

# **SOLID**

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# **WASTE**

MANAGEMENT

# Managing grass clippings at home

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Grass clippings account for about 15 to 20 percent of the residential solid waste stream during the growing season. Collecting grass clippings adds solid waste collection costs during the summer months, and if the clippings are buried in landfills, uses valuable landfill space. On the other hand, problems with collection of grass clippings, grass moisture content variability, and odors from decaying grass sometimes complicate municipal composting of grass clippings.

## Leave those clippings on the lawn!

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Many of the problems associated with landfilling or municipal composting of grass clippings can be eliminated by reducing the amount of grass collected. If you mow your lawn frequently and allow the grass clippings to fall back into the lawn, collecting them is unnecessary.

The "need" to remove clippings became an issue in just the past 40 years, when suburban sprawl led to the quest for the perfect lawn. Since grass clippings were thought to contribute to thatch buildup, elaborate bagging systems were developed to catch grass, and the grass ended up in landfills.

Recent research has shown that in a properly managed lawn, leaving grass clippings on the lawn doesn't cause thatch. Many manufacturers are reintroducing "new and revolutionary" mulching mowers that chop the clippings finer and leave them on the lawn without blowing them out a chute.

Grass clippings can contain as much as 44 percent nitrogen (N), 0.5 percent phosphorus (P), and up to 2 percent potassium (K) in addition to smaller amounts

of other essential nutrients, including sulfur (S). Being high in N, they decompose rapidly and actually return N to the soil, reducing the need to apply fertilizer N by as much as one-third.

You also save time because you don't have to stop every few minutes to empty your mower bag. Homeowners in one study reduced their average mowing times by 38 percent when they did not bag clippings.

## Thatch

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Thatch is produced when the fibrous portions of the grass plant grow abnormally fast. The fibrous portions are high in lignin (an organic molecule that provides strength to cell walls) and include roots, rhizomes, stolons, and crowns. Grass clippings themselves are not high in lignin, but are composed mostly of cellulose and water. Thatch is associated with incorrect mowing height, overwatering, and improper timing of fertilizer applications.

## Fertilize properly

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Recent tests indicate that as much as 50 percent of applied N may be removed with clippings. Returning clippings can reduce the need to apply N, thereby saving money, helping to protect our groundwater supply, and minimizing the formation of thatch.

Fertilizing at the right time of year for the type of grass in your lawn can help your lawn remain healthy all year long. Proper lawn fertilization depends on grass type, location in the state, and soil type. Strate-

gies for fertilizer application and application timing can be found in CIS 846, *Fertilizing Lawns in Southern Idaho*, and CIS 911, *Northern Idaho Fertilizer Guide: Northern Idaho Lawns*. These guides provide information on reducing problems associated with incorrect fertilization such as weedy or diseased lawns and contaminated groundwater.

Some species and varieties of grass naturally require less N to keep a good green color. Research continues on the development of these grasses. Select dark-green varieties that perform well in your region to minimize the use of N to create green color. Information on grass selection appears in CIS 583, *Selecting Turfgrasses for Idaho Lawns*.

## Mow more often!

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Selection of mowing height is probably the most important decision in mowing. Mowing heights vary with grass type. Generally, mow when the grass is dry and no more than 3 to 3 1/2 inches tall. Specific recommendations for cutting heights for different grass types appear in CIS 731, *Thatch in Lawns*.

Mow the lawn at least once a week. As a general rule, schedule mowing to remove no more than one-third of the grass at any time. This may require mowing more often during the rapid growth period in spring.

The clippings filter down through the lawn, where they become less noticeable. The clippings then start to decompose rapidly, and in a few days they will be mostly gone. The decomposing clippings, being high in N and proteins, feed the soil microorganisms and help contribute to a healthier soil and lawn.

If the lawn does get too high before you mow, remember not to cover the lawn surface with mowed clippings. Instead, you may want to consider bagging and composting the clippings.

## Other tips

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A few other tips will help you to recycle your clippings efficiently and relatively painlessly.

- ✓ Aerate your lawn in spring. Consider renting an aerator, which removes cores of soil from the lawn, opens up the soil and allows greater movement of air, water, and fertilizer to the roots.
- ✓ Use a sharp mower blade. This will make finer clippings that will decompose quickly.
- ✓ Avoid overfertilizing your lawn. If it becomes too dense with growth, the clippings won't reach the soil to decompose.
- ✓ Do not overwater. Even during the driest part of the summer, lawns require 1 inch or less of water per week. See CIS 731, *Thatch in Lawns*, for specific watering requirements.

Different sprinklers deliver water at different rates. The best way to measure how much water your lawn is receiving is by placing cans at various places beneath the sprinkler's coverage area and noting the time it takes to fill them with 1 inch of water.

- ✓ Apply lawn chemicals only when problems have been correctly diagnosed. Remember that some pesticides may harm or kill beneficial soil organisms. Allowing these organisms to thrive helps decomposing clippings to return nutrients to the soil.

## Backyard composting

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If you don't leave grass clippings on the lawn, consider composting them. Grass clippings can be composted successfully in a well-aerated backyard

compost bin. Composting the grass clippings with bulky materials such as leaves or chipped woody wastes allows a good air flow through the pile.

Be aware of the carbon to nitrogen (C:N) ratio of the materials you're composting. A C:N ratio of 30:1 is ideal for microorganisms to digest organic material quickly. Grass clippings have a C:N ratio of 12-25:1, while leaves have a C:N ratio of 30-80:1 and wood chips have a C:N ratio of 100-500:1. The high C found in both leaves and woody wastes can help to balance the high N in grass clippings and bring the mixture closer to the ideal 30:1 ratio.

For more information on composting see CIS 679, *Making and Using Compost*.

## Mulching

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Yard waste components can be used successfully as mulches.

- ✓ Grass clippings can be spread in thin layers over vegetable and flower beds or around the base of trees, providing they aren't placed too close to the trunk.
- ✓ Grass clippings mixed with leaves can be spread around shrubbery in the fall as a mulch. For more information on mulching see CIS 837, *Mulches for the Home Landscape and Garden*.

## For more information

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CIS 583 *Selecting Turfgrasses for Idaho Lawns* (35 cents)

CIS 679 *Making and Using Compost* (35 cents)

CIS 731 *Thatch in Lawns* (25 cents)

CIS 837 *Mulches for the Home Landscape and Garden* (35 cents)

CIS 846 *Fertilizing Lawns in Southern Idaho* (35 cents)

CIS 911 *Northern Idaho Fertilizer Guide: Northern Idaho Lawns* (35 cents)

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