

Cooperative Extension Service
The University of Georgia College of Agricultural and Environmental Sciences



Georgia Pest Management Newsletter

Your source for pest management and pesticide news

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Believe it or not, everything you see on television is not true

HEALTH AND THE ENVIRONMENT

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Babies may be absorbing pesticides and other chemicals even before they are born, according to the Environmental Working Group

There are two distinct schools of thought concerning the use of human subjects to evaluate pesticide risks

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The EPA has released a proposed settlement involving endangered species and pesticides

The Department of Defense released the Air Force Health Study on the health effects of exposure to herbicides in Vietnam

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IR-4 is conducting a survey on major pest problems throughout the country

DON'T DO IT

Some beekeepers have been using sodium cyanide to control pests in the hives

Drop us a line if you have ever used an inverted glass bowl to eliminate a yellow jacket nest (bugman@uga.edu). We need more information before we can recommend this nonchemical solution, but there is some evidence that it works. I have used this method twice in my own yard. Both times, it

eliminated the nest within 4-5 days. We also talked a colleague into trying it. She kept the bowl over the nest entrance for about two weeks just to be sure. After digging up the nest after a fortnight, she reported the wasps were all dead. Other sources have also suggested that this strategy works. However, we do not have enough information to recommend it to our clients.

We do not know why this method would work. It seems unlikely that the temperature would increase enough under the ground to kill the yellow jackets. Our hypothesis is that the nest runs out of food and/or water very quickly.

Here is the method in case you want to try it.

1. Observe the nest from a distance to determine exactly where the entrance hole is. *The nest may have more than one entrance, but yellow jackets do not create a second escape hatch. The queens establish a nest wherever they find a suitable existing hole; perhaps a root rotted away or a rodent abandoned a nest.*
2. Place a clear bowl(s) over the entrance(s). To reduce the chances of a sting, place the bowl either very early in the morning or at dusk when the wasps are not active. *We do not advise doing it at night with a flashlight; the wasps may be attracted to the light and you.*
3. It is imperative that the edge of the bowl fits tightly to the ground. You may need to pile sand or dirt around the bowl to seal the edges of the bowl. The yellow jackets will find any gap, but they apparently do not understand that they could dig under the edge of the bowl.
4. Observe the bowl during the day for a few days. If the wasps are escaping around the edge of the bowl, seal any gaps with loose dirt or sand.
5. Please report to us the success or failure of the project.

If you do not want to try the bowl method or if the entrance cannot be covered with a bowl, here is plan B. Apply an insecticide in and around the entrance hole(s). A common household product called Sevin (active ingredient carbaryl) is deadly to wasps and bees. You can also buy products labeled "Wasp and Hornet" sprays that can be applied from 20-30 feet away. These products are also very effective. Again, we advise you to make the applications at dawn or dusk when the wasps are less likely to be active.

Even though you will see gasoline recommended frequently on the internet, DO NOT use gasoline when you want to attack bees, yellow jackets, or other wasps. Gasoline is not more effective than the insecticide products listed above, but it is much more dangerous for you and the environment. Gasoline can kill people, plants, pets, etc., but the insecticides listed above are unlikely to kill anything except for insects.

Here are some more tips in case yellow jackets are invading your picnic or otherwise being a nuisance. Nonchemical yellow jackets traps are pretty effective at drawing the wasps away from a local area. Keep soft drinks, beer, and harder drinks covered. I have not been half drunk and/or stung in the mouth, but it seems like a sure formula to spoil a good time. Popsicles and sticky hands can also result in a sting.

This time of year, it is a good idea to keep first aid for stings handy. Wasp and hornet nests can have hundreds of individuals by late July, and they get more aggressive in numbers (don't we all). When my children were young and stung, I would have called the product Sting-Eze a bona fide miracle. I am sure there are other products that work just as well.

Beware of free pest control advice; it can be very expensive. A client called earlier this week with a serious problem. Upon the advice of a sincere retail clerk, they applied so much pesticide that their house was uninhabitable. When the lady called, she and her husband had been living in a travel trailer

for two weeks. The husband was unable to remain in the house without serious respiratory distress. Additionally, the wife suffered skin irritation whenever she sat in their car.

