

## **Yard Waste and Composting**

### **Yard Waste in New Castle County**

There has been a lot of interest recently in New Castle County in the new Yard Waste Ban that goes into effect on January 24, 2008. Here are some details:

This ban is only for yard waste entering the Cherry Island Land Fill. It was imposed as part of the permitting process for the landfill. Over the next several years, other landfills in Delaware will renew their permits and yard waste bans will probably be imposed at that time. The intention is to increase the life of the Cherry Island Land Fill (and others in the future) since 23% of the residential waste stream is yard waste and yard waste can be recycled and reused as compost.

Currently, this ban only affects residents in New Castle County whose trash haulers use the Cherry Island Land Fill (most of northern New Castle County). So the first step for residents is to check with their trash hauler. Landscapers who need to dispose of yard waste can bring the waste to the Cherry Island Land Fill where it will be composted on-site. The tipping fees will be the same as for other waste. Landscapers can also bring yard waste to private entrepreneurs who accept and compost yard waste. Strobert's Tree Service (475-7089) is accepting yard waste and the tipping fees are less than at the land fill.

Residents should understand they have three choices for dealing with yard waste:

1. Compost and use it on site - this is the best alternative since it doesn't involve using resources for transport of the waste.
2. Take it to a land fill or composting location yourself.
3. Pay a trash hauler or landscaper participating in yard waste collection services to pick up the yard waste and take it to an appropriate site (depending on the trash hauler, this service may be provided at no additional charge or there may be an additional fee for yard waste pick up).

DNREC is currently working with trash haulers and landscapers in the state to identify the services they will be providing to their customers. A list of yard waste drop-off sites, collection options, and other up-to-date information is available at the DNREC website: <http://www.dnrec.delaware.gov/yardwaste>.

### **Reducing Yard Waste ...**

Try to reduce the amount of yard waste you generate:

- Leave grass clippings on the lawn -If you mow frequently enough (one of the best ways to improve lawn health is to mow frequently), the clippings will just sift into the lawn. They also provide a great source of nitrogen as they decompose, reducing the fertilizer requirement for your lawn by one-third.

- If you still need to bag clippings—sometimes when the lawn is a little wet you have to bag clippings to prevent clogging of the mower—use them as mulch on your garden. They make great mulch for vegetable gardens and if mixed with leaves will also look good on landscape beds.
- Use all your fall leaves for mulch—either shredded by a lawn mower or with a vacuum/shredder. If you blow leaves, try to blow them (or rake them) onto landscape beds.

Other types of yard waste can be composted on site with a small compost bin. It doesn't take up much space and provides a great source of organic matter for vegetable gardens and landscape beds.

Cooperative Extension has resources for residents to learn how to properly compost their yard waste at home. We will also continue to partner with Delaware Solid Waste Authority to help distribute the "Presto Hoop" compost bin, available for \$10. Just call your county extension office.

New Castle County – (302) 831-2667

Kent County – (302) 730-4000

Sussex County – (302) 856-7303

## Frequently asked questions about compost...

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### Q: What is **COMPOST**?

Mature compost is a stable material produced by decomposition of organic wastes ... all living material (leaves, vegetables, fruit, plants, weeds, stems, twigs, bugs, animals, microbes, etc) die and decay.

"**COMPOSTING**" is just the process of speeding-up natural decomposition! It is managed, accelerated decomposition.

### Q: Is **COMPOST** a **SOIL**?

NO ... soil is the uppermost portion/layer of the earth's crust ... soil is comprised of various levels of sands, silts and clays with different amounts of organic matter.

Compost is a "Soil Amendment" ... it adds organic matter and a small amount of fertilizer to soil.

### Q: What is the difference between **COMPOST** and **MULCH**?

**Mulch** is non-decomposed material that has not gone through a 'heat' cycle.

MATURE composted material (well-rotted) can be used as mulch around plants because it protects tender roots from drying.

### Q: Is **COMPOST** a **MANURE**?

NO ... manure is animal waste containing material such as bedding or sludge, weed seeds that potentially can sprout under adequate conditions and potential disease organisms.

### Q: Is **COMPOST** a **FERTILIZER**?

NO and YES ... mature compost does contain some nutrients that are released slowly into the soil, but not enough to be considered a fertilizer amendment. Fertilizers are composed of portions of nitrogen, phosphorus, potassium and sometimes other elements specifically listed on their label. Some are soluble and readily available for plant uptake, others release slowly. But in all cases, they provide a known quantity of the fertilizer element.

**Q: Is COMPOST a PEAT?**

NO ... Peat, although formed over a very long time period by decomposition of plant material, is harvested from special land areas called "bogs" and dried before marketed. Peat is a limited resource and therefore, valued as a NON-renewable resource because it takes thousands of years to decompose.

**Q: What materials can be COMPOSTED?**

"DO" Compost:	grass clippings	food scraps
	leaves	grass-eating animal manure
	plants	fruit wastes
	hay & straw	coffee/tea grounds
	hair & lint	egg shells (they take a long time to break down)
	corn cobs	bread & grains
	coffee filters	

"DON'T" Compost:	lime	weed seeds	plastic
	wood ashes	metal	glass
	used BBQ charcoal	dairy products	chunk wood
	used coal bones	meat	contaminated matter
	solid wastes from cats/dogs/humans	grease	

Wood ashes or added lime will make the mature compost alkaline and raise the pH higher than the ideal condition of 6.8-7.0.

BE CAREFUL composting leaves of ash, poplar & cottonwood trees ... these will make the compost material alkaline and raise the pH ... Rubarb's oxalic acid actually lowers the pH.

