

# Composting Turns Yard “Waste” Into Useful Material

Compost is a mixture of partially decomposed plant material and other organic wastes. It is used in the garden to amend soil and fertilize plants. Making and using compost recycles yard wastes and reduces the burden of organic trash on our landfills.

## Make Your Own Compost

Almost all organic materials will decompose. Composting hastens this natural process by creating conditions conducive to decomposition.

### Composting Materials

Yard wastes, such as leaves, grass clippings, straw and non-woody plant trimmings can be composted. The predominant organic waste in most backyard compost piles is leaves. Grass clippings can be composted; however, with proper lawn management, clippings do not need to be removed from the lawn (see article on opposite page). If clippings are used for compost, it is advisable to mix them with other yard wastes.

Branches, logs and twigs greater than 1/4 inch in diameter should be put through a shredder/chipper or cut up prior to placement in the compost pile. Kitchen wastes such as vegetable scraps, coffee grounds and eggshells may also be added.

Certain organic materials should not be used to make compost because they may pose a health hazard or create a nuisance. Do not add pet feces since they may transmit disease. Meat, bones, grease, whole eggs and dairy products should not be added because they can attract rodents. Large amounts of weeds with seeds or diseased plants may create problems.

### Building the Compost Pile

A compost pile should be large enough to hold heat and small enough to admit air to its center. As a rule of thumb, the minimum dimensions of a pile should be three feet by three feet by three feet (one cubic yard) to hold heat. The maximum to allow air to the center

of the pile is five feet tall by five feet wide and as long as you wish.

The compost pile can initially be prepared in layers. This will facilitate decomposition by insuring proper mixing. To build a compost pile, start with a four to six inch layer of chopped brush or other coarse material set on top of the soil. This will let air circulate under the base of the pile.

Next, add a three to four inch layer of low carbon organic material such as grass clippings. This material should be damp when added to the pile. On top of this, add a four to six inch layer of high carbon organic material (leaves or garden waste) which should also be damp.

On top of this, add a one-inch layer of garden soil or finished compost. This layer will introduce the microorganisms needed to break down the organic matter.

Mix the layers of high carbon organic matter, low carbon organic matter, and soil before adding another layer to the pile. This will ensure a speedy and even composting of the organic matter. Repeat the “layering” process until the composting bin is filled.

Microorganisms can only use organic molecules dissolved in water. A moisture content of 40–60 percent provides adequate water without limiting aeration. The “squeeze” test is an easy way to gauge the moisture content of composting materials. The material should feel damp to the touch, with just a drop or two of liquid being released when the material is tightly squeezed in the hand.

### Making a Compost Bin

To save space, hasten decomposition and keep the yard looking neat,



On the left, mixed organic material just beginning to decompose. On the right, finished compost.

contain the compost pile in some sort of structure. Composting structures can be made from a variety of materials. Yard wastes can be composted either in simple holding units, where they will sit undisturbed for slow decomposition, or in turning bins which speeds up decomposition.

**HOLDING UNITS** — Holding units are simple containers used to store garden waste in an organized way until these materials break down. It only requires placing wastes into a pile or bin as they are generated. Decomposition can take from six months to two years. Since yard and garden wastes will be added continuously, the stage of decomposition will vary from the top to the bottom of each compost pile. Generally, the more finished compost will be found near the bottom of a pile and partially decomposed materials near the top.

**TURNING UNITS** — Turning units are typically a series of bins used for building and turning active compost piles. A turning unit allows wastes to be conveniently mixed for aeration on a regular basis. Turning systems require

frequent maintenance and preparation of the wastes to be composted. Composting in these units is most efficiently done in batches. Materials should be stockpiled until there is enough to fill the bin. These bins should be monitored and turned after temperatures have peaked (90°–140° F) and begun to fall. This occurs four to seven days after pile construction. Turn a second time when the temperature peaks again, four to seven days later. Compost processed this way will be ready in six to eight weeks.

### Location

The compost pile should be located close to where it will be used and yet not offend neighbors. The pile will do best where it is protected from drying winds.

### FOR MORE INFORMATION

University of Nebraska–Lincoln Extension NebGuide “Garden Compost” (G810) publication is available at the extension office or online at <http://ianrpubs.unl.edu/horticulture/g810.htm>

## The City’s Composting Operation

The City of Lincoln maintains a 16-acre yard waste compost facility next to the Bluff Road Sanitary landfill (at Highway 77 and Bluff Road). This site receives about 20,000 tons of grass, leaves and brush each year. This is equivalent to about 2,000 garbage trucks during an eight month period.

Grass is mixed with leaves and wood chips to form windrows roughly six feet high and 12 feet wide. It takes about 12 months to complete the composting process. The material is screened to remove any debris and wood chips and placed in a curing pile. This finished material is then available to the public as LinGro Compost.



Lincoln’s 16-acre yard waste compost facility receives about 20,000 tons of grass, leaves and brush each year.

Since the program began in October 1992, the city has composted an estimated 171,300 tons of grass and leaves and wood chipped 201,865 tons of tree debris. For an average year the compost facility grinds about 5,000 tons of brush and tree debris.

The diversion of grass, leaves

and brush by the city for 12 years, has added almost 3½ years to the life of the sanitary landfill. If the program was discontinued and the yard waste was buried in the landfill, it would close in 2022 instead of the current projection date of 2026.

Partial funding for the city’s composting program was provided by the Nebraska Department of Environmental Quality, Waste Reduction and Recycling Program.

### TO GET LINGRO COMPOST

A list of locations to pick up or purchase LinGro compost are listed on the next page.

## Avoid Clopyralid Products in Compost

City officials urge residents to check to see if the herbicides used on their lawn contain clopyralid. If it does, the City would like residents to mulch their grass clippings rather than compost them. Alternative products are available that will kill undesirable weeds and not affect compost.

Clopyralid has been discovered in compost operations in several states, including at The City of Lincoln’s composting facility. Testing of the City of Lincoln’s LinGro samples has found levels of clopyralid as high as 87 (ppb). Levels of clopyralid of 10 (ppb) or less can damage some plants.

It is unlikely that damage will occur to sensitive plants if the compost is properly applied and mixed thoroughly with the soil (1” of compost into 6” of soil). “The clopyralid levels found in Lincoln’s compost are not known to present health risks to people or animals,” said Scott Holmes, Environmental Health Division Manager for the Lincoln-Lancaster County Health Department.

Additional information regarding clopyralid in compost can be obtained by contacting Gene Hanlon with the City of Lincoln 441-7043 or checking the City’s Web site at [www.lincoln.ne.gov](http://www.lincoln.ne.gov) – keyword “compost.”