



The University of Georgia

College of Agricultural and Environmental Sciences
Department of Entomology

THE GEORGIA PEST MANAGEMENT NEWSLETTER

Your source for pest management and pesticide news

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Even though we have been running the pesticide program for more than ten years, we still have questions about how to improve. Everyone is so busy with their own responsibilities that they have little time to provide feedback or comments. In the end, we are often left to guess at which services are most useful to our clientele. Keep in mind that Extension is public service and taxpayers foot the bill. You are my boss. Let me know if there are additional services that we can provide to make your life easier, safer, and more productive. bugman@uga.edu

BIOTECHNOLOGY

Genetically modified bentgrass escaped into the wild in Oregon, the source of about 70% of the U.S. commercial grass seed. The grass was developed to tolerate glyphosate (the active ingredient in RoundUp and some other products). This type of grass would appeal to a large market of golf course managers who would be able spray over the top of the grass with glyphosate to control weeds. Unfortunately, glyphosate-tolerant grass was found up to three miles from the test site. Some grass came from seed produced by the genetically modified parent grass; other grass was the result of non-modified grass that was pollinated by the modified grass. Because so much grass seed comes from Oregon, there is the potential for contamination of other seed. You can read the details at <http://www.blackwell-synergy.com/doi/abs/10.1111/j.1365-294X.2006.03072.x>

We do not need this kind of mistake.

MONEY

The USDA is soliciting ideas in two areas of organic production. Part of the funding will be to support projects that help growers move into organic production. The other part is to help organic producers grow and market high quality organic agricultural products. If you want to try for a piece of this pie, you will find the details at <http://www.csrees.usda.gov/fo/fundview.cfm?fonum=1141>
The closing date is December 18, 2006.

The EPA wants to award about \$500,000 for projects that reduce pesticide risks. If you have an idea, you can find out how to apply at http://www.epa.gov/oppbppd1/PESP/regional_grants/2007announcement.htm
The closing date is January 12, 2007.

NEWS YOU CAN USE

The USDA has released “Pre-Harvest Security Guidelines and Checklist 2006” to help growers improve the security of their operations. The guidelines are voluntary and may be a useful aid to identify and reduce risks. You can find it on the web.

http://www.usda.gov/documents/PreHarvestSecurity_final.pdf

New types of grasses could keep Canadian geese out of the way. Geese and other types of birds can be a serious nuisance on the golf course, and they can be a serious hazard around airports. Driving unwanted birds away has proven to be an expensive and nearly intractable problem. Dogs, air cannons, lights, and other options have proven only partially effective.

Australian researchers are looking for combinations of grass and fungi that birds do not like. Endophytes are fungi that live between plant cells, and we have known for some time that some endophytes can repel insects or make livestock sick. The Australian scientists are looking at endophytes that make geese and other birds sick when they eat the grass. The endophytes are not intended to hurt the birds, but a ten-meter strip around golf course waterways made geese and other birds move to other parts of the course.

<http://www.abc.net.au/news/newsitems/200608/s1709754.htm>

Although this development is biotechnology in the broader definition, the grass is not genetically modified. The endophyte association of grass and fungi is a natural and widespread phenomenon. It could prove to be an ideal part of the solution to this growing problem. In many parts of the southern U.S., “migratory” is not one of the words that golfers use to describe Canadian geese.



Here is a website with high quality insect illustrations from the “olden days”. It was once common for biological illustrators to draw high quality insect pictures to accompany text. The digital age has eliminated much of that work, but computers are also helping to preserve it. You will find high-quality digital images of insect illustrations from the 1952 Yearbook of Agriculture at this address

http://www.aphis.usda.gov/ppq/ep/emerging_pests/cushman/index.html

DON'T DO IT

Back in the summer, Dow AgroSciences voluntarily cancelled the use of spinosad on Georgia collards and other leafy brassica crops because of concerns about resistance. That blurb only tells part of the story. We included a story about the potential problems for spinosad resistance in 2002 and recommended that growers take resistance management seriously. Unfortunately, some greedy and shortsighted growers continued to misuse and overuse the product. The end result is the loss of the spinosad for Georgia brassica growers, and these producers do not have a lot of insecticide options. Poor pesticide decisions also have implications for the future. Why should a company or the IR-4 program use the resources to register a pesticide for a small-market crop if the growers are just going to screw it up?

