



The University of Georgia

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# THE GEORGIA PEST MANAGEMENT NEWSLETTER

Your source for pest management and pesticide news

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**There is dissension within the EPA Office of Pesticide Programs regarding FQPA (Food Quality Protection Act), pesticide registrants, and the looming August deadline.** By August, the Agency is supposed to have a tolerance decision for every pesticide registered when FQPA was passed in 1996. There are about 20 pesticides awaiting decisions, including some organophosphate and carbamate insecticides.

The EPA is under pressure to meet the deadline. It could very serious for the Agency to miss this deadline, particularly if they miss the target by an important margin. Over the next couple of months, the Agency is going to make decisions even if they do not have all of the data they would like. The EPA wants the process to move quickly, smoothly, and steadily forward. They do not want controversy, particularly among their own ranks.

In a letter dated May 24, the leaders of three unions (American Federation of Government Employees, National Treasury Employees Union, and Engineers and Scientists of California) sent a letter to EPA administrator Steve Johnson. These unions include many EPA scientists and risk managers. The letter says the Agency is too closely allied with the pesticide industry and that the EPA will make hurried, unscientific decisions to meet the August deadline.

You will find the details here [http://www.peer.org/news/news\\_id.php?row\\_id=691](http://www.peer.org/news/news_id.php?row_id=691)

Anti-pesticide groups will be on this issue like Japanese beetles on grapes; they will point out that EPA's own scientists are criticizing the EPA process. The primary focus of the union letter and the anti-pesticide groups is the organophosphate and the carbamate insecticides. Most of the bloodletting is over for the organophosphates, but the carbamates stand at the brink. Decisions have not been made for aldicarb, carbaryl, or other carbamate insecticides. Additionally, the cumulative risk assessment has not been completed for the carbamates. The final decisions for individual carbamate insecticides cannot be made until the cumulative assessment is finalized.

The carbamates aldicarb, carbofuran, and carbaryl will face particular scrutiny. Aldicarb is a highly toxic material; it is highly toxic to birds; it can leach into groundwater; and aldicarb has been widely used to illegally kill dogs and other animals. Carbofuran is highly toxic to birds and fish; the EPA already placed additional restriction on carbofuran use because the pesticide has been widely used to kill birds and other animals.

Carbaryl is the active ingredient in the common household product “Sevin”; it is also registered for use on dozens of food crops. As a result, there will be many different potential routes of exposure for children. This widespread use pattern was a major reason that chlorpyrifos and diazinon were removed from the home market.

Be alert! The Agency may make decisions very quickly. In negotiated settlements, the pesticide registrants may be willing to discard minor registrations to protect bigger markets.

- Be ready with data (if possible) that you can use to defend the pesticides that are critical for your industry.
- It will be particularly important to have information about real-world use patterns. The EPA may have little or no data regarding how pesticides are used for minor crops or for localized problems.
- Discuss ways to reduce risks that would still permit effective use of the chemical. What is the longest acceptable re-entry interval or pre-harvest interval?
- Prioritize the uses of the pesticide. It may not be possible to protect every registered use for a chemical with broad and varied use patterns.
- Let the EPA and pesticide registrant know which chemicals are critical for your situation.

## BIOTECHNOLOGY

**Researchers at the University of Arizona in Tucson recently conducted the first large-scale study to simultaneously examine how growing Bt cotton affects yield, pesticide use, and biodiversity.** The study looked at commercial cotton fields over an area of 6,600 square kilometers, with 40 of these fields planted to non-Bt cotton, 21 to Bt cotton, and 20 to Bt/herbicide-resistant cotton.

Researchers found that: 1) per pesticide application, Bt cotton produced 9% more cotton/acre than non-Bt cotton; 2) growers that planted Bt cotton used fewer applications of broad-spectrum insecticides, so that growers ended up with similar yields/acre regardless of the type of cotton grown; and 3) the type of cotton planted had no effect on insect biodiversity.

The team will publish its research in an upcoming issue of the Proceedings of the National Academy of Sciences. To read the complete press release, go to

<http://uanews.org/cgi-bin/WebObjects/UANews.woa/8/wa/CALSArticle?ArticleID=12616>.

(Crop Biotech Update, 5-12-06)

Scientists from the US Department of Agricultural Research Service's Donald Danforth Plant Science Center and the University of Illinois at Urbana-Champaign have isolated two Chinese soybean lines without the primary protein linked to soy allergies. Soy ranks among the top ten foods to which people are allergic. The allergic reactions are due to the human body's reaction to some protein in the food. Although some other soy proteins can also cause an allergic reaction, the protein lacking in these bean lines is responsible for most soy allergies.

The lines, which are adapted to Illinois-like field conditions, will be given to breeders to produce new varieties of allergy-free soybeans. Allergy to soy-based products, including infant formulas, has been observed in 6-8 percent of children. Adults with soy allergies have shown reactions that range from skin reactions and gastrointestinal irritation to difficulty in swallowing and fainting.

