

# Cornell University Cooperative Extension Niagara County

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## Environment , Gardening & Land Use

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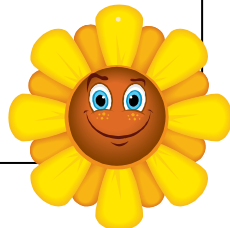
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## **PESTICIDE RESIDUES IN CENTRAL NYS HOMES**

Submitted by John Farfaglia



Pesticides, and in particular, organophosphate insecticides, are toxic compounds that are commonly used both outside and inside homes in the United States. Overexposure to organophosphate and carbamate pesticides affects red blood cells and at a sufficient dose the exposure can be fatal. Moderate pesticide exposure can increase neurological symptoms and cause problems with thinking and motor skills. Other pesticides have fewer toxic effects. Outdoors, pesticides are subject to a variety of environmental processes due to sunlight, water and soil, which break them down into simpler compounds such as water and carbon dioxide. Indoors, these processes are diminished and pesticides may persist and even accumulate inside buildings. Pesticides may be used inside homes to eliminate insects and they may be tracked into homes from outdoor sources on clothing and footwear. Previous studies of indoor pesticides in various regions of the US have shown that residential environments can be contaminated and many occupants may be exposed to pesticides in both urban and rural areas.

Studies in homes have shown correlations between pesticides in household dust and pesticide exposure in people living in the homes in both urban and rural settings. It has also been found that children of agricultural workers or those who live near treated farmland have higher pesticide exposure than other children in the community. Recent research done at Cornell assessed 17 pesticides in 41 homes in counties in central New York that were surveyed during summer 2000 and winter 2001. These homes were equally divided into three categories: farmer household; rural residence not involved with farming; city or suburban homes. Four types of residue were collected: dust samples collected by vacuuming a designated carpeted area; wipes of hard-floor surfaces (linoleum tile, or wood); wipes

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of flat surfaces, such as tables, shelves, or windowsill (non-floor surfaces); and an airborne sample collected on filter paper. Most homes contained between 5 and 12 pesticides with the maximum of 15 of the 17 pesticides found in one home. Total pesticide residues were higher in farm households than in non-farm households, either rural or urban, and the level of residue was higher in carpet dust than in dust collected from smooth floors. Few differences in numbers of pesticides detected were found between seasons or between floor types.

Further analysis showed that higher residues of individual pesticides were observed for those pesticides used in agricultural and horticultural application with the highest residues in summer in rural farm households, especially those of certified pesticide applicators. Residues detected within all of the homes were higher on carpets than on the smooth surfaces or settled dust, indicating that complex textile structures and high surface areas hold residue over time. In addition, the flat surface samples and the settle dust samples indicate that pesticides that enter the households are redistributed within the households by airborne routes. The residues indicated that these compounds become gaseous within the households and recondense to contaminate surfaces and objects in addition to becoming airborne by adsorption on small dust particles.

#### **What you can do:**

- ➔ Take off shoes when entering home in agricultural areas and in other settings after outdoor pesticide use.
- ➔ Wipe shoes on floor mats.
- ➔ Close windows near application time in agricultural areas and in other settings as appropriate.
- ➔ Use vacuums with HEPA filters.
- ➔ Clean floors and carpets regularly to lessen redistribution.
- ➔ Do not put children directly on carpet.
- ➔ Avoid most pesticide use in homes or keep application confined to surfaces and places that can be easily cleaned.

Source: Cornell University program on Breast Cancer and Environmental Risk Factors, Newsletter, Volume 12, Number 2.

## **ASSEMBLY PASSES BILL Requiring Stores to Recycle Plastic Bags**

Submitted by Paul E. Lehman

The Assembly passed legislation (A.8810-C/Sweeney) to reduce the environmental damage caused by single-use plastic carryout bags. It is estimated that up to one trillion of these bags are used worldwide each year, with billions ending up as litter, contaminating the environment, and posing a risk to wildlife and marine life.

The Assembly bill would require large retail stores that provide customers with plastic carryout bags to establish in-store programs for customers to return those bags for recycling. Additionally, the stores would be required to make reusable bags available to customers for purchase and permit those bags to be used in lieu of single-use bags. In establishing return programs, the stores would be required to make available clearly-marked and accessible bag collection bins, and ensure that each plastic bag provided by the store is printed with the recycling information. Manufacturers of compostable plastic bags would be required to indicate that compostable bags are not recyclable. The bill defines compostable plastic bags as plastic bags that meet at a minimum the American Society for Testing and Materials Standard D6400 for compostable plastic.

The legislation would also require plastic bag manufacturers to make arrangements with the stores (at their request) for the proper collection, transport and recycling of the returned bags. Furthermore, the manufacturers would be required to develop educational materials encouraging the reduction, reuse, and recycling of plastic carryout bags.