Based on conversations with the client and the examination of samples submitted, here is how I think this situation evolved. The household had an invasion of bird lice/mites from an abandoned bird nest near the door. Bird mites/lice are a self-limiting problem because the parasites cannot survive away from a bird for long. Bird mites/lice will sometimes bite people if no birds are around, so I can understand why a person might need to apply a pesticide to eliminate the problem.

Unfortunately, someone told these people that a LOT of pesticide was necessary to get rid of bird lice/mites. The husband took this advice to heart and doused the carpet, the furniture, and the car with at least two different pesticides. In the meantime, the people's skin irritation increased, and the submitted samples did not include any arthropods to explain the irritation.

Most household insecticides have a pyrethroid as the active ingredient, and both skin irritation and respiratory distress have been associated with pyrethroids. I think that these people turned a relatively small problem into a serious situation.

These people were not foolish. They were simply misled by well-meaning but uninformed people and their own belief that a pesticide is always the best solution for a pest problem.

Think carefully before you apply any pesticide indoors, and never use large amounts of pesticides indoors. Find out the source of the problem and learn something about the biology of the pest. Within your local extension office, make sure you are talking to a person with knowledge and experience with your pest problem.

Believe it or not, everything you see on television is not true. I happened to be flipping through the channels, as I am wont to do, when I came upon a man selling a book containing 1,000 pest control secrets. Ears perked, I put down the remote (although I did not let my wife have it). This book did indeed contain pest control ideas that were foreign to my experience. Apparently, eight years at UGA and three years at EPA were not enough. I won't bore you with all of the oddities (as is my wont), but one particular cure stretched my credulity. According to this advertisement, you could rid your yard of moles, gophers, and/or groundhogs by dropping a piece of Juicy Fruit gum down into the burrow. Reportedly, this strategy would kill the offending creature. *No offense is intended or implied about Juicy Fruit gum. I chew it myself, and if I had pet mole, I would offer it to him as well.* The bottom line is that Cooperative Extension is your best source of unbiased information. We do not try to sell you pesticides or sell you our latest book. We do not know everything, but we sure know a lot.

Health and the Environment

According to a recent article in the *Journal of the American Medical Association*, the incidence of children's pesticide exposure in and around schools increased significantly from 1998-2002.

Incidence rates for 1998-2002 were 7.4 cases per million children and 27.3 cases per million school employee full-time equivalents. Illness of high severity was found in 3 cases (0.1%), moderate severity in 275 cases (11%), and low severity in 2,315 cases (89%). Most illnesses were associated with insecticides (n = 895, 35%), disinfectants (n = 830, 32%), repellents (n = 335, 13%), or herbicides (n = 279, 11%). Among 406 cases with detailed information on the source of exposure, 281 (69%) were associated with pesticides used at schools and 125 (31%) were associated with pesticide drift exposure from farmland. (*JAMA*. 2005; 294:455-465)

Babies may be absorbing pesticides and other chemicals even before they are born, according to the Environmental Working Group. Their report states that researchers at two major laboratories found an average of 200 industrial chemicals and pollutants in umbilical cord blood from 10 babies born in August and September of 2004 in U.S. hospitals. The chemicals included pesticides and a lot of other chemicals. You can read all about it here <http://www.ewg.org/>

No one knows exactly what these exposures mean, and some people would dismiss the EWG report because the group seems to be biased against pesticides. However, we should heed a couple of lessons from these reports. Children are being exposed to pesticides, and we need to do everything we can to minimize exposure. In the *JAMA* report, 31 percent of the exposures with detailed information were associated with agricultural pesticide drift. We should be able to eliminate that source of exposure. If we cannot or do not, we should expect additional restrictions on where and how we can use pesticides.

