

LOUISIANA HOME LAWN SERIES

A guide to maintaining a healthy Louisiana lawn



Thatch Management

What is Thatch?

Thatch is a layer of living and dead turfgrass material composed of plant tissues, such as stolons and rhizomes, located from just above the soil surface and into the upper portion of the soil. Thatch helps retain nutrients, maintain soil moisture and temperature, provides a physical cushion to traffic, and is a habitat for microbes and other biota. Although some thatch is desirable, too much thatch can have negative effects on turfgrass growth. Excessive thatch leads to spongy turfgrass surfaces, binds nutrients and pesticides, harbors destructive pests, and affects rooting and turfgrass tolerances to changes in temperature and drought.

Does Your Lawn Have Too Much Thatch?

If the turfgrass is forming a puffy appearance and is very spongy when walking across, these are signs of extreme thatch levels. This is more common for St. Augustinegrass or zoysiagrass. Another way to determine thatch is to take a soil core. If the base of the turfgrass is elevated above the soil surface, then excess thatch needs to be removed. Remember the goal is to balance thatch levels by having some thatch but not too much.

Turfgrasses Susceptible to Thatch

Turfgrass Species	Thatching Tendency
Bermudagrass	Medium to high
Centipedegrass	Low to medium
St. Augustinegrass	Medium to high
Zoysiagrass	High

Factors That Contribute to Thatch Accumulation

1. Turfgrass species that are aggressive and have prostrate growth.
2. Turfgrass tissues that are not easily decomposed, such as rhizomes. Grass clippings do not typically contribute to thatch buildup.
3. High nitrogen or fertilizer applications can lead to more vigorous turfgrass growth.
4. Compacted soils can affect microbial decomposition of thatch
5. Improper pH affects plant growth and decomposition of thatch by microbes.
6. Improper mowing height and frequency.
7. Long growing season leads to greater turfgrass growth and therefore greater thatch deposition.
8. Improper or excessive irrigation application will affect microbial activity on thatch decomposition.
9. Certain pesticides negatively affect microbes that decompose thatch. Also, pesticides can lead to more robust turfgrass growth with less pest damage or interference.

How to Reduce Thatch

Reduce thatch in your home lawn through aerification or dethatching using a vertical mower. Aerification using hollow tines not only reduces soil compaction but can physically remove thatch and create conditions more favorable for thatch decomposition by microbes. The more effective way to reduce thatch is through vertical mowing. Vertical blades move through the turfgrass to bring thatch to the surface. Thatch can be raked into piles and removed. The blades of the vertical mower must cut through the entire thatch layer to be effective. Application of sand topdressing as a means to reduce thatch is not recommended for home lawns because of the frequency of applications required.

Under extreme conditions, the turfgrass and thatch may need to be completely removed with a new turfgrass established.

Timing and Frequency

Aerify or vertical mow home lawns only when the turfgrass is actively growing and will have a suitable period to recover, typically three to four weeks. For warm-season turfgrasses, aerification or vertical mowing is typically performed in late spring or early summer. Environmental conditions, such as soil moisture, also influence the timing. Very dry soils are too difficult for aerators or vertical mowers to penetrate the soil, and saturated or wet soils lead to increased turf damage.

Aerify your lawn every one to three years, depending on the soil type and forces that cause compaction. Heavily trafficked lawns should have aerification performed more often than less trafficked lawns. Vertical mowing frequency will depend on the turfgrass species, management practices and environmental factors. Monitor to determine the frequency needed for your specific situation.



Hollow tine aerification

Post-Aerification or Vertical Mowing Care

If using hollow-tine aerification you can remove the extracted cores from the area or chop cores and work the soil back into the turfgrass. Thatch should be raked and removed when dethatching using a vertical mower.

The lawn needs to be fertilized, irrigated and mowed to stimulate turfgrass recovery. Irrigation will aid in preventing the turfgrass from desiccating. If aerifying, this is a good time to make adjustments in the soil pH with lime or sulfur, depending on soil test results. This is also a good time to add organic matter to the soil.

Make sure to follow proper fertility guidelines and cultural practices per turfgrass species. This will slow thatch accumulation and help keep a healthy turfgrass.



Hollow tine aerifier with cores removed

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Pub. 3624-VVV (Online Only) 10/19

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