While the Assembly has passed this bill, the Senate has received some amendments in the Environmental Sub-committee and the bill is in the hands of the Finance Committee. Local Senator George Maziarz serves on this committee.



## **SOME TREE PROBLEMS**

Submitted by John Farfaglia

### **Sycamore Anthracnose**

Sycamore anthracnose, is starting to cause symptoms on sycamores. Diseased trees are especially conspicuous now as they stand leafless or nearly so next to other tree species with full crowns. Symptoms include shriveled brown leaves and frequently bare twigs.

Sycamore anthracnose occurs in three phases. In order of appearance each season, the phases are canker formation, shoot blight, and leaf blight. Defoliation can occur, but this disease rarely threatens the life of its host and therefore treatments would only need to be made for aesthetic reasons. For new plantings, choose anthracnose-resistant London plane.

### **Silver Maple Seed Production**

Silver maples are producing massive amounts of seeds in many parts of the state, and as the samaras ripen, their tan color causes the trees to look very unthrifty from afar. In addition to the "off color" crowns, "normal" leaves are stunted and shoot growth is much shorter than normal. All of this is because so much of the trees food reserves are being diverted to allow for growth and development of the seeds. However, once the seeds are cast, normal growth should return. Massive fruiting like this is typical every 4-6 years but is nothing to worry about.

### **Broad-leaved Trees and Shrubs**

We saw ash anthracnose on our recent scouting trip to Orange County. The disease is common on black, white and green ash. Early symptoms are water-soaked areas that grow to irregular, necrotic blotches. The blotches enlarge and coalesce rapidly and the leaves drop. Entire flushes of shoots may be killed in wet years and the damage is often mistaken for late spring frost damage. Defoliation from ash anthracnose occurs so early in the season that affected trees seem to have plenty of stored reserves to produce a second flush of leaves. Repeat infections are made by the spores as long as the

conditions are cool and wet, but as summer approaches disease incidence is usually reduced. Unfortunately, it is too late to treat this year. As a control measure, destroy or compost fallen leaves. Chose resistant green ash instead of highly susceptible white ash where disease pressure is high. Source: Branching Out Newsletter Vol. 15 No. 5, 5 30/08

## **Site Considerations Before Planting**

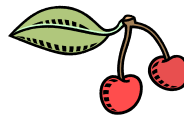
Submitted by John Farfaglia

### **Vegetables**

Choose a site that is:

- Sunny. Receives at least 6 hours of direct sun daily.
- Well-drained. No standing water after heavy rains.
- Relatively level. Or build beds or terraces that run across the slope.
- Away from trees. They can shade and compete with crops for water and nutrients.
- Protected from high winds. Good air circulation, however, helps prevent disease. You may want to avoid low-lying frost pockets.
- Close to a water source. You will need water, and it's too heavy to haul.
- Protected from wildlife. If deer or other large animals are present, proper fencing may be necessary.

Consider using wide beds with permanent paths between planting areas (or raised beds) to avoid soil compaction. Test your soil, adjust pH, and plan to improve your soil with additions of organic matter and/or planting cover crops the year before your first planting. For more information, visit: [www.gardening.cornell.edu/vegetables](http://www.gardening.cornell.edu/vegetables)



## **Fruit**

- While growing strawberries isn't much harder than growing vegetables, fruit plantings – especially fruit trees – require a large commitment to pruning, pest management and care. Before planting, be sure you are ready to commit years of care before seeing your first harvest.
- Avoid frost pockets. Many fruits flower in spring and late frosts can damage or kill flowers or young fruit when they are most vulnerable.
- Sites with good air circulation can help reduce some disease problems.
- Fruit plantings should receive 6 to 8 hours or more of direct sun daily. Ribes (gooseberries and currants) can get along OK with part shade.
- Choose sites with well-drained soil and topsoil at least 8 inches deep.
- Make sure the types and cultivars of fruit you grow are winter hardy at your location.
- Protect plantings from wildlife. Deer, rabbits and rodents can be especially hard on plants. Birds can compete with you for ripe fruit.
- Make sure that you will be able to water during first few years after planting.
- Fruit trees come in many different sizes, depending on the rootstock used. Make sure the size of tree you select fits your space. Leave enough room between plants for good air circulation as well as room to work.
- Don't plant more plants than you need. A small planting that receives proper care will yield more good-quality fruit than a larger planting that is neglected.
- Test and prepare the soil a year before you plant. Most fruit prefer soil with neutral or slightly acid pH. But blueberries require very acid soil (pH 4.5). Making pH changes and other soil improvements is more difficult after planting.
- Some fruits require a nearby plant of a different variety to ensure pollination and fruit set. Check catalogs for more information, or see the *Cornell Guide to Growing Fruit at Home*.
- For more information, visit: [www.gardening.cornell.edu/fruit](http://www.gardening.cornell.edu/fruit)

Source: Cornell Gardening Resources