As pest management moves from broad-spectrum pesticide hammers, resistance management becomes more critical. Many modern pesticides act on a specific chemical target to control the pest. Specificity reduces the risks to nontarget species and makes the pesticide a better IPM tool. However, it can also make resistance more likely because a small change in the target site can protect the pest from the pesticide.

FEDERAL NEWS

With few exceptions, pesticides must be registered with EPA; pest control devices, however, do not have to be registered. For those readers with inventive minds, we offer this explanation (with a nod to *Chemically Speaking*). A product is a *pesticide* if it incorporates a substance or mixture of substances designed to prevent, attract, repel, destroy, or mitigate a pest. A product is a *pest control device* if it uses only physical or mechanical means to trap, destroy, repel, or mitigate any pest and does not include any pesticidal substance or mixture of substances.

If a product is sold in combination with a pesticide (a roach motel with pesticide inside), the product is regulated as a pesticide. If the product is sold separately from the pesticide (an empty pesticide sprayer), it is neither a pesticide nor a device, and EPA does not regulate it. This exception is the tricky part of regulating mosquito misters. The companies do not install the systems with pesticide, so they are outside of existing regulations.

Although EPA does not require registration of pest control devices, other regulations may apply (e.g., labeling requirements or state regulations). Flypaper, mole thumpers (a huge, spring operated finger that flicks moles from the yard), ultrasonic products, etc. are regulated devices if they make some claim to control or repel pests.

All pest control devices, however, are not regulated, including . . .

(1) Those which depend for their effectiveness more upon the performance of the person using the device than on the performance of the device itself. *Just because you have a flyswatter does not mean you have the skills to track and kill the wily fly. Better leave that to us professional entomologists.*

(2) Those which operate to entrap vertebrate animals, such as a mouse, rat, or fish trap. Confused? Not surprising. Our brief explanation does not even begin to cover state regulations that may apply to pest control devices. If you want to develop and market a pest control device, this web site will help you get started. <http://www.epa.gov/pesticides/factsheets/devices.htm#5>

The state of New York is among the first to take action against mosquito misting systems. These systems are designed to release unsupervised pesticide sprays at timed intervals. Many entomology and pesticide professionals do not approve of the systems because of the higher risk of nontarget exposure and pest resistance to pesticides. However, regulation of mosquito misters has been difficult. The companies that install the systems are not applying or selling pesticide, so they fall outside of current pesticide regulation.

The companies, BuzzOff Mosquito and BuzzOff Mosquito Control of Eastern New York will pay a \$25,000 fine and offer full rebates to its customers who purchased the systems. The suit arose because the companies were marketing the misters as “safe” and “nontoxic.” These claims are in violation of pesticide regulation because they are untrue and misleading to the public. Pesticide application (particularly unsupervised application) is not without risk. Additionally, the pesticide registrant had altered their product label to prohibit its use in automated misting systems in New York.

Although a consumer could still purchase and install a mosquito misting system in New York, there are no pesticides that could be legally applied through the systems in New York. The state is also encouraging EPA to pass regulations that would prohibit the application of any pesticide through an automated misting system.

I read the story in the Albany Times Union (11-10-06) after a tip from a colleague (thanks Dr. Dan Suiter), but you can find story in many places via the Internet.

It is the end of the line for lindane in the United States. For some time, registrants and EPA have been canceling lindane uses. The registrants recently made a formal request to cancel the remaining U.S. registrations. The last uses for the organochlorine insecticides were seed treatments. Lindane has been recognized as a risky chemical for quite a while, and new product developments have shifted the balance so that the risks outweigh the benefits. The EPA expects little or no repercussion from the cancellations. You can find out more about lindane at <http://www.epa.gov/oppsrrd1/reregistration/lindane/>.

HEALTH AND THE ENVIRONMENT

The question of pesticide residues on food presents a particularly intractable problem. On one hand, respected, knowledgeable groups like the American Cancer Society state “There is no evidence that the low levels of pesticide residues in fruits and vegetables affect cancer growth. High doses of some of these chemicals have been shown to cause cancer in animals, but the very low concentrations found in some foods have not been associated with increased cancer risk. In fact, people who eat more fruits and vegetables, which may be contaminated with trace amounts of pesticides, generally have lower cancer risks than people who eat few fruits and vegetables.”

