

Grasspave2 and Thatch Buildup

Grasspave2 reinforces grass for traffic areas and prevents compaction. The porous base course below and grass surface allow rain to enter and pass through the cross-section quickly over long periods of time. However, several species of grass (dense turf types) are subject to building a thick layer of thatch (dead and dense organic material) on the surface. This layer can inhibit water penetration and also elevate the plant crown (active growing stalk) well above the protection provided by the Grasspave2 ring structure – allowing potential damage to the plant from traffic.

Warm season grasses (like St. Augustine and Bermuda) are very efficient at surface growth and starting new shoots off older stems, thus growing vertical rapidly, but leaving older stems to compact and capture clippings. Cool season grasses are generally slower in growth, but still subject to capture of mown clippings and allowing them to compact at the surface – generating thatch. Geographic areas with low moisture and/or low microbial activity to biodegrade the clippings will build thatch layers more quickly.

How can thatch layers be minimized or eliminated? Our suggestions are as follows:

1. **Collect mown clippings.** If biological activity is high enough to quickly degrade the clippings, then some nutrient value is actually returned to the root zone as the clippings degrade. If not, then the clippings should be captured in bags, vacuumed, or raked after each mowing, with nutrients supplied to the turf via fertilization, to minimize thatch development.
2. **Increase biological activity.** By adding active beneficial bacteria to the root zone of grass, biodegradation rates increase, minimizing surface layering. Use of active Humate materials, or similar, can provide additional bacteria which is in turn supplemented by micronutrients and regular moisture. This should be part of a pro-active turf maintenance program.
3. **Break up the thatch layer.** **DO NOT AERATE THE GRASSPAVE2 SURFACE.** Deep blade or hollow tube aeration equipment is frequently used to punch holes in dense thatch layers to allow air and water to enter soils below, but this equipment will severely damage the plastic structure. Instead, use spring tine type equipment (horizontal or vertical rotation) to dislodge large quantities of thatch – which are then raked and removed. Physical damage to grass blades will recover in appearance after the next 2 or 3 mowings.
4. **Remove thatch “sod”.** If the thatch layer has accumulated sufficient depth (.75” to 1/25” maximum) to affect water penetration, but still allows dense leaf growth above, then it may be possible to treat this layer as “sod” and remove with sod cutting equipment. Set the horizontal cutting depth to a level just above the top of the rings, cut the sod, roll up and remove. In many cases, this sod can be harvested (monetary value?) and installed elsewhere, perhaps needing only sand topdressing. The active growing plant crowns will have been removed from the Grasspave2 reinforced area, and re-establishment of the turf will require re-seeding or re-sprigging for new turf coverage (as done with a new installation).

5. **Burn the thatch layer.** While this action will frequently not be allowed by many municipal codes, or in areas subject to drought and high fire danger potential, burning lawns (usually in the spring) can be an effective thatch management tool. Burning pastures (usually at multiple year intervals) can quickly restore health to soils, reducing weeds, and allowing grass plants to re-establish. It is also possible to introduce another grass species by seed or sod with different growing characteristics, without use of chemical agents.

Thatch control is a turf maintenance issue – with or without Grasspave2 installed below. Local conditions can vary greatly, but there is always tremendous assistance available from local university extension service agents to address specific problems. Controlling thatch over Grasspave2 will ensure decades of porous pavement performance. If you have experience with additional techniques not mentioned here, please contact us and we will pass the information along.