

# "The solution to pollution is dilution"

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**O**ur college football field was sodded last year with Kentucky bluegrass and it has performed great. We want to build a strategy to control thatch build up and prevent annual bluegrass invasion. We are afraid that any annual bluegrass seed below the sod may reestablish as a weed if hollow coring is used, but we need to reduce thatch. Can we get by with just dethatching our sand-based Kentucky bluegrass field?

I like developing strategies and it sounds like you have put some thought into your specific needs and are on the right track. Let me just mention that I generally spend a lot of time convincing managers to increase thatch and biomass in high traffic areas that are normally devoid of turf and struggle with exposed bare soil. That's not your problem here. Instead, you have a highly managed field with enough fertility and irrigation to force growth and maintain continuous cover.

We often need to force growth with fertility, irrigation, and heavy seeding to meet the visual and playing demands of today's top fields. Fast recovery is imperative during the playing season; that's what you are hired to do. The down side of that is excessive thatch. Thatch accumulates when the rate of plant material production exceeds the rate at which it is removed or broken down by soil organisms such as bacteria, fungi, and earth worms.

Sand systems have low levels of these organisms and consequently thatch accumulates near the surface. In this situation the playing surface can develop excessive thatch that can lead to easier divoting. In the 2 inches just below the thatch excessive organic matter can also accumulate as roots decay. This causes more water holding and slower water infiltration.

Golf course superintendents battle the same problem on thatch prone sand-based putting greens. They use a catchy little phrase that can be adapted for your high performance sand-based field: "The solution to pollution is dilution." This means to dilute the thatchy pollution with frequent application of sand topdressing.

The best strategy in your situation to manage thatch and prevent annual bluegrass invasion on football fields would be to topdress more frequently with sand, use solid tines instead of hollow coring, and dethatch in the spring to avoid tearing up the field during the fall playing season.

In general, annual bluegrass invasion occurs mainly in late summer and fall at the same time you would normally seed cool-season grasses. Some annual bluegrass can also establish in the spring with summer being the least likely time that annual bluegrass would establish. Therefore, I would target your primary time for dethatching in the spring, just before your first mowing.

If you normally scalp the turf with your first mowing to remove all of the winter burned leaves, then this would also be the best time to dethatch. This can be combined with seeding and topdressing to fill in any weak areas that may exist. Spring dethatching is not normally recommended because it could encourage crabgrass germination. If you have a history of severe crabgrass then you may want to avoid spring dethatching; however, most high performance fields don't have much crabgrass pressure and a post-emergence application of Drive can be used if needed.

Solid tine each month from April through July with three-quarter inch diameter tines that are at least 3 inches long. Solid tine deep aeration could be justified in nearly any month of the year, but most athletic fields would use it at the end of the fall playing season to take advantage of winter heaving or even in the summer just before the fall playing season to create large coring channels that help remove puddles during the playing season. Apply a one-eighth inch of sand topdressing in April, May, August, and November.

Be creative and toss away some of the old rules to make it fit your specific playing season and circumstances. Since solid tining and light topdressing are don't severely stress grass you can get away with it in nearly any month of the year. You are accumulating thatch every day that grass is growing so if you are going to "dilute the pollution" then you'll need to frequently apply solid tine aeration and topdressing.

*Correction: Several numbers in Dr. Minner's column in our August issue were missing due to an error by the editor. Here are the correct sentences from the 4th paragraph of "After the flood": "Silt layers can range from 1/4 to 1 1/2 inches thick; drag thin layers or remove thicker layers to sufficiently expose grass blades for recovery"; and, "Anticipate loosing 1/2 to 2 inches of the original skin material when removing silt contaminated skin areas." Our apologies to readers and Dr. Minner. ■*