

# Thatch

Thatch is a layer of living and dead roots, crowns and lower shoots that often develops in lawns. It can weaken and even destroy a lawn if not prevented or removed.

## Causes of thatch

Factors favorable to thatch development include excessive growth and conditions unfavorable to the microorganisms that decompose decaying plant parts. Rapid and excessive growth is likely to produce a heavy thatch because plant material is being produced more rapidly than it can be decomposed.

***\*\*Grass clippings from mowing do not contribute to thatch\*\****

Thatch buildup varies among lawns. Kentucky bluegrass has greater potential for thatch buildup than turf-type tall fescue and perennial ryegrass because of how it grows. Some lawns never develop a thatch layer, and others become thatch-bound within a few years after being established. The best lawn grasses are those that constantly reproduce new plants to renew the lawn. As old plants age and die, they decompose into fine-textured humus that becomes a part of the surface soil.



## Damage caused by thatch

Once thatch starts to form, conditions develop that often result in even more thatch. Accumulated thatch does the following:

- Harbors disease-causing fungi and insects
- Prolongs high humidity, which promotes disease
- Causes shallow root development
- Decreases movement of air, water and nutrients into the soil
- Binds or ties up pesticides

These factors contribute to early death of grass plants. Thus, thatch is both a result of unfavorable conditions and a cause of further damaging influences.

Thatch development may go unnoticed in early stages, especially in bluegrass lawns. Lawns with a thick thatch layer may appear healthy in spring, and then suddenly die in large patches during summer heat and drought.



## Preventing thatch

Thatch may develop over several years before noticeable damage occurs. Good cultural practices, starting when the lawn is new, may not prevent thatch indefinitely but can slow its formation.

### *Desirable cultural practices*

- Fertilize moderately and regularly to maintain vigor without excessive growth.
- Cut grass regularly with a mulching mower at 3" or higher to maintain vigor and to avoid shock. No more than one-third of the leaf tissue should be removed with each mowing. Clippings may be left to decompose if mowing occurs at regular intervals. As clippings filter into the turf canopy and decompose, nutrients are recycled to the turf
- Collect and remove clippings once a thatch layer has begun to develop to avoid further buildup.
- Irrigate deeply and infrequently to encourage deep rooting.
- Core aerify to improve penetration of water and fertilizer. Leave soil cores on the surface to dry and crumble before mowing. Mowing the dried soil cores redistributes the soil microbes that decompose soil and thatch, and aids in reducing thatch.
- Top-dress every one or two years with ¼ inch of Prescription Organic Matter to encourage decay of thatch.
- Avoid indiscriminate use of pesticides that damage earthworms. Earthworms naturally reduce thatch as they collect it from the surface and mix it deeper into the soil.



*The best way to get rid of thatch is regular aeration and good lawn care practices*

## Removing thatch

Examine the lawn closely regardless of how healthy it appears. Cut several plugs 2 or 3 inches deep. Lift and examine the profile. If thatch is present, it will appear as a distinct horizontal layer of brown spongy or feltlike material.

When about 1/2 inch of thatch develops in bluegrass, remove it before the grass is damaged. Thatch is best removed with core aeration. Coring causes less lawn stress than dethatching with a power rake or vertical mower and provides the additional benefit of reducing soil compaction.

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