

# Look What's Out There

Dr. John F. Baniecki, Extension Specialist in Plant Pathology/Entomology, Pest Management Program

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<http://www.wvu.edu/~agexten/>

## Herbicides

**According to a recent conference in Washington (sponsored by CropLife America/RISE), herbicides are critical to the future of American agriculture.**

Leonard Gianessi of the National Center for Food and Ag Policy reported that without herbicides - the most widely used class of pesticides in the United States - crop production and yield would drop, pristine habitat would have to be plowed under for crop acreage, additional cultivation would result in more soil erosion, and ultimately the United States would become dependent on imports - meaning the end of a viable U.S. crop market, with consumers forced to pay higher prices for less abundant and less nutritious food. The USDA estimates that without herbicides, carrot production would drop by 48 percent, rice by 38 percent, tomatoes by 36 percent, strawberries by 30 percent and cotton by 27 percent. Gianessi's full report, *Benefits of pesticides in U.S. Crop Production*, will be available this fall.

The most important point of this report is increased dependency on food imports. Many people do not recognize the danger of that situation, even though U.S. dependency on foreign oil creates a multitude of problems.

## Herbicide Resistance

**If you are interested in herbicide resistance, here is a useful resource.**

An international group of weed scientists has produced an international survey of herbicide-resistant weeds, including 258 biotypes and 156 species (94 dicots and 62 monocots). The data fields can be searched by nomenclature (both common and scientific), location, or herbicide mode of action. You will also find recent publications on

herbicide resistance and links to other materials. It is all on the web at [www.weedscience.org](http://www.weedscience.org)

**The EPA has granted "Reduced Risk" status to an herbicide, a fungicide, and an insecticide.**

Mesotrione (reduced risk status for use on sweet corn) is in the novel triketone group of herbicides and should help with IPM and resistance management. Mesotrione was previously registered in 2001 as a conventional reduced-risk herbicide for use on field corn. Cyazofamid (reduced-risk status for potatoes, tomatoes, cucurbits, and imported grapes) is a locally systemic fungicide from a new chemical class based on the cyanimidazole moiety; it may be an alternative to the older B2 fungicide chemistries. Dinotefuran (reduced-risk and OP alternative status for cotton, leafy vegetables, ornamentals, turf, and public health uses) is a neonicotinoid for control of chewing and sucking insects. Its mode of action is reported to be unique, and the registrant does not expect cross-resistance between dinotefuran and other neonicotinoid pesticides. (*OPMP Newest News, 4-26-02*)

**The EPA granted full registration to harpin protein as a broad-spectrum fungicide and yield enhancer on all food commodities, turf and ornamentals.**

Harpin is one of a class of proteins produced in nature by certain bacterial plant pathogens and acts by eliciting a natural protective response in the plant that makes it resistant to a wide range of fungal, bacterial, and viral diseases. In addition, the product also aids in the suppression of certain insect, mite, and nematode pests, and enhances plant growth. The product is produced commercially by genetic alteration of a nutritionally deficient strain of *E. coli* with DNA from the plant pathogen *Erwinia amylovora*, which encodes harpin protein. (*OPMP Newest News, 4-12-02*)

## Eastern Tent Caterpillars

**Scientists have found a strong link between Eastern tent caterpillars and an epidemic of foal abortions in Kentucky last year.**

Thousands of foals were aborted, and hundreds more died shortly after birth. Needless to say, this epidemic caused tremendous anxiety in Kentucky; scientists and veterinarians began to look for the cause. They tested the link between the abortions and the caterpillars by exposing pregnant mares to large numbers of Eastern tent caterpillars and/or their frass (that's poop to you non-entomologist types). Twice as many mares aborted when they were exposed to the caterpillars or the frass.

No one knows how the caterpillars or the frass could have this effect, but the evidence of a link is pretty strong. Additionally, the mind immediately leaps to possible effects on other pregnant mammals. The results are still preliminary, but clearly this avenue of research demands more attention.

