

What Is Composted Manure and How Can It Benefit Gardening?



[Karuna Eberl](#) Updated: Feb. 25, 2022



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No jokes here, just straight info on how composted manure enhances your garden's health.

When I was first learning to [grow food](#), I wandered through a nursery stacked high with pallets of brightly-colored [bags of soil](#) and [compost](#). That made me wonder: Which would give my garden plants the best chance of survival?

When I got to the composted manure row, I suddenly had a lot of other questions. Is it safe? Will it smell? Are there actual pieces of sheep poop in that bag?

The answers, I eventually learned, were yes, no and no. I also learned composted manure is a great natural tool for giving fruits and vegetables the nutrition they need, without relying on [synthetic fertilizers](#).

What Is Composted Manure?

Composted manure is animal manure left to decompose. It can then be used as a nutrient-rich [soil amendment](#) for gardens. It no longer smells or contains dangerous pathogens. It may be made solely from manure, but most often it contains other composted materials like straw or sawdust.

“Either way, manure is high in organic matter and nutrients that are essential to plant growth,” says Barbara Shea, a master gardener with [Tertill](#).

Where Does Composted Manure Come From?

The more common commercial mixtures come from horses, cows and chickens. People also use manure from sheep, rabbits, goats, ducks and llamas. The waste from nearly any herbivore is fair game for vegetable gardens because they eat mostly hay and grass and aren't prone to pathogens, like pigs are.

“Cats and dogs are carnivores, and their [waste shouldn't be composted](#) because they may contain parasites,” says Shea. “Horse and donkey waste tends to have the least nitrogen, cow manure has the most nutrients, and chicken manure is usually less expensive and more readily available, especially with the proliferation of people raising their own chickens.”

Most types of composted manure can be purchased from garden centers. If you want to make your own, you can find farmers, horse owners or even neighbors with a coop who are more than happy to give it away.

Why Does Manure Get Composted?

People compost manure, rather than putting it directly onto their garden, to:

- Kill dangerous pathogens and bacteria, including E. coli;
- [Kill most weed seeds](#);
- Break down pharmaceuticals used in the livestock;
- Get rid of the smell;
- Make it lighter and easier to haul;
- Get rid of farm waste that can harm streams and rivers;
- Make its nutrients more accessible to plants.

“Fresh manure typically has high amounts of materials that can be harmful to plants, like ammonium, soluble nitrogen, salt and viable weed seeds,” says Susan Mahr, retired master gardener program coordinator at the University of Wisconsin-Madison.

“Composted manure has lower availability of nitrogen and will contribute more to the organic matter content of the soil compared to fresh manure.”

How Does Manure Get Composted?

It's a process called hot composting. To become safe to use, manure must be heated above 145 F (you can check this with a [long-probed compost thermometer](#)). The heat happens naturally because decaying organic matter generates heat.

Aerobic microorganisms, and sometimes [earthworms](#), break down the manure and other organic materials, usually over a few months to a year. That results in a fiber and carbon-rich humus with nutrients including potassium, phosphorus and nitrogen.

Can You Make Composted Manure Yourself?

Yes. “You can absolutely make it yourself, if you’re an experienced gardener and have the room, tools, time and raw materials,” says Shea. But if you’re a beginner, it’s easier and safer to start with the stuff from the store.

How to make composted manure

1. Mix the manure with a good source of carbon, like straw, sawdust, leaves or [wood chips](#). This is essential so the microbial population has enough carbon and nitrogen to consume. Depending on the source, the manure may already be mixed. Shea suggests three parts manure to two parts of a carbon source.
2. Put the mixture in a [covered composting system](#) — a plastic, wood or metal box with a lid. Make sure air can still circulate. You can also compost in an open pile, but that can attract rodents and bugs, emit a foul odor and make it difficult to control the temperature and moisture.
3. Keep it moist and turn it regularly. “Turning manure is essential as it incorporates oxygen, homogenizes the pile and breaks up clumps,” says Shea. “It also allows more contact of manure with microbes.”
4. When the pile cools down, the composted manure is ready to add to your composting projects.

Never use pig, dog or cat feces in [compost piles](#) or on gardens, especially if you’re growing food.

How Does Composted Manure Benefit Garden Soil?

Composted manure is an important source of organic matter for [home gardens](#) because it:

- Supplies primary nutrients, such as nitrogen, phosphorus and potassium;
- Supplies micronutrients for plant growth;
- Improves soil structure;
- Increases the water-holding capacity of [sandy soils](#);

- Improves drainage in clay soils;
- Provides a source of slow-release nutrients;
- Promotes growth of beneficial organisms;
- Reduces runoff.

“The most important benefit of manure is its ability to [improve soil](#),” says Shea. “As we know, healthy soil promotes healthy plants.”

How To Use Composted Manure in the Garden

The best time to spread composted manure is in fall or winter, depending on how severe your winters are. If your soil is already pretty good, you can just add a few inches on top of your beds. Otherwise, you’ll need to thoroughly mix it into your existing soil, four to eight inches deep.

If you end up spreading it in the spring, Mahr recommends waiting at least a month before planting.

To mix it into the soil, you’ll need these tools:

- Wheelbarrow;
- Shovel;
- Rake;
- [Compost spreader](#) or rolling peat moss spreader;
- Tiller;
- Gloves;
- Composting bin;
- A bandana or mask to cover your nose and mouth.

“If you purchased bagged composted manure, the label on the package will tell you the nutrient content and application rates,” says Mahr. If you’re using the homemade variety, you’ll need to experiment, because farm animal manure varies in its nutrient content. You may also want [test your soil](#) to make sure the level of phosphorus isn’t too high and other nutrients are in balance.

If you’re unsure about the quality of your composted manure, mix a little of it with some sand and plant a few pea or bean seeds in a pot. If they sprout healthy and green, the compost probably has the right balance of nitrogen and carbon and is free of contaminants. Then you can spread it across your garden.

Can Composted Manure Be Used as Mulch?

Yes. Composted manure works as a slow-release fertilizer, keeping soil moisture consistent and insulating the soil.

In the fall or early spring, spread a two- to three-inch layer of composted manure over the surface of the soil. Keep it a good three to four inches away from shrubs or tree trunks. Rain and snow will leach nutrients into the soil for the worms, good bacteria and new [spring plants](#).

“Fresh manure is not an option here,” says Shea. “It contains excessive amounts of nitrogen and can burn plants. In addition, some [manure fertilizer](#) consists of urine as well, which is also high in nitrogen.”

Is Composted Manure Safe?

Yes, as long as it has been composted correctly.

“[Non-composted] manure can harbor parasites, such as E. coli, and tapeworm,” says Shea. “Although the risk is low, the longer manure sits before use, the better chance these pathogens will be killed off.”

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