However, a lack of evidence is not proof that pesticide residues on food harm no one. The debate becomes more emotional and troubling when children are part of the discussion. There is a great body of evidence that children need to eat plenty of fruits and vegetables. And the risk associated with pesticide residues on food is probably quite small, but it is not zero. Furthermore, we know very little about the potential effects of pesticides combined with one another or with other chemicals.

Some organizations, like the Environmental Working Group, develop guides (<http://www.foodnews.org/walletguide.php>) intended to help guide you to foods that are safer because they carry fewer pesticides. They may also run mathematical simulations that indicate a certain diet reduces your pesticide exposure by a substantial amount. Many groups promote organic foods as a means to reduce risks.

Unfortunately, these solutions are overly simplistic and may not reduce the overall risks to human health. There is evidence that an organic diet increases the risk of a dangerous *E. coli* infection. Altering your diet to reduce pesticide exposure could increase your risk of disease because you are narrowing your intake of phytochemicals. Additionally, some groups are pushing an anti-pesticide agenda, and the average consumer does not have the expertise to separate fact from pseudoscience. Finally, there may never be the body of knowledge to prove whether or not chemical residues on foods present a health risk. There are not enough scientific resources in the world to test the potential combinations of natural and synthetic chemicals that occur in the diet. *Suppose there were only 100 chemicals and you wanted to test all possible combinations of four chemicals, you would have to run more than 3,000,000 tests.*

Every parent wants to eliminate risks for their children; unfortunately it is not even possible to identify all of the risks. In the larger picture, pesticide residues on foods are a miniscule part of everyday risks. Buckle those car seats, put out that cigarette, get those immunizations, and eat those fruits and vegetables. If you feel better when you buy organic produce, buy it. But if you want to really reduce pesticide risks around your home, store your pesticides securely and only use them when other options are not feasible. This guide can help. http://www.ent.uga.edu/ipm/homeowner_ipm.htm

In spite of all of the scary rhetoric, the food supply in the United States has never been safer, cheaper, or more abundant. Advancing technology and chemicals are the primary reasons.

The EPA released its first court-ordered finding relative to the Barton Springs salamander. In 2005, the Center for Biological Diversity and the Save Our Springs Alliance sued EPA over concerns that pesticides were harming the endangered salamander. The August 2006 deadline required EPA to make a determination about atrazine and the salamander. The Agency stated that atrazine is “not likely to adversely affect” the Barton Springs salamander. The next deadline for EPA is March 2007, when they will have a determination about two other pesticides covered in the agreement. You can read more about the case at these web sites. <http://www.epa.gov/oppfead1/endanger/effects/>
http://www.epa.gov/oppfead1/cb/csb_page/updates/bartons-agreemt.htm.

Although the Montreal Protocol allows ‘critical’ exemptions for the use of methyl bromide, the amounts requested continue to decline. For readers just tuning in, methyl bromide is a “kill-all,” it will eliminate insects, diseases, weeds, etc. from the soil in preparation of planting a high-value crop like strawberry. Methyl bromide is an attractive option because it dissipates from the soil rapidly. Unfortunately, methyl bromide also breaks down ozone in the stratosphere; ozone helps to protect the earth from ultraviolet radiation. Consequently, most of the world agreed to phase out the use of methyl bromide, with an exception clause that permits critical uses until suitable alternatives can be identified.

The U.S. exemption was 9,553 metric tons in 2005, 8,082 tons in 2006, and 6,749 tons in 2007. The 2008 critical use exemption for the U.S. is reduced even further.

In addition to agricultural field uses, scientists are searching for an alternative to methyl bromide as a shipping fumigant for fresh produce and other products. Invasive pests from other countries can cause tremendous problems, and countries go to great lengths to keep exotic pests out. Frequently, governments require that imported products be fumigated to kill any pests; methyl bromide has been a long time standard for fumigation.

