



**OUTREACH & EXTENSION
UNIVERSITY OF MISSOURI
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In This Issue

Save money – look for the “Energy Star” 2

Sharon Laux, PhD
Environmental Design Specialist

Irradiation lowers food safety risk for most vulnerable 3

Pamela Ingram
Dietetic Student
Cynthia Fauser, MS, RD, LD
Nutrition Specialist

We're on the Web!

This *Life Times* newsletter is available on the Web at <http://outreach.missouri.edu/ecregion/lifetimes/>



Extension's Mission

University Outreach and Extension serves Missouri by extending research-based knowledge and high-quality educational programs to address the high-priority needs of citizens at the local level.

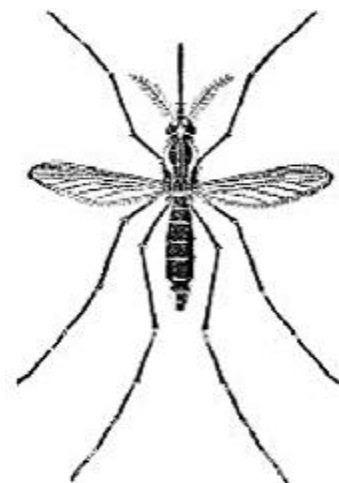
How to avoid West Nile Virus when gardening

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As summer approaches and we find ourselves spending more time outdoors, we should also know how to protect ourselves and our families against the West Nile virus.

The West Nile virus is spread through the saliva of infected mosquitoes. It's then transmitted to humans, birds and horses. Symptoms include fever, headaches and body aches, usually lasting for a few days.

The good news is that less than 1 percent of mosquitoes carry the virus, and less than 1 percent of the people or animals bitten by an infected mosquito ever develop



symptoms of the disease. When detected early, most people have a good chance of recovery. On the other hand, this virus can be fatal. In rare cases, the disease can lead to permanent neurological problems.

Weather conditions, including rainfall and temperatures, should be considered in the spread of the mosquitoes and, consequently, the virus. Last summer, the virus outbreak affected close to 165 people in Missouri, with five of those cases

(continued on page 4)

Let us know what you think!

With this issue, we begin our fifth year. Whether you've read *Life Times* for a few years, or this is the first issue you've seen, we value your opinion! What do you find helpful? What other information would you like to see?

Please take a minute to complete the enclosed survey and then return it to me by June 30. Thanks for your feedback!

Sandra McKinnon
Content Editor

Save money – look for the Energy Star



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Did you know you could identify and buy energy-efficient products for your home and for your business that can save you money and help protect the environment as well? Just look for the “Energy Star” label.

The U.S. Environmental Protection Agency (EPA) introduced “Energy Star” in 1992 as a voluntary labeling program to identify and promote energy-efficient products to reduce greenhouse gas emissions. At first, only computer equipment was labeled, but steadily more products have been added in recent years.

American consumers have purchased more than 630 million products with the Energy Star label. Last year alone, Energy Star helped save enough energy at peak time to power 10 million homes and reduce greenhouse gas emissions equivalent to those of 10 million cars.

Look for the Energy Star label when purchasing appliances, consumer electronics, heating and cooling equipment, home office equipment and lighting. These products have met guidelines set by the EPA and the U.S. Department of Energy. Energy Star labels can also be found on newly constructed homes.

The Energy Star website (www.energystar.gov) can help you evaluate the energy efficiency of your home and provide suggestions for improvement. In the St. Louis area, for example, the estimated annual energy bill for an average house is \$1,456. If you upgraded your home using Energy Star program suggestions, you could reduce your energy bill by approximately half.

Check out the following examples of ways to reduce energy costs in a St. Louis area home.

Building improvements

Making the following building improvements could save up to 20 percent (\$172) annually.