(<http://www.kentucky.com/mld/kentucky/business/3179356.htm>)

Kentucky scientists are continuing the investigation, and they are asking for help from other states. Many parts of Georgia have had abnormally high populations of Eastern tent caterpillars this year. If anyone has noticed unexplained foal abortions, they should e-mail Dan Potter at [dapotter@uky.edu](mailto:dapotter@uky.edu)

**A national Agriculture Health Study is underway to investigate links between agriculture practices and health effects.**

The collaborative study of more than 90,000 pesticide applicators is expected to last more than ten years. The results will have important implications for EPA regulation of pesticides. The highlights of published results, questionnaires, chemicals examined, fact sheets for pesticide applicators and the agricultural extension community, and plans for future studies are on the web <http://www.aghealth.org/results.html> (OPMP *Newest News*, 4-26-02)

## Stuff in Streams

**According to the U.S. Geological Survey, the most frequently detected compounds in U.S. streams include fecal steroids, cholesterol, insect repellants, caffeine, antimicrobial disinfectants, fire retardants, and detergent metabolites.**

The source of these contaminants is not difficult to guess. People dump them down the drain or flush them away. The detection of contaminants does not mean they are causing harm, but identification of foreign compounds does provide direction for further investigation.

For further information, see [www.usgs.gov/public/press](http://www.usgs.gov/public/press) or [http://www.usgs.gov/public/press/public\\_affairs/press\\_releases/pr1569m.html](http://www.usgs.gov/public/press/public_affairs/press_releases/pr1569m.html)

**Seven (soon to be six)\* companies rule the world of pest management.**

We say pest management now instead of pesticides because many of these companies also own global seed companies and are players in biotechnology. Here are the sales data from 2001.

----- Company -----	Sales (in billions of US\$)	Change since 2000
Syngenta (Swiss)	\$5.385	-8.5%
Aventis CropScience (Fr.)	\$3.842	0.05
Monsanto (U.S.)	\$3.755	-3.3%
BASF (Ger.)	\$3.105	0.394
Dow AgroSciences (U.S.)	\$2.612	0.113
Bayer (Ger.)	\$2.418	0.074
DuPont (U.S.)	\$1.917	-4.6%

\*Bayer is expected to buy Aventis CropScience (formerly Rhone-Poulenc which was formerly Hoechst/AgrEvo)

(*Agrow: World Crop Protection News, March 1, 2002; March 15, 2002 and March 29, 2002, via PANUPS, 4-19-02*)

## Canceled – Reldan

It looks like the end for chlorpyrifos-methyl (Reldan). The EPA received notices from Dow AgroSciences LLC and Gustafson LLC for voluntary cancellation of their chlorpyrifos- methyl manufacturing use and liquid formulation products.

These actions further implement an agreement by the registrants, reached as the chlorpyrifos-methyl TRED was being completed in 2001, to voluntarily cancel all products containing this organophosphate stored grain insecticide, rather than develop the additional data needed to support its continued registration. Chlorpyrifos-methyl dust formulation products were canceled effective December 31, 2001. A 30-day public comment period on the manufacturing use and liquid formulation products closes on May 24. The FR notice, TRED document, risk assessments, and other information about chlorpyrifos-methyl are available on the EPA

website at <http://www.epa.gov/oppsrrd1/op/chlorpyrifos-methyl.htm> (OPMP *Newest News*, 4-26-02).

## **Dimethoate**

As of March 13, 2002, the EPA canceled all residential uses and some agricultural uses of dimethoate. The Agency had received requests to cancel these uses from the registrants. No comments were received during and following public comment period. Some people are probably not happy with this decision, but apparently they did not say anything.

Registrants may distribute or sell dimethoate products with residential, public area, and agricultural housefly uses only until March 12, 2003. Others may continue to sell, distribute, and use these products until existing stocks are exhausted. While this notice does affect the majority of dimethoate products, it does not require any changes to the labeling for majority of agricultural uses.

