

What About Thatch?

Don't worry about grass clippings contributing to thatch problems. Turf experts nationwide agree that clippings do not produce thatch because they are 80% water and decompose quickly. Rather, thatch is the accumulation of dead roots and stems and is most often caused by over fertilizing and over watering. A thatch layer of more than 1/2" should be removed as a matter of healthy lawn maintenance.

Other uses for clippings

Compost clippings at home: Clippings are an excellent source of nitrogen for your compost pile. No more than 1/3 of the pile should be fresh clippings. Mix thoroughly with "brown" materials such as leaves or straw and turn the pile regularly to keep it well oxygenated and to prevent odors.

Use clippings as mulch: Apply dried grass clippings directly on the soil about 1 inch thick to reduce weeds, moderate soil temperature, and control soil spattering, erosion, run-off and evaporation. Avoid mulching with clippings which have been recently treated with herbicides. This can harm your plants. As a precaution, mulch with clippings from herbicide treated lawns only after two lawn mowings.

Incorporate clippings into garden soil: Mixing fresh grass clippings into the garden adds nutrients and organic matter which improves the texture and moisture retention properties of the soil. A two inch layer of grass can be turned into the soil to a depth of 6" about once a month.

Alternative Landscapes

Consider planting ground covers such as English ivy, pachysandra, and periwinkle; increasing shrub beds; or growing a wild-flower meadow as alternatives to turf grass. They look beautiful, don't need mowing and will help reduce lawn maintenance and yard waste!

For More Information, Please Write To:

Massachusetts Department of
Environmental Protection
Recycling Program
One Winter St.
Boston, MA 02108

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DON'T TRASH GRASS!



Save Time and Money! Reduce Waste!

Did you know that a 1/2 acre lawn in New England produces over 3 tons or nearly 260 bags of grass clippings each year? Think of all the time, money and effort it would take to bag all those clippings. Why go through all that hassle when it's really not necessary?

You can have a healthy green lawn by leaving grass clippings where they fall! It's simple...grass clippings left on the lawn will decompose and act as a natural organic fertilizer. This allows you to reduce the amount of additional commercial fertilizer you need to apply. Your lawn will still be healthy and green because each time you mow, you will be returning valuable nutrients to the soil!

The key word is "less"...less fertilizer, less water, less work, and best of all, less waste! Recycling clippings back into the lawn requires less effort than disposing of them as waste. No one has to handle the clippings - not you, not your lawn care professional and not the waste management crew. You can reduce your mowing time by nearly 40% by not bagging, and spend less money on fertilizer and trash bags. And by not trashing grass, you'll be doing your part for the environment by reducing waste!

If you follow these "Don't Trash Grass" mowing, fertilizing and watering guidelines, not only will you have a healthy lawn, but you'll never have to bag grass clippings again!

Mowing Techniques & Tips

- **Any mower can recycle grass clippings.** Simply remove the grass catcher! Ask your lawn mower dealer if a special safety plug or adapter kit is needed to convert your mower into a "recycling" mower. You can also have a mulching blade installed
- **Keep your grass mowed to 2" - 3" tall.**
- **Do not remove more than 1/3 of the grass blade in any single mowing.** For example, if your lawn is kept at 2" tall, it should not be allowed to grow higher than 3" before it is mowed again.
- **Mow when the grass is dry.**
- **Keep your mower blade sharp** because dull mowers tear the grass blade, injuring the plant, and create a brownish cast to the turf.
- **If the grass gets just a bit too high,** simply mow over the clippings a second time to further shred and scatter them.
- **If excessive growth occurs between mowings,** raise the mower height, mow and then gradually lower it over a span of several mowings. This will help prevent shock to the plants.
- **When it's time to replace your mower,** consider buying a mulching, recycling, or a non-polluting reel mower. All of these do a good job of shredding and scattering grass clippings.

Fertilizer Application

Proper fertilizer application is important. And remember, when it comes to fertilizer, **more is not better!** Research shows that most grasses require only **modest levels of nitrogen** for good color and controlled growth. Too much fertilizer will make your lawn grow faster, resulting in more mowing and more clippings!

