Open
- 6 Voluntary Registration Cancellation Planned for About 90 Pesticides

Container Recycling—Saving Money and the Environment

Recycling pesticide containers is an activity that has a variety of benefits. Recycling empty pesticide containers benefits the environment by keeping the containers out of landfills and utilizing the recycled materials to create other products. The container recycling benefits pesticide users by providing an inexpensive means of disposing of empty pesticide containers. Recycling empty pesticide containers benefits all pesticide users by generating good publicity about pesticides with the general public, and this helps improve the image of pesticide applicators by demonstrating a commitment to a cleaner environment. Many products are manufactured using materials recovered from pesticide container recycling. These include marine pilings, field drain tiles, fence posts, pallets, and construction materials that can reduce the use of wood in applications with low exposure to people.

There are groups that help promote and facilitate container recycling. The Ag Container Recycling Council (ACRC) is a nonprofit organization whose mission is to promote and facilitate the collection and recycling of pesticide containers. ACRC is composed of 30 member companies and 9 affiliate companies. The ACRC has regional contractors who handle the recycling efforts in their respective regions. For more information about ACRC and a map with contact information for the contractors, visit <http://www.acrcycle.org/>. The contractor for Illinois is Tri-Rinse, located in St. Louis. Tri-Rinse can be reached at (314)647-8338 or by visiting their Web page at www.tri-rinse.com. Recycling through Tri-Rinse is generally available at no cost. Besides serving as a regional contractor for ACRC, Tri-Rinse also coordinates recycling activities with the Illinois Department of Agriculture and several individual chemical manufacturers.

Another organization that promotes recycling pesticide containers is The Pesticide Stewardship Alliance (TPSA). TPSA is an organization made of government organizations from local, state, and federal levels; research and education institutions; and corporations. TPSA promotes stewardship of pesticide use for every process involved in their usage, from manufacturing to the recycling of empty containers. For more information of TPSA, visit <http://www.tpsalliance.org/>.



University of Illinois • U.S. Department of Agriculture
Local Extension Councils Cooperating
University of Illinois Extension provides equal opportunities in programs and employment.

So how successful have the pesticide-container recycling programs been? Since 1993, ACRC contractors have recycled over 80,000,000 pounds of pesticide containers nationwide. In 1993, contractors collected a total of 2,500,000 pounds, and the amount has increased gradually since, with a total of 7,900,000 pounds of containers recycled in 2004. There was a slight decrease in 2005, with 7,800,000 pounds recycled nationwide. The state with the greatest amount of containers recycled in 2005 was California, with 1,360,000 pounds of containers recycled. Following California was Mississippi with 730,000 pounds, Texas with 630,000 pounds, Washington with 570,000 pounds, and Arkansas with 470,000 pounds of containers recycled. In 2005, Illinois recycled 59,000 pounds of containers through ACRC contractors.

The Illinois Department of Agriculture offers container-recycling options for pesticide users in Illinois. They help organize both permanent recycling collection sites that are available to accept containers throughout the year, as well as annually coordinating single-day collections sites during the growing season. During 2005, there were 29 single-day collection events, at which roughly 63,600 pesticide containers, weighing a total of 43,713 pounds, were collected and recycled. Also in 2005, the Illinois Department of Agriculture held two mini-bulk recycling collection events in Illinois. A total of 313 tanks were collected at these two events. For more information on upcoming pesticide-container recycling activities in Illinois, visit <http://www.agr.state.il.us/Environment/recycle.html>. Please note that the currently posted schedule of single-day collection sites is from 2005; the schedule for 2006 will be posted at the same Web site location later this year when it has been finalized.

Here are some important things to keep in mind if you are planning on taking advantage of a recycling program. Make sure the container has been completely emptied of pesticide, and

that the container is made from high-density polyethylene (HDPE). Look for a recycling symbol number 2 to confirm this. Clean the container thoroughly by triple-rinsing or pressure-rinsing with a specialized container-rinsing nozzle. Make sure the container is free of pesticide residue, both inside and outside. Stains are acceptable, but residue is not. The caps are not recyclable, so don't put them back on after cleaning. To learn more about properly preparing containers for recycling, visit

<http://www.pesticidesafety.uiuc.edu/facts/container.html> and

http://www.acrecycle.org/How_to.html. As always, follow any and all label instructions and wear any required personal protective equipment.