The words “pesticides” and “children” are always a volatile political mix. After all, who would say that they were for exposing children to pesticides? In real life, the situation is much more complicated because no one is for exposing their children to roaches or other pests at school, and no one promotes food with greater insect damage and infestation. *Which would drive customers away from a grocery faster, the possibility of pesticide residues or live insects in the produce?*

If we are to avoid severe restrictions on pesticides, we need to continue to investigate and employ integrated pest management. When critics begin to imply that we are destroying the planet and poisoning the children, we must be able to point to examples of how we are taking steps to reduce the health and environmental risks of pesticides. The fact that the U.S. food supply is the most abundant and safest in the world does not excuse us from doing even better.

There are two distinct schools of thought concerning the use of human subjects to evaluate pesticide risks. Many think that people should never be used for pesticide testing. Another group says that testing could be allowed under stringent safety standards if the data cannot be collected through other means and the end results will promote human health. *A few people also think that unlimited testing should be permitted on ex-spouses and deadbeat relatives.*

It is not difficult to support either side of this argument.

Con: No one is going to pay the money it would take for me to volunteer me or my family for this testing. The testing subjects will undoubtedly be skewed to poor and/or uneducated populations.

Pro: Drug companies already do this kind of testing. Without human tests, the general population becomes the test subjects anyway. Why should we stand in the way if other people wish to volunteer for testing and make a little easy money?

Read the report and make up your own mind (Environ Health Perspect 113:813-817, 2005)
<http://ehp.niehs.nih.gov/docs/2005/7720/abstract.html>

The EPA will accept comments on its revised ecological risk assessment of dichlorvos (DDVP) until August 29, 2005. The Agency is particularly seeking use and usage information, data refinement, and/or risk mitigation proposals to address the risk estimates presented in the revised Phase 5 DDVP ecological risk assessment. The EPA expects to issue a separate Phase 5 DDVP human health risk assessment for comment later in summer 2005.

DDVP is registered for indoor, terrestrial non-food, greenhouse (food and non-food) and domestic

outdoor use. *You may remember No-Pest strips from years ago; DDVP was the active ingredient.* Most DDVP uses are indoors, and ecological risk assessments are not performed for indoor uses. Outdoor uses of DDVP include liquid sprays for turf and dry granular bait formulations applied around animal premise areas. EPA has identified potential ecological risks of concern from various DDVP use scenarios. Acute and chronic risks were identified for birds and mammals from turf, flying insect, and bait applications. Turf application scenarios are expected to yield risks of concern for certain aquatic species.

The revised DDVP ecological risk assessment and supporting documents are posted on EPA's Pesticide Docket Web site (<http://www.epa.gov/edockets>) under docket number OPP-2002-0302. See also the Agency's DDVP Web page, <http://www.epa.gov/opprrd1/op/ddvp.htm>. For additional information on this and other pesticide issues, see EPA's Pesticide Program Web site at <http://www.epa.gov/pesticides/>

The wheels of government turn slowly (probably for the best). I remember an EPA colleague working on DDVP when I was there. I have been with UGA for 10 years.

Federal News

The EPA has released a proposed settlement involving endangered species and pesticides. The Center for Biological Diversity and the Save Our Springs Alliance sued EPA because they felt the Agency was not doing enough to protect the Barton Springs salamander, *Eurycea sosorum*, or its designated critical habitat from pesticides. This salamander is only found in Austin, Texas; the springs are also an important source of drinking water and a major-league swimming hole.

Six pesticides, including atrazine, diazinon, carbaryl, prometon, metolachlor, and simazine have been identified in the Barton Springs watershed. No one knows if these pesticides adversely affect the salamander, and the uncertainty is the crux of the lawsuit. The proposed settlement establishes a series of deadlines for the Agency to make "effects determinations" for pesticides containing any of six active ingredients to determine their potential effect on the salamander and/or its critical habitat. For each of these six active ingredients, the Agency would determine if its action (1) has no effect on the Barton Springs salamander; (2) may affect but is not likely to adversely affect this species; or (3) may affect and is likely to adversely affect this species. If the Agency determines that its action "may affect and is likely to adversely affect" the Barton Springs salamander or designated critical habitat, the Agency will initiate formal consultation with the U.S. Fish and Wildlife Service. (Office of Pesticide Programs Update, 7-12-05)

If this lawsuit is successful, we expect similar actions. Because many people view the Bush administration as weak on the environment, groups will be looking to use the courts to force action.

