

# My Turf is Stressed and So Am I San Diego 2016

Winterkill and Injury in Tennessee

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- Winter Injury in Tennessee in 2013 and 2014
- Widespread injury to Ultradwarf greens, tees, fairways and roughs 2014/2015
- Ways that superintendents in Tn are trying to prevent injury this winter and processes that we used recover.

# 419 Bermudagrass Fairway



# Zoysia Fairway



Bermudagrass infiltration

# Overall Winterkill





Shaded wet area, 419 bermuda



# MiniVerde Green



# Champion Green





# Traffic



# Traffic



# Shade and Lack of Drainage



# Preventing Winter Injury

- Covers on Ultradwarf greens
- Address shade issues
- Drainage
- Basic common sense agronomic practices
- Increased attention to thatch and compaction



# Turf Covers on Greens



TPC Southwind













Green soil temp: single cover no snow vs single cover 3" snow

# Mark the edges



# Mark orientation of cover





# Don't wait too long





# Hint that double covers work





Make sure they are secure!  
12" tent stakes





# 10" nails with plywood washers





# Blown cover







# Resistance to Covering?

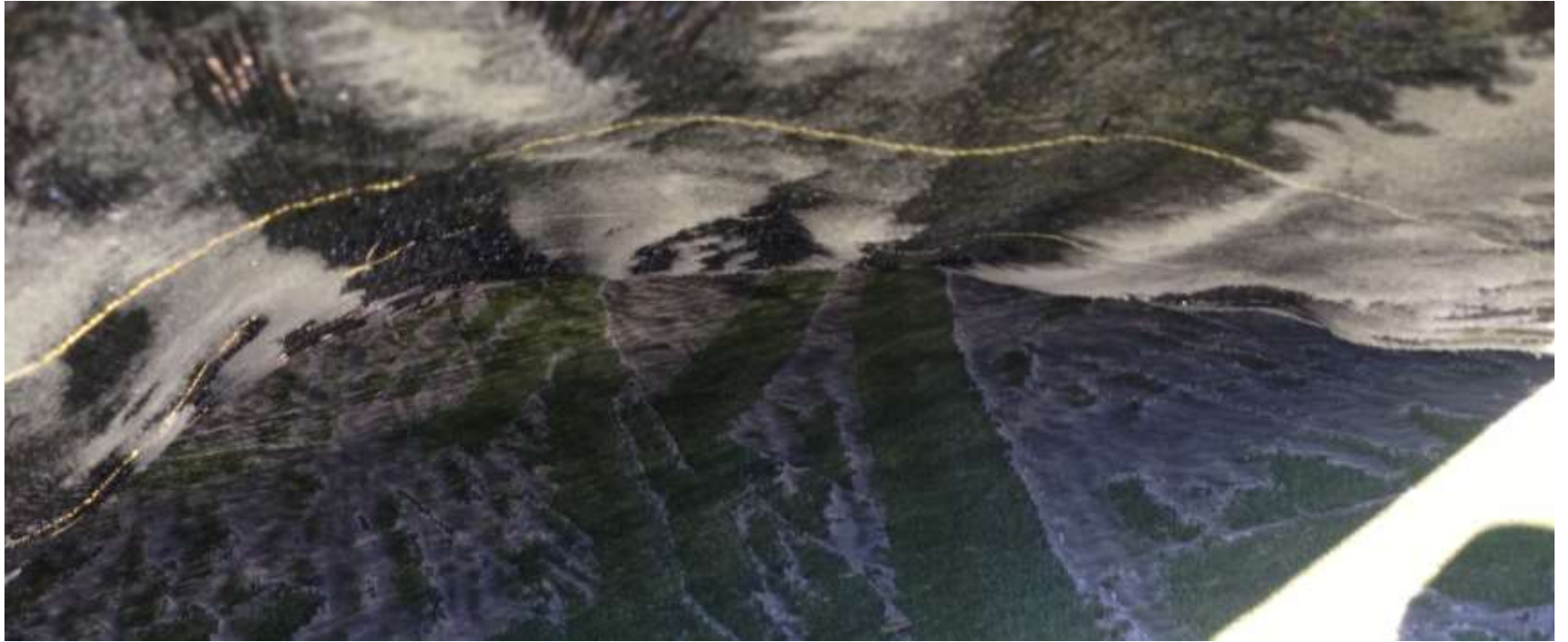
- GM's and Golf Pros resistant to covering?
- Covering email blast
- Evolved into year round forum
- This winter there are changing trends on covering criteria



