As the summer winds down and the fall season comes our way, this is a great time to think about composting for next year. So here are some helpful hints on what can be composted and what shouldn’t be composted. Just because it is an organic product doesn’t mean it should be in the compost pile.

**What Can Be Composted**

Any natural organic material can be composted. Organic trimmings in your landscape, such as grass clippings, weeds, fallen leaves, pine needles, hedge clippings, straw, livestock manures, flowers and remains of garden plants make excellent compost. Also, many manufactured organic materials that are not waxed or plastic-coated, such as newspapers, paper boxes, clothing scraps and wood shavings are compostable and may be used. Compost made from grass clippings treated with herbicides or any other pesticides is not recommended for use in vegetable gardens. Kitchen scraps, such as fruit and vegetable peels and trimmings, crushed eggshells, tea bags, and coffee grounds and filters can also be composted. Woody yard trimmings can be run through a shredder before adding to the compost pile. Sawdust may be added in moderate amounts, if additional nitrogen is applied. Add a pound of actual nitrogen per 100 pounds of dry sawdust.

**What Materials Should I Avoid Adding to My Compost Pile?**

Organic materials that should not be added to your compost pile include meat, bones and fatty foods (such as cheese, salad dressing and leftover cooking oil). Do not add pet or human waste to a compost pile. Weeds that have not gone to seed can be added to the compost pile. Weeds with large storage roots like nutsedge, Florida betony or greenbriar should be left out and dried in the sun before composting to reduce their chances of survival.

The high levels of heat produced in the center of the compost pile can kill many pests, such as weeds with seeds and diseased or insect-infested plants. However, it is very difficult to mix the contents thoroughly enough to bring all the wastes to the center, so some disease organisms may be returned to the garden with the compost.
Centipedes and Millipedes

This spring and summer, I have had many calls concerning centipedes and millipedes. They all can literally be a pain, if you are bitten by these menacing critters.

**Centipedes**

The presence of centipedes or “hundred-legged worms” around the house usually indicates that insects are also present and are being used as food by the centipedes. All species bear a pair of front legs equipped with claws having poison glands at the base. These legs extend forward to work with the mouthparts and are used to subdue and kill insects and other small prey. Large tropical species of centipedes are said to be quite venomous and capable of inflicting serious injury to humans. The small species found generally distributed over Arkansas are harmless. A single large dark brown centipede (Scolopendra) appears to be large enough to puncture human skin with poison claws. However, no instances of human injury by this large centipede have been reported in Arkansas.

**Millipedes**

Close relatives of the centipedes are the “thousand-legged worms” or millipedes. The kinds that occur in Arkansas are entirely harmless. Some millipede species have repugnatorial glands, but none of the secretions from these glands are known to be harmful to humans. Millipedes neither bite nor sting.

Millipedes vary from less than 1/2 inch up to 3 inches in length. When disturbed, they typically curl up into a tight ring and remain motionless. Their food is decaying organic matter and thus, they are usually found in flowerbeds that contain leaf mold and other organic mulches. Occasionally, millipedes migrate in large numbers from flowerbeds along foundations up into porches or houses. They can be controlled by spraying the foundation walls and windowsills with insecticides.

**Millipede and Centipede Control**

If millipedes or centipedes are occurring in great numbers indoors, it is usually an indication that there is a large population in the area surrounding the home. To control these pests, the most important step is to remove materials that provide them with shelter in the immediate area around the home. This includes mulch, rocks, boards and similar materials.

Secondly, dethatching the lawn and mowing closely allows for drier conditions, which repels these pests. Watering in the morning rather than the evening also gives the lawn a chance to dry before the millipedes, in particular, become active at night.

Thirdly, prevent them from entering the house by making sure doors and windows fit tightly and cracks and crevices are caulked.

