Simple Home Composting

Outline of Home Composting Class Presentation
Project requirement for Master Composter training
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Objective: After the presentation, I'd like the participants to have enough motivation, knowledge, and confidence to go home and immediately start their own compost pile.

Target Audience: The audience will be a small group of adults who have come specifically to learn the basics of composting. Most people will have had little or no composting experience.

Time: I expect the presentation will take about an hour. Perhaps longer if there are lots of questions and discussion.

Class Materials: Materials will be mentioned below as used in the presentation. I will also give people a printed copy of the presentation outline, slightly revised for that purpose.

The Presentation

Introduction

- We are ___ and ___ from the Bernalillo County Master Composters organization.
- To find out more about the organization go to nmcomposters.org
- Class participants, please introduce yourselves.
- Be sure to ask lots of questions as we go!

Why compost at home?

- Composting is fun!
- Compost is the best thing you can add to the soil in your yard and garden. Some of its many benefits:
    - It is a soil amendment/conditioner, not a fertilizer, but does provide a slow release of nutrients (NPK approximately 1:1:1) and makes fertilizer more effective.
    - Improves texture of sandy soil; improves ability to hold water.
    - Improves texture of clay soil; improves drainage.
    - Introduces crucial microorganisms to the soil.
    - Makes a good mulch for weed control. Immature compost is a mild herbicide.
- Composting is an exceptionally good way to recycle. Nationally, 63% of the waste stream is organic. 25% of all landfill waste is suitable for home composting.

- Composting keeps organic waste out of waste water (that gets there via garbage disposal).
- Composting reduces greenhouse gases. Organics in landfills produce methane which is 21 times more potent than CO2 as a greenhouse gas.
- Composting is easy, especially if you aren't in a hurry. And, why hurry?

Is it safe to compost at home?

- Take these simple precautions.
  - Wear gloves when handling compost and compost ingredients.
  - Wash your hands well when you are done.
  - If handling moldy materials (e.g., moldy hay), or if concerned about mold in compost wear a face mask that filters to 1 micron and change clothes when you are done. E.g., aspergillus fumigatis is a mold that can cause allergic reaction, lung infection, but full time compost workers don't show higher incidence. This is a concern if you are immuno-compromised.
  - Get a tetanus booster every 10 years.
  - If you use any equipment such as a chipper, be sure you know how to use it safely.

What can I compost at home?

- Do compost these:
  - Kitchen waste: fruit/vegetable scraps, coffee grounds, tea bags, rinsed eggshells, nut shells, stale bread, cereals, spoiled food
  - Grass clippings
  - Fallen leaves. (Ask your neighbors for theirs.)
  - Other yard waste. (Be careful with weeds that have set seed; kill seeds by exposing to high heat such as in a black plastic bag in the sun for a few days; if in doubt, don't put in pile.)
  - Pet and human hair. (Maybe that's what fills up your vacuum bag.)
  - Manure from horses, cattle, rabbits, and chickens. (But don't overdo, it adds salts; horse might have had deworming medication so let manure sit, watered, for 30 days before adding to compost; beware of weed seeds; know your source.)
  - Paper that you don't recycle otherwise, such as used paper towels.
  - Etcetera! Use your imagination.

  Poster shows list of things you can compost.

- Don't compost these at home:
  - Kitchen scraps that might attract dogs, cats, mice, etc. (unless you have a bin that will keep them out)
  - Perennial weeds such as bermuda grass and bind weed
  - Diseased plants (e.g., tomatoes with wilt)
  - Dog or cat feces
  - Large chunks of wood (but chipped wood is ok)
  - Wood ashes (too high PH for our area, plus no longer organic)
  - Plastic, petroleum products
  - Anything that wasn't alive once upon a time

  Poster shows list of things you should not compost.

Where can I make compost at home?

- If you have a yard, put your compost in an out of the way corner, preferably in the shade.
  - You'll need access to water.
  - You can do it in a pile on the ground.
  - Or you can do it in a bin. Poster shows various kinds of bins.
  - Not a bad idea to put thick pad of wood chips or other coarse material on the bottom to improve air flow.
  - If you do it right, it won't be smelly or attract animals.
  - You'll probably see a few cockroaches, sow bugs, etc. They help the pile break down and are not harmful. If you stir the pile often, the cockroaches will probably leave.

