



FACT SHEET 4.7

PLANT MATERIAL COMPOSTING

As a hobby farmer, you may find yourself with an abundance of organic material throughout the year. Spoiled fruit, vegetable waste, spent garden plants, animal bedding, grass clippings and autumn leaves are just a few of the sources of organic material that can be found on a hobby farm. All of this can add up to a lot of material on a daily, weekly and monthly basis creating a significant amount of work, time, and often money to dispose of. One way to recycle this material is composting.

WHAT IS COMPOSTING?

Composting is the process of decomposing organic material by combining specific ingredients in an ideal environment for microorganisms to break down. As a result, organic material is turned into a nutrient rich soil amendment that you can spread in your garden or farming areas. Composting and decomposition are the same process – both occurring naturally when living materials die, except composting takes place in a controlled environment where material can be collected and reused. Compost is often highly sought after since it is generally organic in nature, builds soil structure and is high in nutrients. Composting organic material can:

- Recycle organic material
- Reduce your overall solid waste volume and disposal costs
- Help keep organic yard waste out of waterways
- Kill disease causing pathogens
- Create a valuable soil amendment
- Enrich soil structure that can increase water retention and reduce soil erosion
- Decrease your fertilizer budget



BUILDING A COMPOST BIN

There are many different ways to compost your organic material. Homemade compost bins can be made of recycled material you might already have around your hobby farm such as discarded wooden pallets, chicken wire, mesh screens or concrete blocks. Compost bins are also available from local garden centers and online catalogs with dozens of different sizes and designs commercially available.

Additionally, many Massachusetts municipalities have compost bin programs, where they sell compost bins to residents at or below retail costs. See the following link to see if your community participates in a compost bin distribution program (www.mass.gov/eea/agencies/masdep/recycle/reduce/get-a-low-cost-rodent-resistant-compost-bin.html).



When deciding on how large of a compost pile you would like to maintain, keep in mind how much time, space and material you will have to dedicate to composting.

LOCATION, LOCATION, LOCATION

It's important to locate your compost bin in an area that is flat, dry and easily accessible so that you can add material and manage your pile easily. If it's not in a convenient location or if you need to carry your organic material long distances to your bin, you'll be less inclined to manage your pile. In any case, make sure your compost area is away from both groundwater wells and surface water and preferably covered.

HOW DO I COMPOST?

Composting is all about creating an environment for good microorganisms to thrive so they can help decompose your organic material. To do this your decomposers need the following:

- **Food** – your compost should be made up of organic material with layers of 'brown' – high carbon organic material and 'green' – high nitrogen organic material. Ideally use approximately three-parts of brown material to one-part green material.
- **Air** – the microorganisms in your compost pile need air. Turn or mix your compost pile often - weekly or even a couple times per week to speed up the process.
- **Moisture** – your compost pile needs moisture to work – it should be damp but not dripping wet. If your compost pile becomes dry – just mix in some water.
- **Heat** – sunlight provides the heat needed to help create that perfect environment for decomposition and to help make sure that any harmful organisms are eliminated. This is why the composting process tends to slow down during the winter months.

WHY COMPOST?

Composting organic material on your hobby farm can significantly reduce the volume of solid waste that may otherwise need to be disposed of while generating a nutrient rich material that you can reuse. It's recycling at its best!

CAUTION!

DO NOT COMPOST diseased plants; food scraps containing meat, fat, oil or butter; hazardous material; pressure treated lumber; inorganic material; weeds or invasive plant species; plants/clippings containing herbicides; or pet waste. It is possible that some of the above materials can be composted however very specific temperatures, intensive compost management and alternative methods are often needed. It is recommended that these materials not be used in a typical hobby farm compost system to help ensure a healthy and safe compost.

Common Compost Material

COMMON 'GREEN' MATERIAL	Spent plants, fruit and vegetable waste, grass clippings, seaweed, blood meal, egg shells, coffee/tea grounds, animal manure* (cow, horse, pig, sheep, chicken, rabbit), hair and feathers, nut shells
COMMON 'BROWN' MATERIAL	Dried leaves, shredded newspaper, animal bedding*, straw/hay, wood chips/ash, cornstalks, saw dust, pine needles

* Note that if you are composting animal manure with bedding, you may need to add an additional source of nitrogen such as grass clippings, blood meal or chicken manure.

Smaller material composts quicker so consider breaking up any larger material in your compost pile if you're looking to speed up the composting process.

Basic Composting Steps

The following are basic composting steps:

Step 1

Select your composting location.

Step 2

Build (or buy) your bin.

Step 3

Add your green and brown organic material.

Step 4

Turn your pile often.

Step 5

Keep it moist and covered.



WATER QUALITY BENEFIT

Composting organic material not only keeps it out of waterways but recycles material into a valuable soil amendment for your garden.



Plan ahead and build a compost bin that has a removable top - this is where you'll add new materials for compost. Have one side of the bin that is open towards the bottom - this is where you'll take your completed compost from. Make sure you can fit a shovel in through the opening!

HOW DO I KNOW WHEN I'M DONE?

Finished compost is generally a crumbly, dark brown soil that is light in weight with an earthy smell. You can screen your compost and return the larger material to start your next batch of compost. The amount of time it takes to create finished compost will vary depending on the volume and type of organic material you use, climate, and how often you turn your pile. Most compost can be ready to use in 3-6 months.

HOW CAN I USE MY FINISHED COMPOST?


Compost is a rich organic material that is high in nutrients which is why it's sought after by gardeners. Compost can be used in all types of gardens throughout the year. Using compost can often reduce or eliminate the need to use certain fertilizers. Completing a yearly soil test can help you determine what nutrients your garden crops need. Adding compost can also help build healthy soil structure that can support soil microorganisms that are important in keeping pests and disease away.

BE INNOVATIVE



Did you know that one pound of worms can eat up to ½ pound of organic material per day? Ideal for those looking to compost in small areas or even indoors, vermicomposting is the process where worms digest organic material and the products – worm castings – are highly nutritious compost. For more info on vermicomposting, visit: <http://www.mass.gov/eea/agencies/massdep/recycle/reduce/vermicomposting-indoor-composting-with-worms.html#WherecanIgetawormbin>.

HELPFUL LINKS



www.ag.umass.edu/crops-dairy-livestock-equine/fact-sheets/waste-management-composting
www.howtocompost.org
www.mass.gov/eea/agencies/massdep/recycle/reduce/composting-and-organics.html