# When to Cover?

- Past few years, when lows are going to be 24 or below. Double cover when in teens
- Daytime highs not above freezing
- This year, lows below 26.
- Covering earlier in the day and staying covered longer.
- 3 acres of greens, 10 crew members, 4 to 5 hours. No wind, 3 hours
- Not uncovering as much this winter

# Uncovering?



# Wait till the ice is gone.






**Bermudagrass green surround**

**TPC Southwind, Memphis**

- Northern slope
- Lower height of cut
- Traffic (compaction)



A large black tarp is spread out over a grassy field, covering a significant portion of the foreground and middle ground. In the background, there is a large, multi-story school building with a central clock tower. Several bare trees are scattered around the field and building. The sky is clear and blue.

Solution: Extended the coverage  
area with a “Larger tarp”



Covering a high traffic walk up

# Increased Cultivational Practices

- Core aerification once a year. ½" cores
- Solid needle tine once per month April/May through September/October
- Dryject 2 times per year in problem areas
- Verticutting and topdressing 1x per week

# Clean up laps on greens





# Additional verticutting 1 x per week





# More Aggressive Verticutting





# Debris from a single green





# Once a week







# Finished Product



# Weekly Topdressing





# Black Sand?



# White Sand



# Green Sand



Early Start on Aerification Cores 1 x year,  
usually July or August









Verticut after core clean up





Blow, drag, roll









# DryJect?





# Costs

- 100,000 sq ft of greens run \$4,500 on a 3"x3" spacing
- 450lbs sand per 1,000 sq ft
- Sand is extra. It needs to be kiln dried. \$30 ton for bulk.



# Deep Tine Aerification







# Air2G2



# Needle Tine



Once per week  
on problem greens

Once per month on  
healthy greens



@FramaticApp



# Topdressing before Needle Tine





# Moisture Control During Winter

- Hand water high spots before covering
- Water whole green if it hasn't rained, moisture meter goal 25-30%
- Monthly application of wetting agents to keep moist but water moving through

# Shade Reduction on Problem Greens



# Shade at 3pm



# \$20,000 in Tree Work





3pm after trimming



# Tree Trimming Extreme



# TPC Southwind









# Sodding





May 18th

June 20th



August 18th

**Grow in Program, no sprigging**

# Other Areas Were Aerified and Grown Back



Bear Trace at Harrison Ford



# The Worst Areas Got Sod





# Big Roll Sod



# Fairways and Tees



Aerification, verticutting  
Extra aerification on compacted areas





# Topdressing Tees







# Shade and Drainage



#10 Fairway at Bear Trace at Harrison Bay

# Several Stage Process



#10 Fairway at Bear Trace at Harrison Bay

# Bear Trace at Harrison Ford





# Serious Drainage



B  
e  
a



TPC Southwind



# Finished Sod on Fairway





Just had to have a nice picture



# Main Lessons Learned in TN

- Make a decision quickly! Sod sooner rather than later
- Pesticide and nutrient programs varied across state, but all were focused on consistent health of turf
- Pay more attention to basic principles
  - Air movement
  - Sunlight
  - Moisture Control on greens, too much and too little
  - As aggressive as possible on thatch control
  - On Tees, Fairways and Roughs, even if you can't aerify everything at least do the trouble spots
  - More drainage everywhere!

# Questions



Shelia Finney