Composting compositions

Composting is the natural process of recycling organic matter to make valuable fertilizer. Organic matter like leaves, plant-based food waste, egg shells, and even paper can be used in composting. The fertilizer is then used to enrich the soil and help plants grow. Composting speeds up the process of breaking down foods and organic materials with the help of decomposers. Decomposers are organisms that break down organic material. Worms, bacteria, and nematodes are some common decomposers.





Vermicomposting is the word used when earthworms break down organic materials. Earthworms consume 25% of their body weight each day. That means four pounds of earthworms would consume one pound of food waste in a day. The worm "castings", or excrement, are called vermicompost. In the United States today, 28% of all waste in landfills could have been composted. When composting, there are many benefits to the environment. Composting helps retain water in soil, reduces soil erosion, helps reduce landfill waste, and adds natural fertilizer into the soil.



Illinois State University Farm

Lexington, IL

Tell us about your farm.

The ISU Farm consists of 440 acres. We have row crops (corn and soybeans), livestock (cattle, swine and sheep) and a compost site. The purpose of the farm is to allow our students to gain hands-on experience in agricultural production.

How do you produce compost on the farm?

We have a 15-acre site on the farm for making compost. To make compost you need carbon, nitrogen, water, and oxygen. Our compost carbon source is made up of yard waste from the Town of Normal and crop residues that we use for livestock bedding. The nitrogen source is from our liquid swine slurry. We combine these materials, add water, and mix them together to add oxygen. As this happens, good bacteria (microbes) start growing, and the decomposition begins. Throughout the process, we monitor the compost and add more of each ingredient as needed. After about 8 months, the compost is ready to be screened (removal of large pieces) and sold or used on our own cropping acres.

How does adding compost benefit soil health?

Compost benefits the soil by adding organic material. The organic material helps loosen heavier soils such as clay. As a result, the plant roots are better able to spread out to gather moisture and nutrients. This makes a healthier plant that has better roots, leaves, and fruits.

