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Topdressing and Surface Maintenance
TOPDRESSING DEFINITION

- A uniform thin layer of soil or finely granulated organic material applied over the turf surface

- Act of adding soil or rootzone material over the turf surface
Reasons for Topdressing

- Reduce thatch/effects
- Reduce hard, compacted soils (in conjunction with cultivation)
- Can improve the profile (physical properties of the soil) via aerification and consistent application over time.
Reasons for Topdressing

- Improve aeration and drainage
- Level minor depressions
- Improve seedbed for overseeding
- Winter protection for crowns

Photo Credit: Sean Gault
Assess Rootzone Physical Characteristics

- What is the texture of the rootzone?
- What topdressing material would match up with the existing rootzone?
- Am I trying to alter the existing rootzone?
Assess Rootzone Physical Characteristics

- Texture
- Structure
- Bulk density
- Porosity
- Saturated hydraulic conductivity
Topdressing Materials

- Sand
- Compost
- 60:20:20 (or another mix)
- Don’t switch materials!!

Photo Credit: Sean Gault
Layering Issues

As seen in this soil profile, layers of differing soil texture impede water movement through the soil, resulting in a shallow root system.

Photo Credit: USGA
Topdressing Materials- Talk about each one

- Soil- Can drag existing aerification plugs into place
- Sand w/ organic matter- Usually between 95:5 and 80:20
- Compost
- 60:20:20 (sand: soil: organic matter)
- Don’t switch materials!!
Selecting Sands for Topdressing

- Quartz vs. Calcareous sands
  - Quartz/feldspar - more resistant to weathering
  - Calcareous - can break down in acid conditions
- Medium—coarse in texture (but avoid gravel)

Photo Credit: Sean Gault
Selecting Amounts for Topdressing

**Amount needed**

The amount of topdressing material needed will depend on the purpose of the topdressing. A light application, a 1/8" - 3/8" layer which is about ½ - 1¼ cubic yards for each 1,000 sq. ft., is usually used when seeding or overseeding.

Topdressing to amend the soil to relieve compaction will require a heavier application, enough to fill the aeration holes. To change the soil profile by actually building a sand cap will take much more material.

**Topdressing amounts**

<table>
<thead>
<tr>
<th>Approximate Depth (inches)</th>
<th>Approximate Amount Needed cubic yards/1,000 sq. ft.</th>
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</thead>
<tbody>
<tr>
<td>1/8</td>
<td>0.4</td>
</tr>
<tr>
<td>¼</td>
<td>0.8</td>
</tr>
<tr>
<td>3/8</td>
<td>1.2</td>
</tr>
<tr>
<td>½</td>
<td>1.5</td>
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<tr>
<td>¾</td>
<td>2.3</td>
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</tbody>
</table>
Logistics Consideration for Topdressing

- Develop a long-range plan—Is regular topdressing a practice you can commit to? Acreage?

- Annual plan—what can you fit into your labor and materials budgets? Is there time to do this?

- Can you work around the race schedule?
Logistics Consideration for Topdressing

- Whereas you can aerify or cultivate “piecemeal” by lanes, you don’t want to make a habit of topdressing by lane

- Irrigation capability/resources- How well you can “manage moisture” can have an impact on topdressing decisions.
Topdressing Timing

- Race schedule considerations
- Good growing conditions
- In conjunction with cultivation, if possible
- 1-3 Times/Year
Topdressing Case Study

- Use a Dakota Peat 440 Turf Tender
- 32 Acres
- 2.75-3 Tons/Acre
- ~ $4,500 /application for 32 acres

Sand Cap System

- Idea is to combine the advantages of a sand-based system with minimizing interruption.
- Drainage installed
- Sand topdressing is aggressive to try to build up the sand layer
Divot mix

- Somewhat separate from a topdressing and has its own considerations.
Thank You!

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