

## Pesticides and Your Health

Some pests, like ants, are nuisances. They don't really cause much damage, but annoy us. Other pests eat vegetable and crop plants, which ultimately increases the cost of food. A few pests, like mosquitoes, transmit important diseases that disable or even kill people.

Most people understand benefits of using pesticides to control pests, but more and more of us are also concerned about possible harmful effects of pesticides on the health and safety of our family and pets.

Results from a recent survey by the University of Kentucky showed most people believe pesticides cause cancer. Whether this is true is not yet known, but all of us can agree it is good to minimize exposure to pesticides.

In this discussion, **pesticides** include **insecticides**, which kill insects; and **herbicides**, which kill weeds. Some other types of pesticides include fungicides (kill fungi) and rodenticides (kill mice and rats).

### Farm Family Study

Researchers at the University of Minnesota decided to find out if pesticides get into the bodies of pesticide

applicators and their family members. They wanted to know if practices used to prevent exposure to pesticides actually reduced pesticide concentrations in the bodies of applicators.

This study looked at 95 farm families. The three pesticides of interest were *glyphosate*, a herbicide commonly sold as Roundup®, *2,4-D*, a herbicide found in many weed control products, and *chlorpyrifos*, an insecticide sold as Lorsban® and Dursban®.

To look at pesticide levels, researchers took blood samples from the person who applied the pesticide and his/her immediate family members.

The study showed chlorpyrifos and 2,4-D were *always* detected in the body of the person who applied the pesticide. But, what was unexpected was low levels of these pesticides were often found in spouses and children, even when they did not have direct contact with the pesticides.

In this study, 100 percent of all family members (farmers, spouses and children), had detectable amounts of the insecticide chlorpyrifos in their bodies.

The highest amounts of pesticides were found in applicators who did not

follow pesticide label instructions. These applicators:

- Did not wear chemical resistant gloves while mixing pesticides.
- Spilled the pesticide during mixing and spraying operations.
- Had skin contact with pesticides during handling.
- Repaired spray equipment without wearing chemical-resistant gloves.
- Smoked during mixing and spraying operations.

Conversely, farmers who carefully followed label instructions and observed safety precautions had lower levels of pesticides in their bodies.

### Risks from Pesticides

The health risk of an individual to a pesticide is a function of its **toxicity** and the **exposure** to the pesticide.

**Pesticide toxicity** is measured by how much pesticide is needed to kill a rodent population. A very small amount of one pesticide might produce a toxic effect, while a much larger amount of another may not. The **signal words** on the pesticide label indicate the acute toxicity that may occur with exposure to the pesticide.

- Danger = high toxicity
- Warning = moderate toxicity
- Caution = low toxicity

The route of human exposure to a pesticide also influences the toxic effect. Pesticides can enter the human body three ways: 1) by absorption through the skin or eyes (*dermally*), 2) through the mouth (*orally*) and 3) by breathing into the lungs (*inhalation*).

So, to reduce the risk of pesticides, choose low toxic products/approaches whenever possible and reduce exposure by using chemically resistant gloves and other PPE as recommended on the label. Or, hire someone else to apply the pesticide.

Source: Clyde Ogg, Extension Educator, Pesticide Safety Education Office

### FOR MORE INFORMATION

University of Nebraska-Lincoln Extension publication, *Managing the Risk of Pesticide Poisoning and Understanding the Signs and Symptoms* (EC2505) is available free at the extension office and online at [www.ianrpubs.unl.edu/sendt/ec2505.pdf](http://www.ianrpubs.unl.edu/sendt/ec2505.pdf)

## What Might be Lurking in That Sack of Oranges?

Barb Ogg

UNL Extension Educator

In late February, a 4-H family brought a very large, light brown spider into the Lancaster County Extension office. It was a spider I had never seen before. The family speculated the spider may have come into their house in a sack of oranges bought at the grocery store. We took it to Jim Kalisch, UNL extension entomologist, for identification.

After consulting with Rick Vetter, arachnology research at the University of California, Riverside, Jim reported this spider to be a female Giant Crab Spider, *Olio giganteus*. This large spider is native to the southwestern United States. These spiders wander about at night in search of prey and overcome them by their speed. The female spider has an interesting egg laying behavior. She crawls under large curved pieces of tree bark and other secluded places where she constructs an egg

sac and entombs herself inside the sac with the eggs. The female remains inside the egg sac until their spiderlings hatch. Jim is going to give this female spider the right care and hope she constructs an egg sac.

While it is always good to be cautious around unknown spiders, giant crab spiders are not dangerously venomous and these spiders are not aggressive toward humans.

A lot of people bring us specimens which makes what we do more interesting. Many thanks!



Giant crab spiders, native to the southwestern U.S., are light brown with one-inch long bodies and legspan of three inches.

Many crab spiders found in Nebraska are found camouflaged in flowers, where they wait to pounce on flies and bees. This is a bright yellow goldenrod crab spider.

## Household Hazardous Waste Collections

These collections are for household only; not for businesses. Only residents of Lincoln and Lancaster County can bring items to collections.

**Friday, June 20, 9 a.m. – 1 p.m.**  
Union College Parking Lot, 52 & Cooper Streets

**Saturday, June 21, 9 a.m. – 1 p.m.**  
NE Wesleyan University, parking lot, 56 and Huntington Streets

### Some items you can bring for disposal:

Thermometers, thermostats containing mercury, solvents, oil-based paint, paint thinner, pesticides, (even banned products like DDT), items containing PCB's (ballasts from fluorescent fixtures and capacitors from old appliances). Compact fluorescent light bulbs (CFL's) contain mercury and will be accepted.

**Do not bring:** asbestos, tires, batteries, used oil, antifreeze, medicines, fertilizers, explosives and ammunition.

Still unsure what you have will be acceptable? Call the Lincoln-Lancaster County Health Department at 441-8040.

## Insect Photography Workshop Offered June 21

Do you like nature photography? Do you like to be outdoors? Need a new hobby? If you can answer "yes" to any of these questions, you may be interested in attending a workshop that focuses on close-up photography of insects.

UNL Extension will present an Insect Photography Workshop on Saturday, June 21, 9 a.m.–Noon at the Lancaster Extension Education Center, 444 Cherrycreek Road, Lincoln. Cost of this workshop is \$30/person or \$40/couple who can share a reference book. Attendees are encouraged to bring their camera.

Jim Kalisch, extension associate from UNL Department of Entomology, will share his knowledge about close-up photography. Jim is a regular on UNL's Backyard Farmer program on Thursday nights 7–8 p.m. on NET1 (Channel 12). He is an accomplished insect photographer (see spider photos on this page).

Emphasis will be on digital macro-photography. Topics covered will include camera features/settings and equipment needed for macro-photography, basics of close-up photography, lighting, getting insects to cooperate and much more.

In addition to receiving workshop information, attendees will be given a reference book. Later in the summer, attendees will have the opportunity to submit photos to be critiqued. Best photos will be featured in a calendar given to attendees at the end of the summer.

It is expected attendees will have

a basic understanding of photographic principles, but need help taking good close-up photos. Ages 14–18 must be accompanied by a parent/guardian. For more information, call Barb Ogg at 441-7180.

Register by submitting form below before June 13. Space is limited, so sign up early!

### Insect Photography Workshop Registration Form

Registering as:  Person (cost \$30)  Couple (cost \$40)

Name(s) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

MAIL BY JUNE 13 to (check payable to Lancaster County Extension):  
UNL Extension in Lancaster County, 444 Cherrycreek Rd, Ste A, Lincoln, NE 68528