

# Fix your crown

Avoid sand buildup that can cause your collars and approaches to become crowned and thus impede proper drainage off of the putting surface. *By Dustin Riley, CGCS*

The summer of 2010 delivered some extremely challenging weather for golf course superintendents all across the country. In Wisconsin and parts of the upper Midwest, record rainfall totals, high humidity and lengthy stretches of above average night time temperatures throughout June, July and August provided stresses that superintendents and their turf hadn't seen since 1995 – albeit Summer 1995 still ranks No. 1. Water management is crucial in assisting the turf survive these types of environmental stresses. And yes, irrigation scheduling and proper hand watering techniques are the obvious responses for proper water management. And, of course, drainage is always something that becomes obvious as water accumulates in low areas following rain events.

But, what if this accumulation of water is occurring on your putting surfaces as a result of slowed or impeded surface drainage? As superintendents, we focus on providing the best root zone medium for the turf on our putting surfaces. Sand topdressing is a major component in maintaining or modifying the root zones and improving putting surfaces. Throughout the growing season,

sand is periodically applied to the putting surfaces as part of turf management programs – deep-tine aeration, core aerations and topdressings. If these turf management programs are in place for many years, a buildup of sand can develop on the collars and approaches as a result of the repetitive brushing or dragging of the sand across the putting surfaces. This sand buildup can cause the collars and approaches to become crowned and thus impede the proper drainage off

of the putting surface. Since the crowning slows the surface drainage, more water is forced to enter the soil at the front of these greens. The increased soil moisture can raise soil temperatures, reduce air filled pore space, negatively impact turf rooting and induce disease concerns. All of which impact turf health and quality and could lead to potential thinning, which many witnessed this season.

To improve the turf health, crowned areas need to be cor-

rected to assure there's positive surface drainage off of the green surfaces. I'm sure there are various methods which could be used to correct a crowned collar or approach.

Here are two methods that have worked well and could be considered if you encounter a similar situation. **GCI**

*Dustin Riley is superintendent at Oconomowoc Golf Club in Oconomowoc, Wis.*

1b.



Method #1:  
Slight Crowning (<1")

1c.



1d.



1e.



- 1a. Identify the crowned area.
- 1b. Aerate crowned area with ½" or greater hollow tines. 2" spacing (or tighter if possible)
- 1c. Remove all cored material.
- 1d. Hand water cored area until saturated.
- 1e. Roll area with drum style roller (Sidewinder style greens roller, 1 ton asphalt roller) forcing the aeration holes to collapse and close. This process could result in a ¼"-1/2" drop in elevation per event.
- 1f. Allow to heal and repeat as necessary until crown is removed and proper surface drainage can be achieved.

2a.



2b.



## Method #2: Moderate to Severe Crowning (>1")

- 2a. Identify the crowned area.
- 2b. Remove sod and carefully store. Label and place each row of sod so each piece can be easily returned to the exact same location it was taken from. This is crucial to promote faster healing and to avoid "sod square" discoloration.
- 2c. With sod cutter, set depth of blade to match desired soil removal. Cut and loosen soil throughout the crowned area to desired depth and remove material. Repeat until crown has been removed. Measure surface elevation with transit to ensure proper surface pitch.
- 2d. Finish rake and float the soil surface in preparation for sod replacement. If soil surface is too soft, lightly roll and pack to reduce any unevenness or foot printing.
- 2e. Apply starter fertilizer and begin replacing sod in reverse order. Again, replacing each piece exactly in the same location as before will promote a faster healing and eliminate any future "sod square" discoloration.
- 2f. Following sod replacement, blow the surface clean of any debris or soil.
- 2g. Slowly roll the entire area to smooth the surface and seal the seams.
- 2h. Hand water area to begin the healing process.
- 2i. All of us manage turf in different locations with varying degrees of geographical and environmental influences. Unfortunately, summers such as 2010's highlight and enhance turf concerns that may not normally be visible. Renovating a crowned collar or approach is not a complex process. But the result can become extremely valuable in assisting the surface drainage component of your water management for your greens.

2c.



2d.



2e.



2f.



2g.



2h.

