



Mowing, Dethatching, Coring, and Rolling Kentucky Lawns

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Correct mowing and perhaps an occasional dethatching, coring, or rolling can help you achieve a quality lawn.

Good lawn care takes more than just mowing and chemical treatments. To develop quality turf, you need correct mowing techniques and may occasionally need to dethatch, core, or roll your lawn.

Mowing

Some of the most serious mistakes in lawn care include mowing lawns too closely, mowing too infrequently, or using a dull mower blade.

Height of Mowing

Check your blade height and follow these guides for your grass:

Grass	Mowing Height (Inches)
Kentucky Bluegrass	2 - 2½
Tall Fescue	2 - 2½
Creeping Red Fescue	2 - 2½
Perennial Ryegrass	1 - 2
Bermudagrass	½ - 1
Zoysiagrass	¾ - 1

Below-optimum mowing heights greatly restrict root development, and the grasses become susceptible to disease, heat and drought damage, traffic injury, and weed infestation. If mower height can be adjusted, slightly increase the height for bluegrass and tall fescue lawns during the summer and lower the mower height slightly below optimum during late fall. Never allow these grasses to go into winter at tall height. As long as the grass grows in the fall, keep mowing.

Mowing Frequency

Adjust your schedule according to how fast the grass is growing. Mow often enough so that no more than one-third to one-half of the turf height is removed at any one mowing. For example, if you are mowing at 2½ inches, mow again when the turf reaches a height of approximately 3½ inches. If your grass gets excessively tall, raise the mowing height so you do not cut off too much at one time. Instead, mow every two or three days, gradually lowering the mower back to the original height.

Blade Sharpness

A sharp mower blade makes mowing easier and results in a better-looking and healthier turf. Reel-type mowers are preferred, but a sharp rotary mower gives a clean cut and is easier to maintain than a reel-type mower. Rotary mower blades need sharpening two or three times per year.

Mowing during Heat Stress

Lawns can be severely damaged if you mow during midday when the temperature is near 90°F or higher and the soil is very dry. If you must mow under these conditions, wait until the temperature is cooler in the late afternoon or early morning, until you can irrigate, or until rainfall occurs. It also helps to raise the mower height and mow less frequently during severe heat/drought periods.

Removal of Clippings

Clippings are not harmful if your mower spreads them uniformly and if they are not so thick they shade the grass below. Clippings can aid the grass by returning nutrients back to the soil, and they do not cause thatch problems. However, removing clippings when heavy disease is affecting the grass may help prevent further spread of the disease.

Be Careful

The rotary mower may be the most dangerous tool you own. Safety rules follow:

- Always disconnect the spark plug when checking the blades.
- Keep children and adults out of your yard when mowing.
- Remove debris such as sticks, toys, etc. from the lawn prior to each mowing.

Thatch

Thatch is a tightly intermingled organic layer of dead and living shoots, stems, and roots that develop between the green vegetation and soil surface. A neglected lawn will never accumulate thatch; a well-managed lawn may. Thatch most frequently develops when:

- no earthworms are present in the soil.
- very high rates of nitrogen fertilizer are applied year after year.
- lime has not been applied to correct an acidity problem.

A little thatch is desirable, since it helps moderate temperature extremes at the soil surface and provides a cushion effect on the surface. But an accumulation of ½ to 1 inch of a dense



Check for thatch by using a knife or soil probe to remove a core. The dense organic layer above the soil line is thatch.

thatch creates problems because it interferes with water and air movement into the soil and creates a favorable environment for insects and diseases.

Mechanical Dethatching

To combat thatch, use a dethatching implement or vertical mower that cuts through the thatch to the soil surface. As it passes through the grass, dead and living organic material is cut, torn loose, and deposited on the surface. If ½ inch or more of thatch is present, it may be necessary to cross the lawn two or three times in different directions. Operation of dethatching machines is relatively easy, since they are partially self-propelled. Most difficulty occurs on steep slopes or when soil is very dry.

Select a dethatching machine that cuts with knives or blades. Some machines have flexible, leaf rake-type tines that are ineffective in removing thatch. Spring tines that can be attached to your rotary mower blade are not good for dethatching either, and can cause severe mower damage. Dethatching equipment can often be rented from lawn equipment rental companies.

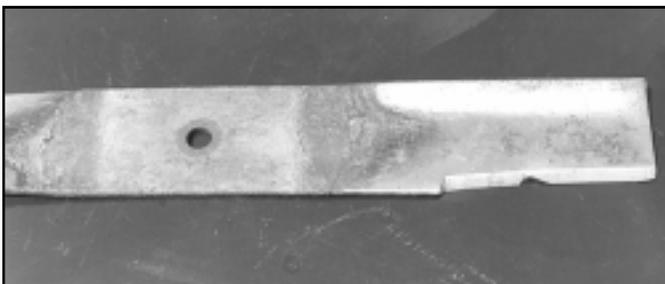
The organic material dislodged by the dethatching machine should be removed and composted or discarded. It can be raked into piles or onto plastic sheets or a tarpaulin and placed in garbage bags or dumped in a truck. Several garbage bags or a full pickup load of thatch can be removed from just a small lawn.

