THE UNIVERSITY OF ARIZONA
Cooperative Extension
Yavapai County

Home Composting

A simple “how to” guide to composting in your backyard

What is composting?
Composting is a natural process where bacteria, fungi and other soil organisms convert organic materials into a nutrient-rich mulch.

What are the benefits?
Composting provides a nutrient-rich soil amendment which saves the cost of purchasing commercial fertilizer. Compost:

- improves the moisture-holding capacity of soil, which saves water
- reduces the amount of material sent to landfills
- improves plant growth and health when added to the soil, which supports flower and fruit production

What can be composted?
Compost is made from a combination of nitrogen- and carbon-rich organic materials. Green vegetation such as fresh yard clippings and kitchen scraps provide nitrogen. Brown vegetation such as dried leaves, small twigs, shredded cardboard and black newsprint provide the carbon source. The carbon:nitrogen ratio ranges from 25:1 to 40:1.

Getting Started with Home Composting
Select a location & storage style
Find a spot that blends with the landscape, gets 6 hours of sunlight, has good drainage and a nearby water source. The ideal size is 3’x3’x3’ to effectively retain heat and allow for easier turning. Piling materials directly on soil is a simple and low-cost method but may attract pests.

Following are some examples of compost containers.

Wire mesh in a circular or square enclosure; easy to use.
Photo by Stephen Lovejoy

Perforate a large garbage can or purchase a turnable barrel unit; good for limited space and easy turning.
Photo by Rosemary Zimmerman

Stationery composter on legs; requires manual turning of materials.
Photo by Jo Glaves

Construct a multi-compartment bin with wood pallets to facilitate turning and processing of completed compost; allows for more complete processing of materials.
Photo by Beth Brereton

Load materials in top and remove compost through bottom door
Photo by Mary Barnes

Gather Compostable Materials

- Alternate layers of brown and green at correct ratio. Mix materials as you build it. Smaller pieces will break down faster than large pieces.
- Air and water keep microorganisms alive so they can complete the decomposition process. Turning the pile helps aerate it and the frequency with which it is turned will determine how soon compost is ready for use. Compost should be kept as moist as a wrung-out sponge. Add water as needed and ensure good drainage.
- Maintain a temperature range of 90ºF to 140ºF. Purchase a compost thermometer for accuracy. A pile that is too hot will kill microorganisms and a cold pile will not decompose. At the start of the process, temperatures begin hot and gradually cool. When compost is ready, it may be slightly warmer than ambient temperature.

Do Compost	**Do Not** Compost
Yard & garden trimmings	Wood ash (too alkaline)
Vegetable & fruit scraps	Charcoal briquettes
Seedless weeds	Plastic & synthetics
Eggshells	Diseased plants
Hair and fur	Bermuda grass (any part)
Coffee grounds	Weed seeds
Livestock manure	Manure of carnivores
Cardboard (egg carton, paper towel rolls, boxes)	Animal products (meat, fish)
	Greasy food
Newsprint (black only)	Fats & oils
	Dairy products

Finishing

- Finished compost is dark, crumbly and has an earthy, non-offensive odor.
- Cure the pile for about a month to allow full decomposition of materials. Compost that has not completely decomposed may release ammonia and continue to heat up when placed on garden soil. This can damage plants.

Photo Credit: "better compost" by normanack

Troubleshooting Check the compost pile regularly and address problems immediately. There may be multiple solutions to a single problem.	
Problem	**Try**
Smelly compost (rotting or ammonia odors)	• Checking for poor drainage; the pile may be too wet • Increasing C:N ratio by adding more carbon-rich brown materials • Turning the pile to improve aeration
Materials are slow to heat up or decompose	• Lowering C:N ratio by adding more green materials to increase nitrogen • Checking moisture; add water if necessary • Turning the pile • Increasing the size if the pile is smaller than 3'X3'X3' • Cutting materials into smaller pieces • Moving composter to a warmer location
Flies, vermin, maggots	• Removing meat, dairy or fat immediately and refraining from adding them

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Information compiled by Karen Kumar, Yavapai County Master Gardener
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