Read more on allergen-free soybeans at

<http://www.danforthcenter.org/newsmedia/NewsDetail.asp?nid=118>. (Crop Biotech Update, 5-12-06)

## NEWS YOU CAN USE

**In many areas, growers still do not know what to expect from soybean rust.** This new, potentially devastating disease was found in the U.S. in 2004. The spores were probably blown in from other countries during the hurricane season, and soybean rust is here to stay. The good news is that there are some fungicides available to help manage the disease. The bad news is that kudzu is a reservoir for soybean rust, but the disease does not kill kudzu.

The 2006 UGA soybean production guide can help with soybean rust and other aspects of production.

<http://www.griffin.peachnet.edu/caes/soybeans/2006guide/2006SoybeanGuide.htm>

This link from EPA provides state-by-state pesticide options available via Section 18.

[http://www.epa.gov/oppfead1/cb/csb\\_page/updates/soybean\\_rust.htm](http://www.epa.gov/oppfead1/cb/csb_page/updates/soybean_rust.htm)

There may be more than one product available with the same active ingredient. If you use Section 18 chemicals to manage soybean rust, be sure you are not exceeding the permitted level of active ingredient.

If you would like to travel to the Pacific NW and learn something useful, the “Pest and Nutrient Management Options to Protect Water Quality and Enhance Crop Yields Workshop” may interest you. At the very least, it is the workshop with the longest name I have ever seen. You will find all of the details at their web site.

[http://isnap.oregonstate.edu/workshops/iSNAP\\_Nutrient\\_and\\_Pest\\_Management\\_Workshop.htm](http://isnap.oregonstate.edu/workshops/iSNAP_Nutrient_and_Pest_Management_Workshop.htm)

Clemson University has put together curricula and other information for teachers to teach students about integrated pest management (IPM). The lessons have been adapted to fulfill South Carolina educational requirements. Currently, materials are available for 4th and 5th grade classes. The information was used in the classroom during the last school year; the program will be revised based on teacher feedback. You can review the materials at: [http://www.clemson.edu/scg/ipm/schoolipm\\_teachers.html](http://www.clemson.edu/scg/ipm/schoolipm_teachers.html)

## FEDERAL NEWS

**The EPA has released its new “National Strategy for Agriculture.”** The plan is intended to initiate a closer partnership with agriculture in fulfilling the agency's mission of protecting human health and the environment. No one knows where the new strategy will lead, if anywhere, but some of the points look good on paper.

The goals of the National Strategy for Agriculture include:

-- Increasing EPA employee awareness of how their actions affect agriculture and how farming benefits human health and the environment. *The strategy mentions the environmental benefits of farms several times. Maybe it will help offset the general impression of agriculture as the enemy of the earth.*

-- Working with the agricultural industry – including production, processing, and distribution – in developing and demonstrating environmental protection solutions that express to the public the value of farmland environmental stewardship activities;

-- Coordinating research and technology development and real world application so the needs of agriculture and EPA can be more efficiently met; and,

-- Identifying existing environmental improvement measures for agriculture and developing new ones, where needed.

This statement in the implementation section of the strategy encouraged me – “Foster a holistic multi-media approach to environmental protection and public health relative to agriculture.” *Pesticide regulation has historically focused on a single pesticide or a group of similar pesticides. This approach has not typically given enough consideration to the implications of a particular decision. For example, the EPA cancelled the use of methyl parathion on peaches because of concern about organophosphate residues (OP) remaining on the fruit. Growers switched to another OP pesticide. The replacement increases risks for the pesticide applicator and leaves the dietary issue unresolved. Overall, the human health risk may have increased in spite of considerable investment by EPA.*

The Agency also hopes to improve interaction with agriculture: “Communicate proactively with the agricultural industry on emerging issues.” *The common pattern has been that agriculture was not part of the discussion until it was too late to change the course of events. The Agency needs to make a special effort to communicate with the agricultural community before EPA and the pesticide registrants make a deal. Often, minor crops are left out of negotiations, although there are fewer substitutes available to minor crop producers.*

You can read the strategy here <http://www.epa.gov/agriculture/agstrategy.html>

Publication of a strategy offers another advantage as well. Written documentation provides agriculture with a stick to prod EPA if they are not following their own plan. Many activist groups are very effective at making the Agency follow through. Agriculture needs to improve in this area.

## FQPA/REREGISTRATION

**The EPA has released the cumulative risk assessment for the triazine herbicides; the comment period closes August 21.** The bottom line is that the triazines will be eligible for reregistration with some additional restrictions on simazine use. Earlier restrictions placed on atrazine in an interim decision will also become permanent.

The atrazine agreement required the registrant to establish a drinking water monitoring system in areas where atrazine is heavily used. If atrazine levels exceed the EPA level of concern, atrazine use is prohibited in the watershed.