If necessary, insecticides are available that are labeled for outdoor use against millipedes and centipedes. These include products containing carbaryl (Sevin WP), bifenthrin (Ortho-Klor Termite & Carpenter Ant Killer Concentrate, Ortho Bug-B-Gon Max Lawn & Garden Insect Killer Concentrate or Ortho Home Defense Max Perimeter & Indoor Insect Killer Ready-To-Use), lambda-cyhalothrin (Spectracide Triazicide Once & Done, Spectracide Bug Stop Indoor Plus Outdoor Insecticide Once & Done Insect Killer Ready-To-Use), cyfluthrin (Bayer Advanced Power Force Carpenter Ant & Termite Killer Plus Concentrate or Bayer Advance Home Pest Control Indoor & Outdoor Insect Killer Ready-To-Use), esfenvalerate (Ortho Bug-B-Gon Multi-Purpose Insect Killer Ready-To-Use) or deltamethrin (Bayer Advance Power Force Carpenter Ant & Termite Killer Plus Ready-To-Use). Apply insecticides around the outside of the home, concentrating where millipedes and centipedes may live or enter the structure. Treat the lower 2 to 3 feet of the foundation wall as well as a band of soil 2 to 4 feet out from the foundation. Applications should be made with just enough water for the insecticide to penetrate through mulch and thatch to reach the soil. Although pesticides are available for indoor use, removal with a vacuum or dustpan and broom is often sufficient.

Pesticides provide only temporary control unless measures are taken to alter the environment outside the home as described above.

When using pesticides, check the label carefully to make certain the product is labeled for the target pest. Also make sure it is approved for use indoors, if that is the intended area for treatment. FOLLOW ALL LABEL INSTRUCTIONS AND PRECAUTIONS EXACTLY! Note that professional pest control operators have access to products and methods not available to the general public. If a heavy pest infestation is a problem, contact a pest management professional.
As many of you know, I like to experiment in our garden. Last year I planted a few herbs to try out; they were all perennials. I didn’t bother them too much last year, but was so looking forward to cooking with them this spring and summer! Alas, it wasn’t meant to be for me to have fresh herbs. I failed to tell my father-in-law that I had planted them at the edge of the garden, where I thought they would be out of the way. He did his early Spring spraying of glyphosate around the garden and got my rosemary, chives and dill. The lesson I learned from this experience is 1) let those who help with the garden know that you have planted something different, 2) flag it or mark it so there is NO question that it is supposed to be there, 3) remind them you have planted something new and not in a normal spot. Some lessons you just can’t learn from a book.

Lessons I Learned...

Ok I am going to admit it—I am a closet science geek!! My favorite classes in high school and college were the science related ones. Biochemistry fascinated me; biology and microbiology did too. Don’t even get me started on the specialized sciences related to agriculture such as parasitology, soil science, animal physiology, and meat science. I just can’t help myself when it comes to the science. So I thought I would share my passion and show how you could incorporate experiments and even a little math into your love of gardening. Most of these little experiments or problem-solving activities can be extended to help the youth in your life enjoy fascinating world of science and math while making it fun!!

First discover your soil type. Here’s an easy way to find out what type of soil you have. In a glass jar or other container with a lid, mix a generous handful of dirt with two-thirds of a quart of sterile water (you can get distilled water at most any place that sells bottled water) and a teaspoon of dishwashing soap. Shake it up and let it settle. Heavy sand will drift to the bottom quickly, but leave your jar undisturbed overnight so medium-grade silt and the lightest clay can settle more slowly. You should see clear lines dividing the soil types. Dirt that is about 40 percent sand, 40 percent silt, and 20 percent clay is ideal, and it’s called loam. The great thing about this little experiment is that it is cheap and easy.

Sand or clay? You be the judge. Here’s a simple test to see if your soil is sand or clay. Grab a clump of dirt and roll it between your hands to form a cylinder. Now study your soil. Heavy clay is sticky and will form a neat worm, even conforming to your finger marks. Clay loam will hold together relatively well, but come apart in crumbly clumps when pressed. Sandy loam and sandy soil will feel gritty and won’t even form a cylinder. The best soil will hold its shape but crumble easily when pressed.

Simple math helps uncover the fertilizer mystery. If you have trouble figuring out how much nitrogen is in your fertilizer, you are not alone. This vital information is hidden in the NPK formula. Each of the numbers separated by dashes tells you what percentage of the bag is pure mineral. N stands for Nitrogen, P for Phosphorus, and K for Potassium. To figure out how much nitrogen is in a bag, multiply the weight of the bag by the percentage of nitrogen. For example, if a 50-pound bag has a NPK of 10-4-4, multiply 50 by .10 — you have 5 pounds of nitrogen in your 50 pound bag. You can use this same formula for all the minerals.

Using Science and Math in Everyday Gardening
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Sincerely,

Sherry Beaty-Sullivan
County Extension Agent-Agriculture