- Insulate ceilings to R-38, and walls to R-11, and basement walls to R-11.
- Caulk and weatherstrip doors, windows and cracks in your home.
- When replacing windows, select those with solar-control low-E glass, especially on the east and west sides of your house. Wood or vinyl frames and argon gas between the panes of glass also will help to save energy and make your home more comfortable.

Heating, ventilating and air conditioning equipment

- A furnace with an Energy Star label can save approximately 15 percent (\$105) on your annual heating bill.
- An Energy Star-labeled air conditioner can save 20 percent or more each year (\$31).
- The average forced-air duct system loses about 30 percent of the energy produced by the furnace or air conditioner when distributing air to rooms. Reduce this energy loss, and save \$257 per year, by sealing duct joints with mastic or high-quality duct tape and insulating ducts in unconditioned spaces.

- Save 5 percent to 30 percent (\$43 to \$257) of your heating and cooling bill by using a programmable thermostat that automatically adjusts the setting at night or when your home is unoccupied.

Water heating and major appliances

- Use an insulating wrap on your water heater if it's more than 10 years old. Wraps cost \$10 to \$20 and are available at hardware stores and home improvement centers.
- Energy Star refrigerators require about half as much energy as a 10-year-old model (\$50 annual savings).
- Energy Star clothes washers use about 50 percent less water and 70 percent less energy than conventional models (\$100 annual savings).

Lighting, TVs and VCRs

- Lamps used more than two hours per day on average are good candidates for replacement with compact fluorescent lamps. The energy bill savings will more than pay for the extra cost of the lamps over their lifetime, and you will replace fewer lamps because fluorescent lamps last longer than incandescent.
- Motion sensors or timers on outdoor lights help reduce electricity for these high-use lamps.
- Look for Energy Star-labeled TVs and VCRs to reduce energy waste. (Americans spend nearly \$1 billion each year to run TVs and VCRs when these products are switched off.)

For more information about the Energy Star program, call 1-888-STAR-YES (1-888-782-7937), visit www.energystar.gov, or contact your local Extension office.

Irradiation lowers food safety risk for most vulnerable

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What do cosmetics, feminine products, Band-Aids, bulk spices, disposable diapers, medical devices and hamburger have in common? They are all products irradiated to protect consumers from bacterial contamination.

When hamburger is treated, an electrically generated beam of high-speed electrons scans across the packaged item, breaking up DNA strands in the bacteria so they die or fail to reproduce. NASA has used this technology for years to protect astronauts from food-borne illness.

Non-food items do not need to be labeled, but food items sport a "radura." This is an international symbol resembling a stylized flower that identifies products treated with this extra safety precaution.

Although anyone might appreciate the additional peace of mind irradiated meats offer, people who stand to benefit most are the elderly, children under age 4, pregnant women and those with impaired immune systems. For these, a case of food poisoning can be much more devastating than a few days of an upset stomach.

Irradiation performed on pre-packaged products effectively destroys 99.9 percent of existing bacteria. However, it does not



"The FDA requires that this symbol, called a radura, appear on irradiated food products."

protect the product from abuse afterwards. Consumers must still handle hamburger with care and use within one or two days.

Joanie Taylor, director of consumer affairs and community relations at Schnucks Markets, advises, "All ground meat, including irradiated meat, should be handled properly. It must be kept refrigerated below 40°F, prepared with clean hands and utensils, and cooked to 160°F."

Food irradiation does not impact nutritional value. Certain vitamins can be minimally decreased, comparable to canning, cooking, freezing and drying. Some foods may have slight taste changes due to the process, just as pasteurized milk differs in taste from unpasteurized milk.

The irradiated ground chuck sold by Schnucks Markets comes in special opaque plastic packs called "chub-packs," similar to sausage packages. The additional cost is about 10 cents per pound. "Sales so far have been as projected," says Taylor. "It is a choice we wanted to offer."

Many people are already comfortable with safety of the ground meat they purchase and like being able to see the meat through the shrink-wrap. It will take time for acceptance of irradiated meat in its opaque packaging.