Sod Removal

A thatch layer of ¾ inch or thicker is usually most easily removed with a sod cutter. When cut just above the soil surface, the highly organic strips of sod are very light and easy to handle. Of course, the lawn must be re-established after the thatch and live grass are removed.

When to Dethatch

Bluegrass lawns should be dethatched only in the fall or spring, never in summer. For bermudagrass, remove thatch in early to midsummer. Tall fescue and perennial ryegrass turf never develop enough thatch to be a problem. Zoysiagrass may



Nicked and dull mower blades cause severe tearing of the leaf.

develop a serious thatch problem, but dethatching it is not recommended, since zoysiagrass requires several months to recover.

Aerification/Coring

Aerification is a term used interchangeably with the terms core cultivation or coring. This method of turf cultivation involves using equipment with hollow tines or spoons to remove soil cores from the top 2 to 3 inches of soil and redepositing the soil cores on the surface. Good aerifiers are sometimes available from rental agencies, and most lawn care companies offer aerification.

In contrast to aerification, cultivation practices that do not remove soil (i.e., spiking and slicing) do not improve the surface. They give little or no benefit and may increase surface compaction. Coring helps:

- relieve surface compaction in the top 1 to 2 inches of soil, which is especially important on heavily used sports turfs but seldom a benefit to home lawns.
- improve soil aeration and water infiltration, especially on heavily used sports turf and occasionally on moderate-to-steep lawn slopes where water runoff is rapid.
- reduce thatch accumulation and/or increase microbial decomposition of thatch. The cores that remain on the surface as a result of aerification will gradually be melted down by rainfall or irrigation.

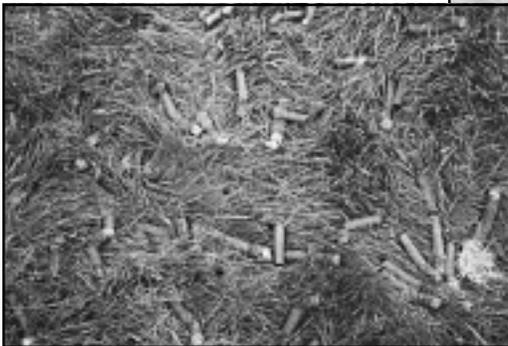
Thatch reduction occurs because the extracted soil mixes with the dead organic matter to create a natural compost. During wet weather, however, the cores from heavy clays will be very sticky on shoes, clothing, and mowing equipment.



A good thatching machine has fixed knives or sling blades; spring tines are not effective.

To make aerification worthwhile:

1. Use the largest available tines or spoons, i.e., $\frac{3}{4}$ inch to 1 inch in diameter.
2. Force the tines to penetrate 2 to 3 inches deep.
3. Make 20 to 30 holes per square foot.
4. Repeat the entire process two or three times per year. A single aerification is practically useless.
5. Carry out this process only when active turf growth is occurring. Since coring increases light penetration into the canopy, crabgrass and other weeds may germinate if quick grass recovery and fill-in does not occur.



The cores will disappear after significant rainfall or irrigation.



Coring machines remove plugs of soil and grass and open up the soil for improved aeration and water infiltration.

Rolling

Rolling is not often considered a regular maintenance practice. In fact, rolling wet, heavy clay soils will cause soil compaction and decrease soil aeration. However, on well-drained, medium, and coarse-textured soils, rolling may help:

- reduce desiccation in late winter or early spring by pressing frost-heaved plants back into the soil. This process most frequently benefits fall-seeded lawns (so roll the following spring) and sparse turf areas under shade trees. Well-established lawns are seldom damaged by heaving.
- smooth a soil surface roughened by mole runs, earthworms, and night crawlers. However, rolling will not correct surface undulations caused by improper grading.
- firm a loose seedbed immediately after the seed is broadcast.

Germination and seedling development are very poor in loose, droughty seedbeds.

Water-ballast rollers can often be rented. These rollers have a hollow drum that can be filled with water. By increasing or decreasing the amount of water in the roller, you can adjust the weight to give a firm seedbed or smooth a surface. If the lawn is sloping, a small garden tractor may be necessary to pull the roller. Rolling is most beneficial when the soil is moist, not wet.



With good moisture, a heavy roller will help remove minor roughness in the soil surface.