The Department of Defense released today the latest report of the Air Force Health Study on the health effects of exposure to herbicides in Vietnam, which includes the strongest evidence to date that Agent Orange is associated with adult-onset diabetes. These findings support earlier reports in 1992 and 1997. The study was intended to evaluate links between herbicide applications (primarily Agent Orange and contaminant dioxin) and health effects.

Results from the 2002 physical examination support adult-onset diabetes as the most important health problem seen in the Air Force Health Study. They suggest that the presence and severity of adult-onset diabetes increased with increased levels of dioxin; additionally, the time to onset of the disease decreased.

A 166 percent increase in diabetes requiring insulin control was seen in those with the highest levels of dioxin. This is consistent with the strong evidence found in animal studies. Cardiovascular disease findings were not consistent, but separate studies have found an increased risk of cardiovascular death in Operation Ranch Hand enlisted ground crews, the subgroup with the highest average serum dioxin.

Overall, Ranch Hand pilots and ground crews examined in 2002 had not experienced a statistically significant increase in heart disease relative to the comparison group. Associations between measures of cardiac function and history of heart diseases and herbicide or dioxin exposure were not consistent or clinically interpretable as adverse. Finally, several blood tests regarding liver function and blood lipids were elevated and did tend to increase with dioxin level. However, these tests may be elevated for many reasons, do not constitute a disease by themselves, and cannot be explained by other findings in the study. At the end of the 20 years of follow-up, Ranch Hand pilots and ground crews as a group exhibited no statistically significant increase in the risk of cancer relative to comparisons. Differences by military occupation were inconsistent. The report emphasizes three major limitations to the study. First, the results cannot be generalized to other groups, such as all Vietnam veterans or Vietnamese civilians, which have been exposed in different ways and to different levels of herbicide. Second, the size of the study makes it difficult to detect increases in rare diseases, thus small increases in rare diseases may be missed by the study. Third, other variables that were not considered in this report could be confounding factors influencing the results.

You will find more information at <http://www.brooks.af.mil/AFRL/HED/hedb/default.html>.

I hope that you understand why we repeatedly caution applicators to minimize their exposure to any pesticide. For most pesticides, we do not know the long-term effects of repeated exposure. We know even less about chemicals in the mix that are not active ingredients.

News You Can Use

IR-4 is conducting a survey on major pest problems throughout the country. IR-4 is a government organization that helps get products labeled for minor use crops (Ornamentals, Turf, Fruit, Vegetables, etc.) that would normally not be labeled by the ag chemical companies because of registration costs. All growers involved in the production of minor use crops should fill out this survey. IR-4 will use this information to fund priority projects. It will only take a few minutes to complete, and the link to the survey site is: <http://ir4.rutgers.edu/ornamentalsurvey/>

Don't Do It

Some beekeepers have been using sodium cyanide to control pests in the hives. This practice is pretty dumb (with a capital "D") from several points of view. It is illegal. Sodium cyanide can cause serious problems for human health and the environment. Unless customers are also mentally impaired, the words "sodium cyanide" will make them reluctant to buy products from you. If your customers have a head cold, they may sue you for causing it with the illegal use of sodium cyanide. Finally, the detection of cyanide in any honeybee product would be a major headache that the industry does not want.

If you happen to discover some sodium cyanide, contact your local extension office or your state Department of Agriculture for information about proper disposal.

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.

If you wish to be added to the mailing list, just call us at 706-542-2816.

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Or visit us on the Web. You will find all the back issues there and other useful information.

<http://pubs.caes.uga.edu/caespubs/entomology/pestnewsletter/newsarchive.html>

Sincerely:

Dr. Paul Guillebeau, Associate Professor & Extension Entomologist