- If you don't have a yard, or even if you do, you can compost in a worm bin in your house. This is called *vermicomposting*. Details not covered in this presentation.

How do I make compost at home?

- The essential ingredients are:
  - Oxygen (composting is an *aerobic* process)
  - Water
  - Carbon ("browns")
  - Nitrogen ("greens")

  Poster shows list of brown and green ingredients.

- Microorganisms do the work: bacteria, fungi, actinomycetes. These microorganisms need oxygen and water. Stir to aerate and help the organisms get to their food, the carbon and nitrogen.

- Worms and bugs help, too. You can buy red worms if you like. But, they might just show up on their own.

- If you want to keep things very simple, use the continuous flow "cold" method:
  - Add materials to the pile as they are available. You *do not* need to add a starter.
  - Add water if pile is dry; keep about as moist as a wrung out sponge.
  - Stir at least every 2 or 3 weeks with a gardening fork to mix and aerate. The more often you turn it, the sooner you'll have compost.
  - Don't let browns/greens get too out of balance.
    - If pile starts to smell bad, add more browns and stir well.
    - If it's not breaking down, add more greens and stir well.
    - If you're a fanatic you can keep track of the C:N ratio and aim for between 30:1 and 60:1. Calculators are available on the web.
  - After a while, stop adding to the pile and let it finish. Stir occasionally and keep moist during this period.
  - In the meantime, start a new pile. I usually have 2 or 3 piles going in various stages of decomposition.

- You can also make *hot compost*. This involves layering green and brown ingredients in very large pile (3' x 3' x 3'). The microorganisms will generate heat and the large pile will insulate to maintain that heat. This will speed up

decomposition and kill weed seed. Won't give details in this presentation. However, hot composting is fun and not all that complicated.

- Compost is done (except for curing) when:
  - It is an even dark brown color.
  - It smells pleasantly earthy.
  - It is mostly an even consistency (but will probably have bits of harder-to-decompose items such as little twigs, fruit pits, corn cobs, citrus peels).
  - It feels cool, moist, and crumbly.
  - Note: A finished pile will be about 37% the volume of the original materials.

  Show small tub with compost at this stage.

- You can use the compost in the above uncured form as mulch for flowers. However, before mixing into potting soils or using in vegetable beds:
  - Remove any large clumps of undecomposed matter.
  - Let it sit for an additional 14 to 30 days to *cure*. (Preferably 30 or more.)
  - While curing, keep it slightly moist, but not nearly as moist as active compost, and turn it, but not as often as active compost.

- Finally, remove any clumps of undecomposed matter from the cured compost. If you wish, pass your compost through a sifter screen (about 1/4" mesh). This makes it easy to remove undecomposed matter and will give your compost an even texture.
  Show small tub with finished compost that has been sifted.

Will I need to buy a lot of stuff?

- Here's a minimal list of items that you'll need:
  - Container in kitchen to hold scraps. You can buy fancy ones these days, but a bucket with a lid under the sink will do.
  - Gloves
  - Watering hose
  - Manure or compost fork (similar to a pitch fork)
  - Shovel

  See container, gloves, and compost fork that I brought.

- Optional:
  - Compost sifter screen, optional but nice. See screen that I brought.
  - Materials and tools to build bins to hold compost.
  - Compostable liners for kitchen bin. See liners that I brought.

How do I use the finished compost?

- When preparing a garden bed, put 2 or 3 inches of compost on top of soil and then work into top 8 to 12 inches of soil. Do this gently with a fork; try not to mix soil layers; just let it sift through.

- Mix compost with soil when planting vegetables and flowers. (At most 30% compost.) However, when planting trees, don't amend soil around root ball with *anything*.

- Top dress approximately 1" of compost around garden and landscape plants,

bushes, and trees.

- Use it as a mulch.
- You may not be able to make as much compost as you'd like for your yard and garden. Well, you can never have too much compost. You can buy compost very inexpensively from the city. Albuquerque $8 a truckload, Rio Rancho $12 a truckload.

How can I learn more?

- See References and Resources page at the Bernalillo County Master Composter website.
  - Many excellent books. Show books that I brought. Poster shows list of books.
  - Many excellent web sites.
- Here is a brochure for you to take home: *Backyard Composting Made Easy* from NM Environment Department.

And now time for additional questions and discussion.