Acceptance will come as more irradiated foods appear in the marketplace and people try this new choice. Just as we now accept pasteurized milk as an important way to protect our health, irradiation is a viable weapon to combat foodborne illness and food spoilage losses.

Uses for food irradiation

- ☉ **Preserve food** – destroys or inactivates organisms that cause spoilage and decomposition. Results produce products that are closer to fresh in texture and flavor.
- ☉ **Sterilize food** – some foods such as grain and spices can be stored for years without refrigeration.
- ☉ **Control sprouting, ripening and insect damage** – a residue-free alternative to pesticides and chemicals. Irradiated strawberries stay unspoiled up to three weeks, compared to three to five days for untreated berries.
- ☉ **Control foodborne illness** – eliminates pathogens that cause foodborne illness, such as E. coli, salmonella, campylobacter, listeria, and shigella.

Is food irradiation safe?

According to the Institute of Food Science and Technology: "Irradiation, carried out under conditions of Good Manufacturing Practice, is commended as a safe and effective food processing method that can reduce the risk of food poisoning and preserve foods without detriment to health and with minimum effect in nutritional quality."

Irradiated food approval

The USDA and FDA work together to approve irradiated foods. Foods approved, or with approval pending, include raw meat/poultry, fresh produce, dry foods (spices, grains), fresh produce, ready-to-eat meats (hot dogs, deli meats), and animal feed.



How to avoid West Nile Virus when gardening

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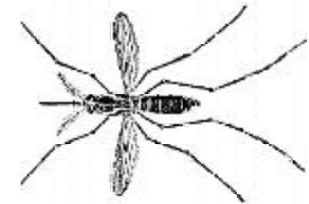
resulting in death. A University of Missouri researcher at the College of Veterinary Medicine (Dr. Gayle Johnson, veterinarian and associate professor of veterinary pathobiology) has been tracking the virus around the state and predicts that the virus outbreak will be as severe this summer as it was in 2002.

As a gardener, it would help if you are adequately informed about mosquito control measures such as: mosquito surveillance, source reduction, biological control strategies, ground and aerial application of insecticides, and public education.

Recommendations to gardeners to avoid the virus:

- **Avoid going outside at dusk or dawn.** Many of the mosquitoes that carry the West Nile virus are especially likely to bite around dusk and dawn.
- **When possible, wear long-sleeved clothes and long pants treated with insect repellent.**
- **Apply an insect repellent before working in the garden.** Recommended insect repellent contains DEET (N,N-diethyl-meta-toluamide). A higher percentage of DEET should be used if you will be outdoors for several hours, while a lower percentage of DEET can be used if time outdoors will be limited.
- **Limit the number of places available for mosquitoes to lay their eggs.** Eliminate and empty standing water sources from around your home, such as old tires, logs or containers.

- **Consider biological control of mosquito larvae and adult.**
 - ♦ Use live mosquito fish (*Gambusia*) in ditches and ponds.
 - ♦ Use birds, bats and dragonflies to control adult mosquitoes.
 - ♦ Place Mosquito dunks and mosquito bits [biological mosquito larvicide containing *Bacillus thuringiensis israelensis* (BTI) as active ingredient] on surfaces of garden pond and other areas likely to harbor mosquitoes.
 - ♦ Apply a few drops of extra virgin olive oil on water surfaces.
- **See a doctor if you suspect you have been bitten by a mosquito and are not feeling well.**
- **Stay updated and educated on the West Nile virus.**



For more information, visit websites for National Centers for Disease Control and Prevention (www.cdc.gov/ncidod/dvbid/westnile/) and University of Missouri (<http://www.missouri.edu/~news/releases/aprmay02/westnile.html>).

LifeTimes is written by University Outreach and Extension specialists for individuals and families living in East Central Missouri. This newsletter is provided by your local Outreach and Extension Council. **Articles may be reprinted for educational purposes only. Please credit as follows:** By (author's name), (author's title), University of Missouri Outreach and Extension.

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