Apply fertilizer to your lawn in late April and again in September. If a third treatment is needed, apply in late May. Apply only 1/2 pound of nitrogen per 1000 square feet of lawn at each application. To figure this out, simply divide 100 by twice the percentage of nitrogen (N) in the fertilizer. This will give you the application rate in pounds of fertilizer per 1000 square feet of lawn. For example:

Fertilizer N-P-K rating (%)	Divide 100 by twice the % of Nitrogen (N)	Pounds of fertilizer to use per 1000 sq. ft.
12-4-8	100 divided by 24	=4.1 lbs
16-8-8	100 divided by 32	=3.1 lbs
20-5-10	100 divided by 40	=2.5 lbs
10-10-10	100 divided by 20	=5.0 lbs

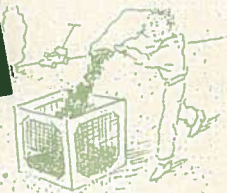
For slower, more uniform growth, choose fertilizers containing sources of self-release nitrogen such as methylene urea, ureaformaldehyde, sulfur coated urea, or IBDU. The bag may also read "water insoluble nitrogen" or "slow release nitrogen". All are acceptable and will increase the amount of time the grass can use the nutrient

Watering Practices

New England has a high precipitation rate, so turf grasses here don't have to be watered to survive. Lawns may turn brown and dormant during periods of drought, but will turn green rapidly when moisture in the soil is replaced. **Remember, the more you water your lawn, the faster it's going to grow and the more you will have to mow it!**

- **Conserve resources by not watering unless the grass really needs it.** Let Mother Nature water your lawn!
- **If you choose to water, 1 inch of water is adequate to wet the soil to a depth of 4"-6".** Place an empty can under the sprinkler to measure when an inch has been applied. If water begins to run off the lawn before an inch is applied, turn off the water and let it soak in for an hour or so, then resume watering until 1" is applied.
- **Water deeply and less frequently to encourage deep root growth.** Light, frequent watering encourages shallow roots and may lead to increased disease and stress injury.
- **The best time to water is in the morning** because less water is lost through evaporation and transpiration.
- **Avoid watering during mid-day and try not to water in the evenings** since a lawn that remains damp during the night is more prone to disease.

Composting Bins



New Age Composter



The New Age Composter (shown) and Earth Machine Composter are rodent-resistant bins distributed through DEP's recycling grant program.

Turning Bins



A series of three or more bins allows you to make compost in a short time by turning the materials on a regular schedule.

Barrel Bin



These bins can easily be made from plastic garbage cans.

Wire Bin



Wire bins can also be made for composting.

How To Make a Compost Pile

There are as many different ways to make compost as there are people who do it. The following guidelines will get you started, but soon your own experience will help you tailor a method that best fits your needs.

1. Build or purchase a compost bin. Check to see if your community has a composting bin distribution program, or order from a garden catalogue, nursery or hardware store. Enclosed compost piles keep out pests, hold heat and moisture in, and have a neat appearance. Or, bins can be simply made of wire, wood, pallets, concrete blocks, even garbage cans with drainage holes drilled in them. In urban areas, rodent-resistant compost bins — having a secure cover and floor and openings no wider than one-half inch — must be used.

2. Set up the bin in a convenient, shady area with good drainage. A pile that is about three feet square and three feet high will help maintain the heat generated by the composting organisms throughout the winter. Although a smaller pile may not retain heat, it will compost.

3. Start the pile with a layer of coarse material such as corn stalks to build in air passages. Add alternating layers of "brown" and "green" materials and mix them together. Sprinkle with soil every 12 inches. Be sure to bury food scraps in the center of the pile. If you don't have "brown" and "green" materials on hand at the same time, build your pile with "browns" and mix in "greens" as they become available. Shred leaves or run over them with a lawn mower to shorten the

composting time. Save several bags of leaves to add in the spring and summer when "browns" are scarce.

4. Add water as you build the pile if the materials are dry. *Keep the composting material damp* or it will not decompose.

5. As time goes on, keep oxygen available to the compost critters by fluffing the pile with a hoe or compost turning tool each time you add material. A complete turning of the pile — so the top becomes the bottom — in spring and fall should result in finished compost within a year. More frequent turning will shorten the composting time.

High Nitrogen

"Green" Ingredients

- grass clippings
- weeds
- food wastes: fruit & vegetables, coffee grounds, tea bags, egg shells
- manure (cow, horse, chicken, rabbit)
- seaweed
- alfalfa hay/meal
- blood meal

High Carbon

"Brown" Ingredients

- autumn leaves
- straw
- cornstalks
- paper/cardboard: paper towels, napkins, bags, plates, coffee filters, tissue and newspaper
- wood chips
- saw dust
- pine needles

Where to Get More Information

In cooperation with the Massachusetts DEP, the State of Connecticut has produced a video entitled *Turning Your Spoils to Soils*, which is available in most local libraries in Massachusetts. DEP's Recycling Program also provides technical assistance and reference materials on composting, and can be reached at (617) 292-5834. Or, visit our website at www.mass.gov/dep

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Turn spoils into soil...