Please try to take advantage of these free pesticide-container recycling programs. They benefit everyone involved by providing a way of reducing disposal expense for pesticide users that also reduces waste and helps protect our environment. If you have any questions about pesticide container recycling, please contact one of the above-mentioned agencies or someone from the University of Illinois PSEP team at <http://pesticidesafety.uiuc.edu/psepteam.html>. (*Scott Bretthauer*)

Participation in Pesticide Reregistration Reviews

August 3, 2006, will mark the 10-year anniversary of the Food Quality Protection Act (FQPA), a series of amendments that fundamentally changed the way the U.S. Environmental Protection Agency (EPA) regulates pesticides. The FQPA mandated reassessment of all existing tolerances (pesticide-residue limits in food) and tolerance exemptions within 10 years, to ensure that they meet the safety standard

of the law. EPA was directed to give priority to the review of those pesticides that appear to pose the greatest risk to public health, and to reassess 33% of the 9,721 existing tolerances and exemptions within 3 years (by August 3, 1999), 66% within 6 years (by August 3, 2002), and 100% in 10 years (by August 3, 2006). In addition to meeting the FQPA mandate, EPA has been reviewing older pesticides (those initially registered prior to November 1984) to ensure that they meet current scientific and regulatory standards. This process, called reregistration, considers the human health and ecological effects of pesticides and results in actions to reduce risks that are of concern.

ALL pesticide uses are affected.

Regardless of how or where you use pesticides (production of food, livestock, ornamentals, landscape maintenance, etc.), you likely have noticed (or will notice) the effects of the FQPA. For nearly 10 years, EPA has been reviewing individual pesticide active ingredients, trying to account for all the risk due to occupational use, as well as exposures from dietary and nondietary sources (such as drinking water, residential lawns, golf courses, parks, garden plots, ornamental plants, pools, paint and wood preservatives, indoor applications, pet applications, pesticide drift). As outlined in this newsletter in 1997 (<http://www.pesticidesafety.uiuc.edu/newsletter/ipr12-97/ipr12-97.html>), when a particular pesticide poses an unacceptable level of risk, it either has to leave the market or the label has to change. These are both forms of risk mitigation. Label changes may be subtle and unimportant, or they may have high impact, such as when specific uses are eliminated (either due to excessive risk or perceived lack of support). In some cases, hardships due to label changes can be minimized or prevented by speaking up and informing EPA of the unique value that a pesticide has to your type of operation.

What's left for EPA to review?

Though the list is getting shorter, there are many valuable active ingredients going through the multi-phase reregistration process now or very soon (for example, copper, cypermethrin, dazomet, dicamba, imazapyr, permethrin, propiconazole, and triadimefon). To see the full 2006–2008 Reregistration & Tolerance Reassessment schedule, visit www.epa.gov/pesticides/reregistration/decision_schedule.htm (“Decision dates” shown on this Web page indicate the end of the reregistration process rather than the beginning. These target dates often change, and you may get caught off guard).

EPA encourages stakeholder input.

The U.S. EPA’s “Public Participation Process” Web page (<http://www.epa.gov/oppsrrd1/public.htm>) is an excellent resource that explains how the multi-phase reregistration process works. Moreover, EPA explains what type of information they need to accurately assess a pesticide. Of course, the pesticide registrant (owner) is a major contributor of information in this process. However, EPA also strives to gain early input from U.S. Department of Agriculture (USDA), university researchers, and extension personnel, as well as key grower/commodity/professional groups. Concerned individuals and organizations commonly weigh-in as well. Regrettably, individual end-users, those who have some of the most critical and detailed information, do not often directly participate in the reregistration process.

How can you participate?

1. Monitor EPA’s Public Comment Period Schedule Web site

(http://www.epa.gov/oppsrrd1/reregistration/public_comment_schedule.htm for active ingredients that are important to you. *Federal Register* notices and related docu-

ments contain enormous amounts of information. Don’t get bogged down; look for key sections such as “Risks of concern associated with the use of . . .,” or “What Action is the Agency Taking,” or “Mitigation measures.”