Sawdust takes A LOT of nitrogen for it to decompose ... beware of adding it to your pile and never place composted material containing sawdust around your plants unless it is MATURE compost.

Sulfur dioxides and other chemicals in BBQ ashes or coal are toxic to microbes and worms.

Solid wastes from cats/dogs/humans carry pathogens ... grass-eating animal manure contains a valuable source of nitrogen and serves as an activator to heat-up the compost pile.

Unless you are sure the compost temperature will reach 140°F ... DON'T compost weeds that have gone to seed.

Weeds that spread prolifically by seed such as: oxalis, quackgrass and crabgrass are pernicious and will multiply in a compost pile ... they will multiply just about anywhere.

Weeds that have tough, long-lasting root systems might also be spread through a compost pile such as buttercups, Bermuda grass, morningglory and Canada thistle!

Don't put debris in your composting pile that has been sprayed with pesticides, herbicides or fungicides ... remember what is actually doing the material breakdown ... microbes and worms!

BE CAREFUL when composting leaves of oleander, hemlock and castor beans ... these are poisonous and can harm critters in the soil.

BE CAREFUL composting leaves of walnut, tomato, eucalyptus, laurel, cypress, juniper, acacia ... these are toxic to other plants and critters in the soil.

### Q: What is the **CARBON:NITROGEN RATIO**?

The **proper balance** between carbonaceous materials (called "brown" because they are dry) and nitrogen-rich materials (called "green" because they are more fresh).

**Carbon** or brown material would be:

leaves, straw, hay, sawdust, woodchips & twigs

**Nitrogen** or green material would be:

fresh animal manures, food & fruit scraps & grass clippings

Dry leaves are a "brown" or carbon source ... fresh leaves are a "green" or nitrogen source.

A general rule would be to all 2-PARTS Green to 1-PART Brown! ... there is a mathematical way to achieve the optimum C:N ratio ... but this general rule is easier to remember and USE!

Too much carbonaceous material in the compost pile and decomposition will be slowed ... too much nitrogen-rich material and the composting process will either become too hot or too soggy and microbe activity will slow or cease until the material naturally become more suitable for their life.

### Q: What is the **optimum internal temperature** of a compost pile?

140°F

### Q: Can I compost **diseased** leaves?

Actually, yes. Most pathogenic fungi and bacteria do not survive well outside the host plant tissue and do not compete well with the fungi and bacteria that are plant decomposers. The exceptions to this rule are fungi that cause wilt diseases such as Fusarium and Verticillium, but resting structure of these fungi would be found in branches not leaves.

### Q: What are the **BENEFITS** of composting?

Compost is a soil amendment that:

- \* improves soil structure
- \* increases the ease of cultivation
- \* increases microbial & earthworm populations
- \* improves nutrient holding capacity
- \* improves root growth
- \* prevents erosion of sloping soils
- \* degrades many pesticides
- \* reduces soil compaction & crusting
- \* improves water filtration through the soil profile
- \* reduces fertilizer requirements
- \* suppresses plant diseases
- \* conserves water
- \* binds heavy metals in contaminated soils
- \* absorbs odors

- \* degrades volatile organic compounds
- \* sequesters contaminants in water and soil
- \* lowers water bills when used as a mulch
- \* protects plant roots from sun & wind damage
- \* diverts organics from landfills
- \* helps manage garbage

**Q: How **HARD** is it to **COMPOST**?**

NOT HARD ... you just need to remember composting requires the right amount of ingredients, air circulation and moisture.

**Q: **WHERE** do I compost?**

You can compost plant material in your backyard! Just make sure the compost area is easily accessible by you and a water source. You will need to:

- \* provide adequate air circulation around the compost
- \* locate it out of full sun
- \* place it on bare ground
- \* locate it away from large trees
- \* locate it away from wooden structures
- \* be aware of concerns from neighbors

**Q: **HOW** do I compost?**

To properly achieve a mature compost material, you must provide a holding facility where the material can be concentrated in an open-air collector. Single compost bin or a multiple-compost bin apparatus can be: a recycled plastic or wood bin, tumbler, wire cage material, modified trash can, concrete block or brick area, wood pallets, etc. The size of your composting system depends on the volume of material you will be feeding it.

**LAYER** your carbon & nitrogen sources ... add the correct amount of water to dampen the material and turn your pile often (depends on the material in the pile, location of the pile, height of the pile and composition of the compost bin).

**Q: When do I **TURN** my compost pile?**

Turning the compost pile adds valuable air for the microbes and worms so they can survive. Turning also allows the composted material inside the pile ... where the main decomposition activity is taking place ... to be circulated around the pile and mixed with the material that still needs to be decomposed.

Depending on the C:N ratio, moisture and material in your pile, as well as the external temperature of the pile, for maximum benefits, turn your pile every 7-10 days for the first 4-8 weeks.

Turning the material speeds-up the composting process and reheats the pile to keep it in a state where plenty of air is flowing in and throughout the pile. A compost pile without sufficient oxygen starts to smell and becomes anaerobic (producing toxic byproducts and reducing effective decomposition).

**Q: Who can I contact for information on **regulations** regarding removing my yard waste?**

Delaware Department of Natural Resources & Environmental Control  
 ph: (302) 739-9403  
[www.dnrec.delaware.gov](http://www.dnrec.delaware.gov)

**Q: Who can I contact for information about taking yard waste to Delaware landfills?**

Delaware Solid Waste Authority  
ph: 1-800-404-7080  
[www.dswa.com](http://www.dswa.com)

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**FACTOIDS:**

Compost, with its high organic content, can absorb up to **four times its weight in water** and can replace essential organic material in wetlands.

It takes nature **1000 years** to make just **one inch** of humus-rich soil.