

PRO P **FACT** Sheet

Grasscycling

Grass clippings and other yard debris represent a large percentage of solid waste deposited in landfills. An analysis of the composition of residential waste in this part of North America showed that yard debris (leaves, prunings and grass clippings) accounted for nearly 20 percent of the total. In many communities, collection and composting of grass clippings is limited. The disposal of this waste material is expensive and takes up valuable landfill space.



The obvious solution to the clipping disposal problem is to recycle the grass - grasscycling. Grasscycling can be easily accomplished by returning the clippings to the lawn. If performed correctly, returning grass clippings should not detract from the appearance of the lawn or cause an accumulation of thatch. In fact, this practice will reduce the labor involved in bagging and also return essential nutrients to the soil.

Research at Penn State University has shown that over a three year period, the leaf clippings from Kentucky bluegrass contained between 56 to 59 percent of nitrogen (N) applied as fertilizer. When clippings are returned, a substantial amount of nitrogen and other nutrients can be used by the turf, significantly reducing fertilizer requirements.

Several tools and management practices can be used to make the recycling process more efficient. A few of the more effective practices are described below.

Mowing Practices:

For clippings to break down rapidly, the lawn should be mowed frequently enough so that large amounts of leaf residue do not remain on the surface of the turf. Weekly mowing is often not enough, especially during the peak period of leaf growth in the spring. As a rule of thumb, no more than one-third of the leaf tissue should be removed during the mowing operation. The turf should be mowed at the suggested height of cut for the predominant species present.

Some people are concerned that returning clippings to the lawn may result in thatch accumulation. Thatch is the tightly intermingled layer of partially decomposed stems and roots which develops between actively growing green vegetation and the soil surface. Because turf clippings are composed mostly of leaf tissue that decomposes rapidly, they do not contribute to thatch.

If the soil pH near the surface is low, populations of microorganisms, which decompose the clippings, may be reduced. To insure that adequate microbial decomposition occurs, maintain a soil pH between 6.3 and 7.0. Soil pH can be determined through a soil test available from your county cooperative extension office.



Mulching Mowers:

Mulching mowers are rotary mowers designed to keep the clippings circulating under the mower deck so the grass blades will be chopped into finer pieces. This hastens clipping decomposition and reduces the amount of residue on the lawn. Some of the newer mowers have special features that facilitate mulching, such as multiple rippled blades and dome shaped decks that allow better circulation of clippings. Lawn mower manufacturers also offer mulching kits - plates that block discharge and force the clippings back through the blades.

Fertilization:

A common problem with many lawns is over fertilization. Excessive fertilizer can produce a flush of growth, necessitating more frequent mowing. Chemical fertilizers are also a non-point source of water pollution as yard runoff carries the chemicals into the local watershed. For these reasons, if your turf grows in infertile soil try using organic fertilizers, such as top dressing with loose leaf compost.

Irrigation:

Excessive irrigation can increase leaf growth of turfgrasses, thereby increasing mowing frequency. This practice eventually will weaken the turf and may cause disease problems. A sufficient amount of water should be applied to insure that the entire root system will be moistened. If water runs off the lawn before soaking into the soil, turn off the sprinkler, allow the water to soak in, and continue irrigation. Frequent light watering encourages shallow rooting and germination of weed seeds.

Special Considerations:

Occasionally, periods of prolonged rainfall make mowing difficult or impossible. In such cases, the turf becomes overgrown and large clumps of grass may remain on the lawn following mowing. The clumps of grass can be removed after drying to facilitate dispersal, composted or removed, air-dried and used as mulch around trees, shrubs or gardens. If the turf has been treated with broadleaf herbicides, do not place clippings around trees, shrubs or garden plants.

If you would like to eliminate use of herbicides, do not cut your grass too low. Cutting your grass short encourages broadleaf weeds like dandelion and the two most common plantains because they have the opportunity to spread out and receive more sunlight. Cutting your grass higher than usual and hand picking weeds can reduce your weeds to a tolerable level while reducing the use of toxic chemicals on your lawn.

*This fact sheet was developed by the Professional Recyclers of Pennsylvania, P.O. Box 25, Bellwood, PA 16617. For more information, visit our website, www.proprecycles.org, or contact us by email at prop@proprecycles.org. Portions of this fact sheet were adapted from *Recycling Turfgrass Clippings*, a publication of the Penn State Cooperative Extension. Funding for this fact sheet was provided through a grant from the Department of Conservation and Natural Resources' Forest Lands Beautification Program. We do our part to close the recycling loop and print all our publications on recycled paper.*