## **To Peel or Not to Peel**

In the United Kingdom, independent scientists who advise the Food Standards Agency have concluded that washing fruit and vegetables is not required as a protection against pesticide residues. But the Agency is stressing that washing them is still a sensible food hygiene measure. The Agency asked the independent Advisory Committee on Pesticides (ACP) to review existing food safety advice from the Chief Medical Officer (CMO) in relation to pesticide residues. It was worried that some consumers were being put off eating fruit and

vegetables which are part of a healthy balanced diet - because they thought they were not safe to eat unless they were washed before eating. The ACP began reviewing the CMO advice at its meeting in October, 2001. It concluded that washing and peeling fruit and vegetables is not required as a protection against pesticide residues. According to the CMO, peeling is a matter of individual choice. The Agency supports the general advice that it is sensible to wash fruit and vegetables before eating to ensure that they are clean, but believes that as a matter of principle, safe use of a pesticide should not depend on such action by consumers.

In response to the statements, Friends of the Earth (FOE) proclaimed that advice by the Food Standards Agency that fresh fruit and vegetables no longer require washing is "irresponsible." Sandra Bell, campaigner for FOE, was quoted as saying, "We're not confident there has been any significant change since 1997, and we've looked at exactly the same papers as the advisory committee. And those papers actually found that safety levels set specifically for children are exceeded for a wide range of pesticides on fruit and vegetables that are eaten commonly by children. So we're not convinced at all that this peeling advice should go at this stage." Asked whether she believed the advice was irresponsible, Ms. Bell said: "We certainly do because the FSA should be protecting consumer health." (*AgNet*, 3/25/02 & 3/26/02)

## **Metolachlor**

In late March, the EPA granted Cedar Chemical Company a registration for the herbicide metolachlor. However, Syngenta, which produced metolachlor under the trade name Dual®, is upset with the Agency for a number of reasons, and believes the decision is incorrect from both environmental and legal standpoints.

Syngenta requested three years ago that the EPA cancel their registration for metolachlor when it decided to pursue isomer-resolved chemistry, leading to the registration of s-metolachlor, which is considered a "reduced risk" pesticide. Despite the fact the EPA did not receive any registration-related fees from Syngenta, the metolachlor registration was maintained in active status, which paved the way for Cedar to seek a "me too" registration. Earlier in March, a federal judge denied Syngenta's

request that EPA be prevented from granting a generic registration. An EPA-prepared release stated that the decision "is expected to result in added competition within the metolachlor market, likely bring prices of both products down, potentially saving American Farmers millions of dollars annually."

Syngenta is not the only group which is upset with the EPA. State officials, grower organizations, non-governmental organizations, and even an employee of the EPA are critical of the decision. The National Cotton Council (NCC) requested in February that EPA honor its original agreement with the registrant, which was acting in good faith when it did not petition to renew registration of metolachlor. The NCC is concerned the EPA's actions will weaken the goals of the Reduced Risk Initiative. Additionally, the Center for Regulatory Effectiveness told EPA it was obligated under the Data Quality Act to afford the public an opportunity to comment on the company's request. Finally, an EPA microbiologist stated in a memo that if

s-metolachlor does not replace metolachlor in the U.S., it is unlikely manufacturers will invest in any future development of products aimed at reducing risks that pesticides pose to the environment. (*Pesticide & Toxic Chemical News*, Vol. 30, No. 22 & *Chemical Regulation Reporter*, Vol. 26, No. 12).

### **Barrier for Insects**

Cornell researchers have developed a fibrous barrier that could help reduce reliance on insecticides for crops such as onion and cabbage. The researcher described the material as a type of cotton candy structure - but with only about one percent of the fiber. This provides a barrier that can be strategically placed to interfere with insect behavior. In untreated fields, cabbage maggot can destroy up to 90 percent of the crop and onion maggot can destroy up to 40 percent of the crop. By placing fiber near the base of onion plants, the number of eggs laid was reduced by almost 90 percent. (*Pesticide & Toxic Chemical News*, February 25, 2002)