# Look What's Out There

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*http://www.wvu.edu/~agexten/*

## Pesticides and Food: Why Children May be Especially Sensitive to Pesticides

Americans use more than a billion pounds of pesticides each year to combat pests on farm crops, in homes, places of business, schools, parks, hospitals, and other public places.

Infants and children may be especially sensitive to health risks posed by pesticides for several reasons:

- their internal organs are still developing and maturing,
- in relation to their body weight, infants and children eat and drink more than adults, possibly increasing their exposure to pesticides in food and water.
- certain behaviors--such as playing on floors or lawns or putting objects in their mouths--increase a child's exposure to pesticides used in homes and yards.

Pesticides may harm a developing child by blocking the absorption of important food nutrients necessary for normal healthy growth. Another way pesticides may cause harm is if a child's excretory system is not fully developed, the body may not fully remove pesticides. Also, there are "critical periods" in human development when exposure to a toxin can permanently alter the way an individual's biological system operates.

Adverse effects of pesticide exposure range from mild symptoms of dizziness and nausea to serious, long-term neurological, developmental and reproductive disorders.

For these reasons, and as specifically required under the Food Quality Protection Act (1996), EPA carefully evaluates children's exposure to pesticide residues in and on foods they most commonly eat, i.e., apples and apple juice, orange juice, potatoes, tomatoes, soybean oil, sugar, eggs, pork, chicken and beef. EPA is also evaluating new and existing pesticides to ensure that they can be used with a reasonable certainty of no harm to adults as well as infants and children.

The 1996, Food Quality Protection Act, set tougher standards to protect infants and children from pesticide risks. EPA is enforcing these tougher standards, which include an additional safety factor to account for developmental risks and incomplete data when considering a pesticide's effect on infants and children, and any special sensitivity and exposure to pesticide chemicals that infants and children may have.

(US-EPA, Pesticide Health and Safety, 2004)

## What is done to keep pesticides out of food?

As a part of the food tolerance setting process, EPA also determines how close to harvest that a pesticide may be applied to insure that residues in the raw agricultural product, or processed foods containing that product, will be below tolerance. For each pesticide and crop the EPA has established a pre-harvest interval (PHI), which may restrict pesticide use from a few days up to weeks before harvest. Many pesticides are not applied close to harvest, and may never result in food residues. In a recent national survey by USDA, using methods that test for over 100 commonly used pesticides, 35% of all fruits and vegetables tested had no detectable pesticide residues. Together, EPA and USDA have pledged to develop incentives to reduce pesticide use and to encourage the use

of safer pest control practices which rely heavily of integrated pest management (IPM) in which pesticides may often play a minor role. As a requirement of the current Farm Bill, USDA has proposed national standards for organic produce, which should facilitate increased food and feed production using organic practices.
(EXTOXNET- FAQ, 2004:
http://extoxnet.orst.edu)

## Chemical News

**January is National Radon Action Month**
Radon is the second leading cause of lung cancer. Radon is a naturally occurring radioactive gas that can be found in homes throughout the country. A decay product of uranium, it occurs in soil and rock, and can be found in well water and some building materials. It is colorless and odorless. The only way to determine how much radon is in your home is to test it using a radon test kit readily available at major hardware stores, ordered over the internet or from the National Radon Hotline at 1-800-SOS-RADON. The following EPA website provides information on Radon: http://www.epa.gov/iaq/radon.

(US-EPA. EnviroBytes, January 9, 2004)

### China OKs Monsanto GMO Food Imports

China's Ministry of Agriculture has approved permanent import safety certificates for genetically modified, or GMO, varieties of soybeans, corn and cotton produced by U.S. agribusiness giant Monsanto Co. The ministry's approvals pave the way for uninterrupted imports of Monsanto's RoundUp Ready Soybeans as well as two of its GMO corn varieties and two of its GMO cotton varieties (USAgNet - 02/20/2004)

- BioSafe Systems recently announced the availability of a stabilized peroxide algaecide available for residential use (GreenClean®, EPA Reg. # 70299-4). The material can be used for ornamental ponds, fountains, and water gardens. It is also listed by the Organic Materials Review Institute. (The Grower, November-December 2003, Via Chemically Speaking, Feb.2004).

- A risk assessment for the mosquito adulticide permethrin was conducted based upon data collected from ULV ground applications in Saginaw, MI during 1999. Samples of residue were collected from park surfaces after the applications had been made 12 hours earlier. The result of the analysis is that a child playing in the park would likely absorb only 0.007 percent of the acceptable daily intake (conversely, the exposure is 15,120 times less than the ADI). (Wing Beats, Winter 2003, Via Cemically Speaking).

- A total of 167 million acres of genetically engineered crops were planted globally in 2003, which is 15 percent more than 2002, according to the International Service for the acquisition of Agri-biotech Applications. China and South Africa reported the largest percentage increases in 2003 (more than 30 percent) and the increase for the U.S. was ten percent. However, about two-thirds of the world's bioengineered crops are grown in the U.S. (106 million acres). The report also predicted that the global market for these types of crops will be $4.5 billion in 2004. (Chemical Regulation Reporter, 1/19/04).

## Events:

**March 15, 2004**
**West Virginia Commercial Applicator Recertification Training Session** - Stonewall Jackson Resort, Roanoke, WV.

**March 16-17, 2004**
**39th West Virginia Vegetation Management Association Meeting** - Stonewall Jackson Resort, Roanoke, WV. Contact Keith Lynch or Ryan J. Osborn