Controlling Thatch in Lawns

What is Thatch?
Thatch is a dense, spongy collection of living and dead grass stems and roots lying between the soil surface and green grass leaves in established lawns. As a grass plant grows, the older sloughed-off plant matter from stolons (above-ground stems), roots, rhizomes (below-ground stems) and stems is often slow to decompose and begins to accumulate at the soil surface forming this thatch layer.

A thatch layer greater than ½ inch thick makes watering difficult, since thatch dries out quickly and is difficult to rewet. It also restricts the movement of pesticides, thus reducing their effectiveness. Nutrients and water cannot be properly absorbed by the grass roots that tend to grow into this area.

Which Lawn Grasses Tend to Produce Thatch?
Grasses differ in their tendency to produce thatch. Tall fescue and perennial ryegrass have a low tendency for producing thatch. Heavy thatch builders include hybrid bermudagrass cultivars and Kentucky bluegrass, mostly due to their vigorous growth rates. Slower growing grasses, such as zoysiagrass, produce thatch because their fibrous tissues are very slow to break down and easily accumulate on the soil surface.

How do I Prevent Thatch Accumulation?
- Apply the correct amount of fertilizer and water to the lawn. Avoid excess nitrogen, and do not exceed the fertilizer recommendations for your particular type of grass. Too much water and fertilizer produce excessive growth.
- Mow your lawn at the proper height and mow frequently. The use of a mulching mower alone will not prevent a thatch problem.
- Keep the soil pH at the level recommended for your type of grass. Soils that are too acidic hamper the activity of earthworms, insects and microbes that break down thatch.

Does my Lawn have too Much Thatch?
A shallow thatch layer up to ½ inch thick actually benefits the lawn, by helping to retain moisture and stabilizing soil temperature. Examine the depth of the thatch layer by cutting out a pie-shaped wedge of sod from your lawn with a knife or spade. If the thatch layer exceeds ½ inch in thickness, then you need to dethatch your lawn.

When Should I Dethatch my Lawn?
Remove thatch in the late summer or early fall for cool-season lawns. Dethatch warm-season grasses in the spring after green-up or in the early summer when it is growing rapidly. Avoid hot and dry periods.

Can I Dethatch my Own Lawn?
Small Areas: Small areas can be dethatched using a dethatching rake. As you pull the rake across the lawn, the sharp curved blades slide through the thatch and lift it from the lawn.

Large Areas: Large areas require power-driven dethatching equipment and know-how. You can either hire a reputable commercial lawn care company or attempt it yourself. Improper dethatching can devastate a lawn.

How do I Dethatch my Lawn?
- Select a vertical mower with revolving, straight fixed blades with adjustable spacing
and depth. Space the blades 1 to 2 inches apart for Kentucky bluegrass, red fescue, bermudagrass and zoysiagrass. Set blades 2 to 3 inches apart for centipedegrass and 3 inches apart for St. Augustinegrass. The blades should cut into the thatch layer and at least ½ inch into the soil.

- Vertically mow centipedegrass and St. Augustinegrass in one direction only, since multiple passes can injure or kill the lawn. Zoysiagrass and Kentucky bluegrass may be vertically mowed in several directions.
- After dethatching rake up the dead material and remove.
- Thoroughly water the lawn to prevent the exposed roots from drying out.
- One week later, apply 1 pound of actual nitrogen (quick-release, water-soluble nitrogen less than 50 percent) per 1,000 square feet of lawn. Irrigate afterwards to minimize burn.

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