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# extension extra

South Dakota State University • U.S. Department of Agriculture

## Recycling Lawn and Yard Waste

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Lawn and yard waste may constitute up to 50% of the total refuse sent to landfills during the summer months, accounting for about 18% of the total waste added during the entire year. Many of these yard and garden waste products need not leave the yard, or at least, should not be destined for useless disposal in a landfill.

Inexpensive, easy, and ecologically sound ways to use many of these waste products can be found in home and community recycling projects. Grass clippings and leaves may be recycled directly on the lawn or garden, used as a mulch, or used in composting. Other materials like dead branches, old vegetable stalks, and other organic plant waste can be shredded and also used as mulch, worked into the garden, or added to the compost pile.

### Sources of yard waste . . .

**One of the biggest contributors to yard waste is grass clippings.** For many years people believed that to have a healthy, lush green lawn it was necessary to catch grass clippings. This belief often was fostered by lawn mower manufacturers who had strongly urged consumers to purchase bagger attachments for their lawn mowers. In fact, it was often difficult to purchase a lawn mower without such an attachment.

With the current crisis many cities are facing with overflowing landfills and restrictions on dumping of yard waste, many people are realizing that trucking grass clippings to the landfill is expensive, ecologically unsound, and unnecessary.

Some lawn mower manufacturers also are changing with the times and promoting the recycling of grass clippings and other yard waste. Mulching or recycling lawn mowers now are available that work very well in chopping up grass clippings. Conversion kits for older lawn mowers also are available.

Thatch long has been thought to build up in lawns when grass clippings were not removed. Actually, thatch is seldom a problem in a healthy lawn, whether or not the clippings are removed. Thatch can become a problem, however, if a lawn is over fertilized and overwatered.

Thatch is mostly non-decomposed fibrous portions of grass stems and roots. Grass clippings, with their high water and nitrogen content, decay rapidly and release nitrogen and other nutrients back into the soil. The clippings do not contribute to thatch accumulation.

Lawns should be mowed properly, following the one third rule. Avoid removing more than 1/3 of the leaf surface at one mowing. Proper mowing helps to maintain the overall health of the lawn, generally eliminates the need to remove grass clippings, and reduces the probability of developing a thatch problem as well.

Increasing the mowing height during the summer will also improve the health of the lawn. Within the height range for your type of grass, a lawn cut higher is healthier because it can produce food (photosynthesize) at a greater rate, it is better able to compete with weeds, it shades the ground, and it uses less water.

Home lawns typically are fertilized with 2 to 4 lbs. of nitrogen per 1000 square feet per year. If grass clippings are recycled on the lawn, you should never have to apply more than 2 lbs. per year to maintain a healthy and vigorous lawn. The grass clippings actually act like a slow-release nitrogen fertilizer, providing a constant supply of nitrogen and other nutrients.

Remove grass clippings if the grass is tall and the clippings form such a thick layer on the turf that light will not be able to penetrate to the growing grass plants. In cases like this, a bagging attachment on the mower may be used or the turf may be raked after mowing to remove the excess clippings.

Excess clippings make a good mulch for the garden that will deter weed seed germination, conserve moisture, keep fruit clean, regulate soil temperature, and add organic matter and nutrients to the soil.

Too thick a mulch of grass clippings could result in increased problems with slugs, flies, and other pests. To avoid these problems, work excess clippings into garden soil or add to a compost pile. The high water and nitrogen content make clippings an excellent addition to the compost pile, aiding in the decomposition of other materials which are more resistant to decay.

Local nurseries also may accept grass clippings, while some larger cities may have municipal composting sites that will accept bagged or bulk grass clippings.

Do not use for mulch, or add to a compost pile, grass clippings from a lawn that recently has had herbicides applied to it. Some broadleaf herbicides can leave residues in grass plants that may damage sensitive plants if the clippings are used as mulch or in compost. Always try to recycle these clippings directly on the lawn where other plants will not be damaged.

**Leaves are the second major source of home yard waste.** Unlike grass clippings, which are a problem throughout the summer and into the fall, leaves are generally only numerous during the fall.

Leaves are much more resistant to decomposition than grass clippings, mostly because they have a lower nitrogen content. Grass clippings are two to

three times higher in nitrogen content than oak or maple leaves. The lower the nitrogen content, the slower the decomposition process will be since the microbes which break down the organic matter need nitrogen to live and multiply.

If only a few leaves are on the lawn, mowing the lawn with a rotary lawn mower may shred the leaves sufficiently and allow for natural decomposition without removing the leaves. Remove large amounts of leaves from the lawn since they will decay slowly, restrict light penetration to grass plants, and tie up nitrogen in the soil to fuel the microbes while they decay the leaves.

The decomposition of leaves can be hastened dramatically if the leaves are shredded. This can be accomplished simply by running over the leaves with a rotary lawn mower or running the leaves through a garden shredder or hammer mill. Mixing the leaves with some other material that will supply additional nitrogen, like grass clippings, other green vegetable material, livestock manure or a nitrogen fertilizer will also greatly hasten decomposition.

**Dead branches or materials from pruning are another source of yard waste.** These materials offer a greater challenge in that they are woody and therefore quite resistant to decay. Branches almost always need to be shredded or chipped to allow for quicker decomposition and to reduce waste volume. Various types of shredders and chippers are available to the home owner. They may be purchased but are rather expensive. A cheaper alternative is to rent the equipment from a local hardware store or garden center as needed.

Shredded branches may be used in the compost pile, but they will require a much longer period for full decomposition to occur compared to non-woody waste materials.

Once shredded, mix organic material with a nitrogen source to aid decomposition, particularly if the material is to be used as mulch. About 1/2 cup 20-5-5 fertilizer per bushel of shredded branches should be sufficient. Failure to add nitrogen could result in nitrogen deficiencies in the plants which are mulched with the shredded material.