Home Composting

A guide for composting yard and food waste



The Commonwealth of Massachusetts

Executive Office of Environmental Affairs

Department of Environmental Protection

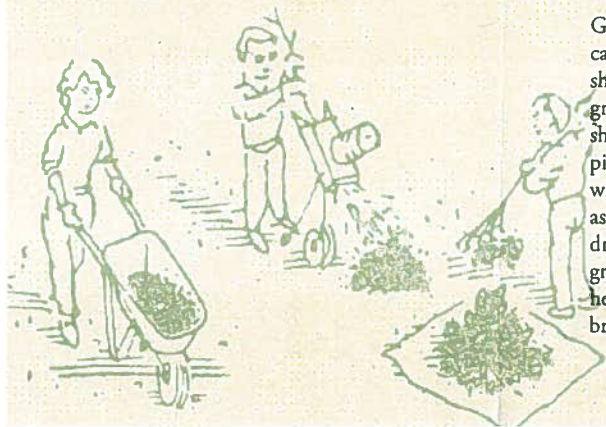
What is Composting?

Composting is a controlled process of decomposition of organic material. Naturally occurring soil organisms recycle nitrogen, potash, phosphorus, and other plant nutrients as they convert the material into humus.

Benefits of Composting

Composting is a convenient, beneficial and inexpensive way to handle your organic waste and help the environment. Composting:

- ◆ reduces the volume of garbage requiring disposal;
- ◆ saves money for you and your community in reduced soil purchases and reduced local disposal costs; and
- ◆ enriches the soil. Using compost adds essential nutrients, improves soil structure, which allows better root growth, and increases moisture and nutrient retention in the soil. Plants love compost!



What You Should Compost

Yard wastes such as leaves, grass clippings and weeds make excellent compost. All fruit and vegetable scraps, plus food wastes such as coffee grounds, tea bags, and eggs shells can be composted. To keep animals and odors out of your pile, do not add meat, bones, fatty food wastes (such as cheese, grease and oils), dog and cat litter, and diseased plants. Do not add invasive weeds and weeds that have gone to seed.

How to Use Compost

When the composted materials look like rich, brown soil, it is ready to use. Apply one-half to three inches of finished compost and mix it in with the top four inches of soil about one month before planting. Compost can be applied as a top dressing in the garden throughout the summer. Compost is excellent for reseeding lawns, and it can be spread one-quarter inch deep over the entire lawn to rejuvenate the turf. To make potting soil, mix equal parts compost, sand and loam. You may put the compost through a screen to remove large particles — these can go back into the pile.

Mulching

Grass clippings, leaves and woody yard wastes can be used as mulch in gardens and around shrubs to keep the soil moist, control weed growth and add nutrients. Woody materials should be chipped or shredded. Use a mulch of pine needles around acid-loving plants. Leaves will work first as mulch, then as a soil enricher as they decompose. Grass clippings should be dried before using as mulch. Do not mulch with grass clippings which have been treated with herbicides; composting them first, however, will break down most herbicides.

Composting Without a Yard

Composting can be done indoors using an earthworm farm. Not only can you recycle your food scraps, you can also have a steady supply of fishing bait! For more information, call DEP's Recycling Program.



Elements of a Good Compost Pile

With these principles in mind, you can convert your organic wastes into resources by turning your spoils to soil.

The Biodegraders

Nature has provided an army of workers who specialize in decomposing organic material. These "critters" — bacteria, fungi, molds, earthworms, insects and other soil organisms — eat all types of organic material and in the process convert nutrients into a form plants can utilize. Without those compost critters, we would be surrounded by mountains of leaves and the soil would be barren. The process of composting is simply a matter of providing the soil organisms with food, water and oxygen. They do the rest.

Organic Material

Organic material contains varying amounts of carbon and nitrogen which nourish the organisms naturally present in your compost pile. (Billions of bacteria inhabit the surface of every leaf and blade of grass in your yard.) The critters need both carbon and nitrogen. An easy way to provide both of these is to remember that brown, woody materials, such as autumn leaves, are high in carbon while green, moist materials, such as grass clippings, are high in nitrogen (refer to the table on the back of this brochure).

Use approximately three parts "brown" material to one part "green" material to optimize the composting process and prevent odors from developing. This recipe will yield finished compost in three to eight months. Leaves alone break down in six to 15 months. Grass clippings or food scraps composted alone result in unpleasant odors because they contain more nitrogen than the compost organisms can use. Mix leaves, straw, or shredded newspaper with green material, or let it dry until it turns brown before composting it alone.

Air

The compost critters need oxygen, just as we do. Lack of oxygen will slow down the composting process and cause odors. Turn your pile, fluff it with a hoe or compost turning tool, or build air passages into the pile with cornstalks to provide oxygen to the organisms.

Moisture

Compost organisms need a moist environment. The pile should be as damp as a wrung-out sponge, but not dripping wet. Make sure leaves are damp when you add them to the compost pile because they will not break down if they are dry. Since moisture evaporates as the pile heats up (a sign of active composting), let rain and snow replace it, or add water during dry spells. A cover helps retain moisture in hot weather.