One of the biggest challenges is finding a way to kill the pests without affecting the condition of the produce. Scientists at UC-Davis have discovered a possible option. Their system alternately exposes the produce and any pests to a vacuum alternating with pressurized carbon dioxide. This process causes irreversible damage to the pests’ cell chemistry and respiratory systems. Ethanol gas is also introduced to kill fungi and bacteria.

The researchers report that the initial equipment investment is higher than equipment needed to use methyl bromide, but the materials used are substantially less expensive than methyl bromide.

http://www.news.ucdavis.edu/search/news_detail.lasso?id=7887

FQPA/REREGISTRATION

This year is the tenth anniversary of the passage of the Food Quality Protection Act. People debate whether or not we are better off, but things have definitely changed. Here are some excerpts from EPA’s report of their accomplishments.

- Nearly 1,700 organophosphate tolerances have been reassessed.
- Of the 49 organophosphate pesticides (OP) that were registered at the beginning of the registration process, 17 have been voluntarily cancelled or are being phased out.
- Virtually all residential uses of the remaining 32 OP’s have been eliminated.
- The number of pounds of OP insecticides used on kids’ foods has decreased 57%.
- EPA has registered about 250 new active ingredients and 1,600 new uses.
- Nearly 4,400 pesticide end-use product registrations were canceled.

The EPA has released the details of a new program that will review pesticide registrations on a continuous fifteen-year cycle as required by Congress. The Registration Review program will operate continuously, encompassing all registered pesticides, and will adjust the scope and depth of the review in accordance with the complexity of issues associated with each pesticide. Pesticides subject to Registration Review should already have met the data requirements for registration established in 1984. EPA will evaluate the significance of any changes since the last review and decide whether they warrant the submission of additional data or further review of the pesticide's registration. The Agency will then decide whether existing risk assessments can be used as the basis for a decision, and whether a pesticide continues to meet FIFRA requirements for registration.

For more information about the new program visit: http://www.epa.gov/oppsrrd1/registration_review/.

If you care about carbofuran, the comment period has been extended until November 30, 2006. The Agency has proposed that carbofuran products are not eligible for reregistration. Unless the comments revise the decision, it is the end for carbofuran.

Carbofuran is a good example of U.S. producers ruining a good thing. Carbofuran is a carbamate insecticide that was once a useful tool in a wide range of crops. Unfortunately, it is also quite toxic to birds. Foolishly, some growers saw the bird toxicity as an advantage and began to use carbofuran products to deliberately kill birds. Other Extension specialists and I tried to tell the blockheads that their illegal activity was painting EPA into a corner. The Agency began to restrict the use of carbofuran, and now it looks like the end of the line. I will be surprised if the illegal use of aldicarb does not force the EPA to cancel it as well.

We showed you this picture of a yellow jacket nest out control; now we can bring you the rest of the story. It turns out that Keith Hawkins (Extension agent in Randolph County, Ga.) took this picture, and he contacted me when he saw the picture in our newsletter.



A client from the town of Coleman down in southern Georgia turned to the Extension Service when they did not know what to do about the wasps that had taken over their VW bug. The car, still roadworthy, had been stored after the back window was broken. The consensus of the Extension Service was that professionals should handle this pest control job. The car was located in a residential area with children living nearby. Tru-Tech Pest Control was called to the rescue, and the wasps were gone in a couple of weeks.

Our bee expert, Dr. Keith Delaplane, said he thought that the mega-nest was probably the work of two seasons. A mild winter may have allowed the nest to persevere. Cold weather is usually the end of a yellow jacket nest, and only mated queens survive to start nests the next spring. Other specialists think that many queens are at work to lay enough workers for this size nest; Dr. Charles Ray counted more than twelve queens in a large nest in Alabama. Dr. Ray said that a typical yellow jacket nest has 2,000-3,000 workers and a single queen. A mega-nest may have 100,000 workers and dozens of queens. At least 16 huge nests were reported in Alabama in 2006. No one knows for sure why the giant nests have become so abundant or whether this trend will continue.

If you want more information, simply search for “huge yellow jacket nests” on the web. You will find interesting stories and fascinating pictures.

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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http://www.ent.uga.edu/GPMN_archive.htm

Sincerely:



Dr. Paul Guillebeau, Professor & Extension Entomologist