

Ball Mark Study on Bentgrass Greens

Andrea C. Bakalyar
The Wee Course at Williams Creek
Knoxville, Tennessee

Objective of Study

- Determine if there is a significant difference in the heal rates between popular bentgrass varieties
- See if temperature/season effects healing rate



Ball Marks



- Wanted a consistent way to measure rate of heal
- Using soil probe, made 5 holes within inches of each other
- Holes = 1" in diameter



Study Criteria

- "Normal" N applications = .05 lbs N /Week
- Tests done on partial sunny Bentgrass plots at The Honors Course in Chattanooga, TN
- Measurements were taken weekly to determine % of heal

Bentgrasses Studied

- Penncross
- Pennlinks
- Crenshaw
- L-93
- SR1020
- G2
- A1

	10/30/00	5/14/01	7/31/01	10/31/01
Plots:				
Penncross	47%	24%	42%	32%
Pennlinks	41%	33%	51%	39%
Crenshaw	38%	33%	44%	37%
L-93	39%	36%	46%	32%
SR1020	45%	33%	50%	41%
G2	43%	23%	46%	41%
A1	44%	25%	50%	37%

Percentage of recovery @ 28 days

Over all Performers at 28 days- October 2000

SUNNY PLOTS:

■ Penncross	47%
■ SR1020	45%
■ A-1	44%
■ G-2	43%
■ Pennlinks	41%
■ L-93	39%
■ Crenshaw	38%

Overall Performers at 28 days- April 2001

SUNNY PLOTS

■ L-93	36%
■ Pennlink	33%
■ Crenshaw	33%
■ SR1020	33%
■ A-1	25%
■ Penncross	24%
■ G2	23%

Overall Performers at 28 days- July 2001

SUNNY PLOTS

■ Pennlinks	51%
■ SR1020	50%
■ A1	50%
■ L-93	46%
■ G2	46%
■ Crenshaw	44%
■ Penncross	42%

Overall Performers at 28 days- October 2001

SUNNY PLOTS

■ SR1020	41%
■ G2	41%
■ Pennlink	39%
■ Crenshaw	37%
■ A1	37%
■ L-93	32%
■ Penncross	32%

October 2000 vs. October 2001

2000 Plots:

Penncross	47%
Pennlinks	41%
Crenshaw	38%
L-93	39%
SR 1020	45%
G2	43%
A1	44%

2001 Plots:

Penncross	32%
Pennlinks	39%
Crenshaw	37%
L-93	32%
SR1020	41%
G2	41%
A1	37%

What's weather got to do with it?

- Temperature- Does matter. October 2000, temperatures were 5.2 degrees above normal; in 2001 temperatures were only 0.6 degrees above normal.
- Least Significant Difference Test
(Courtesy of the University of TN)

What do the numbers mean?

- That no one Bentgrass variety dramatically out performs in this ball mark recovery test.
- Why do the shady plots heal better/poorer?
 - Fall: Over hang of leaves keep air temperatures warmer at night.
 - Early Spring: Less sun, therefore cooler air temperatures.

What about bent & ball marks?

- Pick your bent for every reason other than Ball Mark Recovery ability
- Find a happy balance between green speed and rates of N
- Human Error- Become more proactive & educate players



Traditional Ball Mark Repair





The GreenFix Tool

- Player always has the tool handy
- Prongs are short, so grass can not be lifted & pulled from roots
- Player is less likely to damage the turf grass
- Player does not have to bend over to repair mark
- Could dramatically decrease Ball Mark damage because....
 - 1) Players are more likely to repair marks.
 - 2) They are more likely to do it right or at least not entirely wrong.



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The Wee Course at Williams Creek
Knoxville, TN
acbakalyar@msn.com