The additional simazine restrictions include:

- prohibiting specific uses, formulations, and application methods;
- reducing maximum application rates to typical rates;
- establishing a performance standard for raw water concentrations;
- requiring appropriate personal protective equipment (PPE) for occupational handlers; and
- adding setbacks from wells and waterways.

The Agency did not place additional restrictions on the use of propazine.

The triazine herbicides are widely used in the U.S. The EPA identified three regions of the U.S. where high exposures to atrazine and simazine residues are likely: the Midwest, California, and Florida. In the U.S., the Midwest receives the highest use of atrazine, California receives the highest use of simazine, and Florida receives equally high use of both pesticides. There have been repeated incidents of atrazine occurring in drinking water.

According to EPA, the triazines may cause neuroendocrine developmental and reproductive effects relevant to humans. Specifically, these pesticides may disrupt part of the central nervous system (the hypothalamic-pituitary-gonadal or HPG axis), potentially causing changes to hormone levels and

developmental delays. These were the primary toxicological effects of regulatory concern to EPA in assessing the triazines' food, drinking water, and residential risks.

The Agency also thought that the triazine pesticides shared a common mechanism of toxicity based on carcinogenic effects (the formation of mammary gland tumors in rats). However, the mode of action by which the triazines cause tumors in rats depends on a reproductive aging process that does not occur in humans. A Scientific Advisory Panel agreed with the Agency "it is unlikely that the mechanism by which atrazine induces mammary gland tumors in female SD rats could be operational in humans." For the triazine cumulative risk assessment, therefore, a cancer risk assessment was not performed.

*Here is a good opportunity for you to gauge your level of concern about pesticide exposure, or at least to understand why some people are very concerned about pesticide residues. The EPA's own scientists report that triazines "may" disrupt part of the human central nervous system (the hypothalamic-pituitary-gonadal or HPG axis), potentially causing changes to hormone levels and developmental delays. How much triazine herbicide in your child's drinking water is acceptable?*

**The EPA is proposing two significant actions against two organophosphate insecticides.** The end is in sight for azinphos-methyl, and phosmet use will be more restricted. The Agency is concerned about azinphos-methyl risks to farm workers, pesticide applicators, and aquatic ecosystems. Phosmet poses risks to workers who reenter treated fields. The EPA is seeking comments <http://www.epa.gov/fedrgstr/EPA-PEST/2006/June/Day-09/p8929.htm> until August 8.

The EPA proposes the following actions to reduce risks associated with azinphos-methyl and phosmet.

1. Phase out azinphos-methyl use by 2007.
  - Almonds
  - Brussels sprouts
  - Pistachios
  - Walnuts
  - Nursery stock
  
2. Phase out azinphos-methyl use by 2010.
  - Apples
  - Blueberries
  - Cherries
  - Parsley
  - Pears

During the phase-out period, EPA also proposes:

- Reduced annual application rates
- Additional worker monitoring
- Larger buffer zones

The manufacturer has voluntarily canceled all other uses of AZM.

The Agency also proposes to extend the restricted-entry interval for phosmet to mitigate farm worker risks. EPA is also seeking comment on lengthening the Restricted Entry Intervals (REIs) for nine phosmet uses. The Agency is proposing these additional restrictions to mitigate potential risk to farm workers.

Comments may be submitted electronically at <http://www.regulations.gov> in docket number **EPA-HQ-OPP-2005-0061** for AZM and docket number **EPA-HQ-OPP-2002-0354** for phosmet.

The EPA may place additional restrictions on both azinphos-methyl and phosmet when the cumulative assessment for the organophosphate insecticides is completed.

## HEALTH AND THE ENVIRONMENT

**This web site helps you file an environmental complaint with EPA**

<http://www.epa.gov/compliance/complaints/index.html>

I think this web site could be very useful; there are probably thousands of incidents of illegal dumping or other environmental violations. Most of the companies or individuals have little or no concern about getting caught. The complaint can be as anonymous as the web gets, which means they can find you if threaten to show Dick Cheney how they hunt in your neck of the woods.

**According to the Conservation Technology Information Center, the number of Georgia acres in reduced tillage has increased from 622,666 acres in 2000 to 1,154,204 acres in 2004, which represents 34 percent of all planted acres in the state.** This is significant in that reduced tillage has been demonstrated to decrease the amount of pesticides used as well as to eliminate runoff of fertilizer and pesticides. (EPA Region IV Environmental News, 6-2-06)

*The appearance of any trade name in this newsletter is not intended to endorse that product nor convey negative implications of unmentioned products.*

Dear Readers:

The Georgia Pest Management Newsletter is a monthly journal for Extension agents, Extension specialists, and others interested in pest management news. It provides information on legislation, regulations, and other issues affecting pest management in Georgia.

Do not regard the information in this newsletter as pest management recommendations. Consult the [Georgia Pest Management Handbook](#), other Extension publications, or appropriate specialists for this information.

Your input in this newsletter is encouraged.

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Sincerely:



Dr. Paul Guillebeau, Professor & Extension Entomologist