2. Encourage your grower/commodity/professional groups to be active in the reregistration process. Take the time to accurately respond to pesticide use/usage surveys that are sent, or endorsed, by these groups.
3. Respond directly to the “E-Docket” (see bulleted instructions below) with your concerns and information (see <http://www.epa.gov/oppsrrd1/public.htm> for ideas; provide what information you have and don’t get overwhelmed):
 - Go to www.regulations.gov to access the electronic docket.
 - From the top bar, select “Advanced Search,” then “Docket Search.”
 - In the “Keyword” field, type the chemical name or insert the applicable “Docket ID number.” *Note:* Each pesticide active ingredient has its own Docket ID number (example: EPA-HQ-OPP-2005-9999). To find this number, go to the Public Comment Period Schedule (http://www.epa.gov/oppsrrd1/reregistration/public_comment_schedule.htm) Web page and click on the active ingredient of interest.
 - Click the “Submit” button.
 - In the “Document ID” column, click on the Docket ID number (which is a hyperlink). All documents posted by EPA, registrants, or stakeholders will now appear on the screen.
 - Open any document by clicking on the appropriate PDF icon within the “Views” column. *Note:* If the document does not open, you may need to set your Internet browser to allow document “pop-ups” from this Web site.
 - A tan-colored balloon in the “Add Comments” column indicates that you may comment on that particular document (usually a “Notice” document). Click on a balloon, and you

will be taken to a “Comment Form,” where you can identify yourself (if desired), type your comments and upload any supporting documents. Click the “Next Step” button to see your comments in final form. Click on the “Submit” button.

Make no mistake, the act of reviewing pesticide risks will not suddenly end in 2008. By law, it must (and should) continue. In fact, last fall the U.S. EPA published a proposed Registration Review strategy (http://www.epa.gov/oppsrrd1/registration_review/design.htm) that will guide the agency into the future and force a review of each pesticide every 15 years.

You have the right and the opportunity to speak up and influence the decisions that may impact you. Despite the learning curve, the current and future reregistration and review processes deserve your attention and participation. (*Bruce E. Paulsrud*)

Sources and links

U.S. Environmental Protection Agency Web sites:

- www.epa.gov/oppsrrd1/public.htm
- www.epa.gov/oppsrrd1/reregistration/public_comment_schedule.htm
- www.epa.gov/pesticides/reregistration/decision_schedule.htm
- www.epa.gov/fedrgstr/EPA-PEST/2005/September/Day-23/p18961.pdf
- www.epa.gov/oppsrrd1/registration_review/design.htm

Formosan Termites in Mulch?

In mid-March, there was a series of e-mails going around the country stating that mulch was being produced from grinding up trees that had been damaged by Hurricane Katrina in Louisiana. This mulch was reported as likely to be infested with Formosan termites and was being sold in a couple of national chain home centers. These claims are not true and are addressed in the urban legend Web site: <http://www.snopes.com/inboxer/household/termites.asp>.

The Formosan termite (*Coptotermes formosanus*) is originally from mainland China. It has been a pest in Hawaii for over a century. It was discovered in the mid-1960s in the continental United States. It is now known to occur in Alabama, Florida, Georgia, Louisiana, Mississippi, South Carolina, and Texas. Considerable research has been done on this pest, and it is thought that it could not survive any farther north than Memphis, TN (35°North latitude).

It is a subterranean termite, meaning that it builds its colony underground, as does the common destructive termite species in Illinois, the eastern subterranean termite (*Reticulitermes flavipes*). From these underground nests, the worker termites spread through the soil looking for wood. When it is found, the wood is eaten by the termites and taken back to the colony, where much of it is regurgitated for use by the colony.

As with eastern subterranean termites, Formosan termites can live in above-ground nests in wall voids and other locations if there is a steady source of moisture, such as a leaky roof or leaky pipes. Unlike the eastern subterranean termite, which forms its aboveground colonies in wood or wood debris, the Formosan termite colony forms a carton nest made of chewed-up wood and soil. These are

common in Florida buildings, where the carton nests may be over one foot across, and may cause the wall to bulge outward when nests are built in a wall void.

Formosan termites are more aggressive feeders than eastern subterranean termites. Formosan termites in Hawaii can cause severe damage within 6 months and can almost completely destroy a house in 2 years. The winged reproductives, called swarmers, emerge from colonies in huge numbers on warm evenings and are highly attracted to lights at night. They are about one-half-inch long, with pale, yellowish brown bodies; whereas eastern subterranean termite swarmers are about one-quarter-inch long, with dark brown bodies that appear blackish. Eastern subterranean termites typically emerge in early spring before the warmer days of summer.

