

AGROMEDICINE PROGRAM UPDATE

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Previous issues are available at www.musc.edu/oem/apunews.html

PROGRAM NOTES

>The Agromedicine Program continues to respond to consultations and requests for presentations. Please think of the Program when you have an issue involving human health effects and the environment, particularly the farm, or if you need a program for one of the service, church or other organizations you are part of.

In the past month I have made presentations on "Problem Insects in SC" and "Agroterrorism" to lay groups and on "Diagnosis and Management of Food-borne Illnesses" to a physician audience. Several other agromedicine topics are available or can be developed on request.

Remember, too, that we're happy to provide slides and/or lecture notes to allow you to make presentations in your local area. Please call us.

Survey letters regarding primary care practitioners' experience with serious spider bites, tick-borne dis-

eases and fire ant stings should be in the mail before the end of the month. Please complete the survey when it comes to you and return it as soon as possible.

RECENT CONSULTS

>A recently reported consult on mold sparked this insightful comment from F. Brian Smith, Charleston County Extension Agent:

"You mention the perceived reason for high mold counts in the atmosphere is the decay from Hugo trees. I don't dispute that but was contemplating the large areas of wooded tracts cleared in the last several years for development and thinking that this may play a bigger role than we realize. First you have a large amount of wood that has to be dealt with and burning is a big part of that but still you have residue that must decay from wood fungi. I wonder if the "stirring" of the forest floor during the clearing of these large tracts is not also a significant culprit."

>Our first question of the year regarding ticks came in late March. The caller was concerned about a red spot approximately one inch in diameter that developed at the site of a tick attachment. The tick was "small and brown" (on further questioning it was approximately 1/4 inch long with no distinctive marking on the back) and had been attached less than 8 hours (worked in the yard in the afternoon, found that night). Now 18 hours after removal the area of redness is fading.

The red "spot" at the site of tick attachment that fades relatively quickly after removal is an inflammatory reaction to tick salivary contents. The usual duration of this discoloration is 1-3 days. The short duration of tick attachment makes transmission of a tick-borne disease very unlikely. However, we recommend that the date of tick attachment be marked on a calendar and if flu-like symptoms develop within 30 days (the maximum incubation period of tick-borne diseases), a health care provider should be contacted.

Our single page handout on "Handling Tick Bites" is available on request as is our table summarizing common tick-borne diseases.

>A retired teacher called with a concern about pesticides in his water. He had noted a "petroleum-like" smell for several months. The water department was called to investigate and found no pesticide residues in the water, but methoxychlor was found in soil samples around the water meter. The meter and supply line were replaced and the smell disappeared.

He has had a sore throat and "funny taste" on the tongue, though both are getting better now.

Methoxychlor is an organochlorine insecticide with a "fruity" odor. It is rapidly metabolized in the body and rapidly broken down by water and sunlight in nature. It is toxic to fish, but the LD50 for mice is 6000 mg/kg. It is approved for use to control pest insects in/on gardens, food crops, farm animals, pets, etc.

The "high" pressure water system is very unlikely to have been contaminated by the "low" pressure soil system, even if there were a leak in the system. The resolution of the water odor with the replacement of the line and meter was probably happenstance.

We discussed other possible causes of water odors and discoloration including those associated with heavy rainfall in the area of the watershed. He will report any further symptoms to his physician.

FROM THE LITERATURE

>The titles of two articles from Environmental Health Perspectives, published by the National Institute of Environmental Health Sciences, suggest problems but the articles themselves don't.

Title #1:

"Chlorpyrifos accumulation patterns for child-accessible surfaces and objects and urinary metabolite excretion by children for 2 weeks after crack-and-crevice application"¹

The study found that chlorpyrifos did NOT accumulate in children, in fact, that there was no significant increase in absorption of chlorpyrifos at all. (This study was done before the EPA phased out indoor residential use of organophosphate pesticides.)

Title #2:

"Organochlorine pesticides and male genital anomalies in the Child Health and Development studies"²

¹ Hore P et al. Environ Health Perspect 2005;113::211-219

² Bhatia r et al. Environ Health Perspect 2005;113:220-224

From their conclusion:

"The study does NOT support an association of DDT or DDE with hypospadias or cryptorchidism"

Editorial Comment:

This sort of "sensationalism" or at least over-stating of information in the headline versus the body of an article is certainly common in many media outlets. It occurs frequently enough that if sometimes doesn't even register in our heads. It shouldn't happen in a prestigious journal published by one of our national institutes.

RESOURCES

Breaking New Ground a service of the AgrAbility Project, US Department of Agriculture, has been in existence for 25 years. Their "tagline" is: "cultivating independence for farmers with disabilities."

Their most recent publication is "Arthritis and Agriculture: a guide to understanding and living with arthritis."

Single copies are available from the Indiana Chapter of the Arthritis Foundation at 1-800-783-2342.

For more information about the Breaking New Ground program check the web at: www.breakingnewground.info