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no. 134



COMPOSTS for the GARDEN

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Composts are the partially decomposed remains of waste plant materials. Lawn clippings and garden wastes are collected in piles, moistened, fertilized, allowed to decompose, and returned to the garden. The purpose of composts is to increase soil fertility and tilth.

Composts are made of varying and unspecific mixtures of tree leaves, nonwoody garden refuse, weeds, grass clippings, straw, fertilizer, lime, manures, soil, and water.

Compost may be added to the garden any time after it has decomposed. It may be worked into the soil immediately or left on the surface for a time, as with a mulch. The purpose is to increase the fertility of the soil by returning very large amounts of organic matter. This increases the levels of available plant foods, increases the moisture-holding capacity of the soil, improves water penetration, and reduces crusting and root impedance in stony or heavy soils.

Building a Compost Pile

A compost pile should be 4 to 5 feet wide and as long as necessary to hold the materials available. It should not be more than 5 feet high when finished. The plant material is placed on the entire area selected and packed until it is quite firm and about one foot deep.

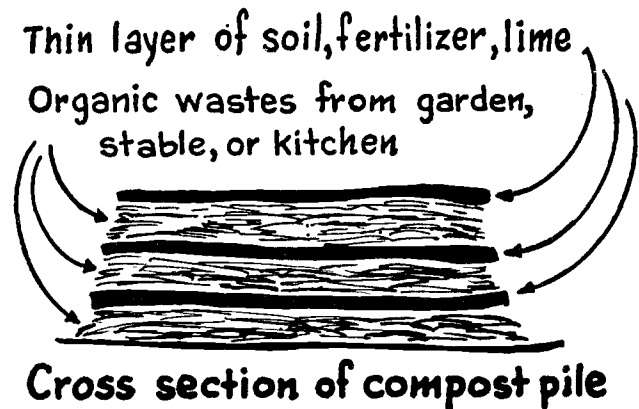
To supply nitrogen and increase the supply of plant nutrients in the compost, it is advisable to scatter some commercial fertilizer over this firm layer of organic material. If a high-nitrogen fertilizer such as ammonium sulfate or ammonium nitrate is used, $\frac{1}{2}$ pound per square yard is enough. In addition, add $\frac{1}{4}$ pound of superphosphate. If a complete fertilizer such as 8-24-8 is used, it will

take about one quart per square yard. Also, add about $\frac{1}{4}$ pound of pulverized limestone. One half pound of wood ashes can be used instead of the lime, but do not use more than this amount. Each successive layer of plant material should have this same treatment.

As you build each layer, add enough water to make it moist. Chemical fertilizer and moisture will aid in a rapid decomposition of the bulky, organic materials. One or two inches of stable manure, poultry or rabbit manure, or even rich garden soil added to the first layer will aid in starting rapid decomposition.

As the pile is being made and after it is completed, add water from time to time to keep the material moist but not dripping wet. If the pile is slightly depressed in the center, it takes the water better. If rainfall is excessive, cover the pile with a plastic sheet to prevent the leaching of valuable fertilizer elements.

If more compost is needed than can be provided by the waste from a small garden, mix clean straw or dry oak leaves with animal manure (pref-



This is one of a series of *Fact Sheets* reporting Cooperative Extension work in agriculture and home economics, Gene M. Lear, director. Printed and distributed in furtherance of Acts of Congress of May 8 and June 30, 1914. Oregon State University, Oregon counties, and U. S. Department of Agriculture cooperating.

erably poultry) in a 10:1 ratio (1,000 pounds of straw to 100 pounds of manure). Within a year, such a mixture will be reduced to a rich, black, friable compost.

Turning the Pile

Decomposition is most rapid inside the pile, where conditions for bacterial action are most favorable. Heat generated by the rotting, if high enough and prolonged enough, results in "pasteurization" and destruction of most weed seeds.

The outer surface of the pile remains cooler and drier and decomposition is slower. For that reason, the compost pile should be turned at least once so that the material toward the outside is moved to the inside of the pile. A more uniform compost results. The first turning may be made two or three months after the pile is complete.

The rate of decomposition will depend upon temperature and moisture. Compost is ready to use after a year, but it is better if left for a longer time.

Plant Diseases

Most plant diseases do not survive on dead tissue. Notable exceptions are apple scab, black spot of roses, Verticillium wilt, and Fusarium wilt. Debris and plants infected by these diseases should not be composted.

Location of the Pile

Ordinarily, compost piles are constructed above ground, but in arid regions piles may be made in shallow pits to facilitate wetting. Bins of boards or building blocks help to contain the material and keep it neat.

Compost piles often can be kept out of sight behind the garage or outbuilding or concealed behind a shrubbery planting or hedge. Shrubbery can be planted to hide a garden utility area for composts and sawdust storage.

Using the Compost

Compost may be used in potting soil mixtures or worked into the garden soils in large amounts to improve the structure and fertility. It may be used as a top dressing in the garden, in which case it also serves as a mulch. Composting is a continuous process, and a fresh pile should be started each year as the oldest batch is being used.

Fertilizer Value of Organic Materials

Material	Chemical content per 100 pounds material		
	Nitrogen (N)	Phosphoric acid (P ₂ O ₅)	Potash (K ₂ O)
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Apple leaves*	1.00	0.15	1.20
Alfalfa hay*	2.45	0.50	2.10
Bean vines	0.50	0.10	0.50
Beet tops	0.35	0.10	0.55
Cabbage, stump and outer leaves	0.37	0.10	0.45
Carrot tops	0.54	0.13	0.11
Cherry leaves*	0.60	0.11	0.72
Lawn clippings	0.50	0.10	0.25
Lettuce	0.25	0.08	0.45
Oak leaves*	0.80	0.35	0.65
Oats and vetch	0.40	0.15	0.30
Peach leaves*	0.90	0.15	1.80
Pear leaves*	0.70	0.12	1.20
Pea vines	0.50	0.05	0.50
Raspberry leaves*	1.35	0.58	0.76
Rye	0.45	0.10	0.40
Tomato vines	0.35	0.10	0.50

* Dry materials. All others green weight.