Formosan termites have been transported to other areas in the United States through the movement of infested wood, particularly landscape timbers and telephone poles. Although these items are treated with creosote and other preservatives that are toxic to termites, they are too thick for the preservative to penetrate completely through the wood. This leaves a small core in the center of the pole or timber where termite colonies can develop.

In Louisiana and surrounding areas, there have been quarantines since October 2005 to prevent the movement of wood and wood products out of the hurricane-damaged areas. Regulatory and enforcement personnel are monitoring clean-up activities to be sure that these quarantines are followed. Severely damaged trees and other wood are reduced to wood chips. This chipping process disrupts nests and kills essentially all of the termites, which are soft-bodied and easily smashed. These wood chips are then hauled to local landfills. Trucks and other vehicles leaving the hurricane-damaged area are inspected for prohibited articles.

Mulch is a low-priced product for its bulk, making it prohibitively expensive to transport very far. No matter how inexpensive the mulch might be in Gulf Coast areas, the cost to transport it into Illinois would make it too expensive to be competitively priced with locally derived materials. Bagged mulch is compressed to reduce bulk; this compression would kill termites and disrupt colonies in the mulch, killing the termites a second time after the chipping process.

Southern termite species, such as drywood and dampwood termites, are occasionally found in large foliage plants and building materials, but they do not become established, probably due to the cold winters and other climatic conditions. For all of these reasons, the likelihood of Formosan termites coming into Illinois and becoming established as pests is very small. (*Phil Nixon*)

Solid-Wood Packaging Treatments

Crates, pallets, and other solid-wood packaging have been responsible for the movement of several pests around the world. Perhaps the most recent of these to affect Illinois was the apparent importation of the Asian longhorned beetle into several locations in northeastern Illinois in crates used to transport athletic equipment and industrial machinery.

Most of the following has been taken from an article published in *Pallet Enterprise* in which Dr. Eric Allen, Pacific Forestry Centre in Canada, was interviewed. He has been a member of the International Forestry Quarantine Research Group and conducts research on heat treatment and other phytosanitary standard issues.

The phase-out of methyl bromide as a fumigant for wood packaging materials increases the need to search for new

methods of treating these materials. Methyl bromide has been linked to the depletion of the earth's protective ozone layer. Methyl bromide effectively penetrates wood to a depth of about 4 inches. Thus proper fumigation methods provide high-quality treatment of wood up to 8 inches thick. Brazil has developed methyl bromide recovery technology that collects the fumigant so that it can be reused, preventing its escape to the outside environment.

Heat treatment has been proposed as a possible replacement for at least some fumigant uses. The wood is heated until the entire mass, including the core, reaches a temperature of at least 56°C (132.8°F) and is then held at that temperature for at least 30 minutes. This is referred to as the 56/30 heat-treatment standard. Research has shown that this method kills most insect pests and fungal pathogens in the wood. It does not kill everything, but is thought to be a good tradeoff between the level of effectiveness and associated economic costs of treatment.

Other potential replacements for methyl bromide that are being researched are the use of microwave and radiation, other chemical fumigants, and modified atmosphere techniques. Italy has made significant progress on the use of microwave treatment.

The International Plant Protection Convention is the global body for plant health-protection standards. It has a committee that analyzes various techniques to determine worldwide accepted phytosanitary treatments. Different tree species produce wood that varies in density, which affects the depth at which various treatments will penetrate. Pests also vary in their susceptibility to the various treatments. Because the testing of all combinations of tree species and pests is not feasible, any particular method of treatment may not be effective in some instances.

There is also concern in the regulatory and scientific communities about

pest infestation after the wood is treated. Particularly with insect borers, this is considered to be more likely if the bark is left intact on the wood. As a result, there has been a movement to require debarking of solid-wood packaging. This increases the cost involved with this packaging because of the additional labor involved in debarking and/or the reduced amount of useable wood obtained from a log if portions with at least some bark cannot be used.

The International Forestry Quarantine Research Group analyzed scientific studies on this issue and determined that pests of phytosanitary concern could secondarily infest treated wood with intact bark. However, it was also determined that a relatively low percent of treated wood with intact bark at shipping ports is infested with pests.

Whether or not any particular wood treatment will be acceptable for phytosanitary purposes will eventually be determined by the National Plant Protection Agencies of the countries involved in international shipment. The need for debarking will also be addressed by the Technical Panel of Forestry Quarantine, which is an official panel of the International Plant Protection Convention. (*Phil Nixon*)

Pesticide Updates

CheckMite+ (*coumaphos*)—A Section 18 request has been granted for its use in honeybee colonies to control varroa mites and small hive beetle. It was approved on February 23, 2006.

Several Section 2(ee) recommendations or bulletins have been made this year for use in Illinois. As a reminder, bulletins must be in the user's possession at the time of application. For more information, contact the manufacturers below:

- *Venom insecticide on grape*—Valent—Expires December 31, 2007
- *Lumax herbicide plus Balance Pro her-*

bicide tank mixture on field corn—Syngenta—Expires August 1, 2006

- *Bolster 15G insecticide applications on soybean using the SmartBox Delivery System*—Bayer Crop Science
- *Serenade Max fungicide on apples*—AgraQuest, Inc.
- *Lanmate LV insecticide on soybean*—DuPont—Expires December 31, 2006
- *Select Max herbicide tank mixtures on soybean*—Valent—Expires December 31, 2007

For an overview of changes in herbicide options available to Illinois agroeconomic producers, please see the Bulletin newsletter at <http://www.ipm.uiuc.edu/bulletin/article.php?id=446>. The article features product label changes for Impact 2, Radius 4SC, Canopy 75DG, Gramoxone Inteon 2S, Select MAX 0, Harmony GT XP 75DF, Synchrony STS 42DG, Synchrony XP 28.4DG, Resolve, and Stout 72.5MP. (*Michelle Wiesbrook, adapted from the March 10, 2006 minutes of the Interagency Committee on Pesticides Meeting.*)

Public Comment Period for Carbofuran Now Open

The revised risk assessment for carbofuran (Furadan) insecticide is now available, according to a March 22, 2006, posting in the *Federal Register (FR)*. EPA is seeking public comment on risk-reduction options for carbofuran and an initial alternatives analysis. The public is encouraged to suggest risk-management ideas or proposals to address the risks identified. EPA is developing an Interim Reregistration Eligibility Decision (IREED) for carbofuran through the full, six-phase public-participation process that the agency uses to involve the public in developing pesticide reregistration and tolerance reassessment decisions. Through

these programs, EPA is ensuring that all pesticides meet current health and safety standards. Comments must be received on or before May 22, 2006. For more information, please refer to the *FR* notice, at <http://www.epa.gov/fedrgstr/EPA-PEST/2006/March/Day-22/p2708.htm>. For more information on carbofuran and to view past comments submitted to EPA, please check out <http://www.epa.gov/oppsrrd1/reregistration/carbofuran/>.

(Michelle Wiesbrook, adapted from the Federal Register, March 22, 2006.)

Voluntary Registration Cancellation Planned for About 90 Pesticides

USEPA has received voluntary requests to cancel registrations for about 90 pesticides. The long list of affected product names can be viewed in the *Federal Register*, at <http://www.epa.gov/fedrgstr/EPA-PEST/2006/February/Day-22/p2492.htm>. Unless a request is withdrawn by the registrant within 180 days (by August 21, 2006) of publication of the *Federal Register* notice, orders will be issued canceling all of these registrations. Users of these pesticides or anyone else desiring the retention of a registration should contact the applicable registrant directly during this 180-day period. For your convenience, Table 2 lists the manufacturers name and address.

(Michelle Wiesbrook, adapted from the Federal Register, February 22, 2006.)

The development and/or publication of this newsletter has been supported with funding from the Illinois Department of Agriculture.

Michelle L. Wiesbrook, Extension Specialist, Pesticide Application Training and Horticulture

The *Illinois Pesticide Review* is published six times a year on the Web at <http://www.pesticidesafety.uiuc.edu/>

Copyright © 2006, Board of Trustees, University of Illinois

University of Illinois Extension
Pesticide Applicator Training Program
1201 S. Dorner Drive
Urbana, IL 61801