Asking the Tough Questions

GRADY MILLER

NC STATE UNIVERSITY

Background

- First Q&A September 2000 – Topdressing football fields with DOT sand
- 17yrs x 6 columns/yr + 3 = 103 Q&As
- A look back among the 103 . . .

- Questions from: field managers, coaches, parents, city managers, landscape architects, athletes, consultants, Master Gardeners, . . . students.

SportsTurf Articles:

1. Topdressing materials
2. Renovation and getting rid of bahia
3. Dual use field in California
4. Algae
5. Salts in topdressing materials
6. Coping with drought
7. Athletic field usage
8. Thin soil layer
9. Scheduling irrigation
10. Field slopes
11. Cutting heights
12. Landfill soccer design
13. Physics and soccer fields
14. Chemical removal of ryegrass
15. Low soil pH
16. Organizing sports turf presentations
17. Verticutting and aerification timing
18. Shoe/cleats
19. Low areas, seeding
20. CEC
21. Ryegrass
22. April fool
23. Irrigation distribution
24. Establishment method – bermudagrass
25. Fence height of baseball field
26. Submerged fields
27. Native grass fields
28. Putting lines on fields
29. Best grass, mowing height, fertilizer, pests
30. Pesticide information
31. Master Gardner questions about field
32. Planting common bermudagrass/renovation
33. Rolling athletic fields
34. Moving to a new job, new location
35. Renovation sties for baseball field
36. Baseball field construction before winter
37. Building a football/soccer field and its slopes
38. Crumb rubber
39. Vandalism
40. Paint by numbers
41. Back to school, gulp!
42. Earthworms
43. Drought recommendations
44. Field establishment without water
45. Management of synthetic turf
46. Grass roots fields
47. Dressing your field
48. Overseeding with ryegrass
49. ?ost – Budget cutting
50. Shopping for a new grass
51. Is K special?
52. Seeding versus sprigging
53. Abandoned fields: how to manage
54. Polystand fields
55. Last field renovation
56. Overseed damage
57. Fire ants
58. Blood on field
59. Seeding date
60. Green colorants
61. Chill damage
62. Budget cut priorities
63. Practices of Pros vs. HS
64. Seedheads
65. Overseed rates
66. African fields
67. New Normal
68. Calendar management
69. Synthetic turf
70. Getting help
71. Good field?
72. Native soil
73. Prank: Goats on field
74. Moisture meter
75. Synthetic field – Coach's perspective
76. HS field renovation
77. Ryegrass damage
78. Overseed alternatives
79. Winterkill
80. Overseed removal
81. Importance of research
82. Too late, winter hit
83. Core aeration of new fields
84. Part-time field
85. Fertilize (non-overseed) or not?
86. PGRs
87. Aerify Early
88. Writing Q&As
89. Crabgrass control
90. Too late?
91. ZTR cut quality
92. Wet, Wet, Wet
93. License to Kill
94. Schools out, now what?
95. Soil testing
96. Politics of turf management
97. Bringing about change
98. Field Use Scheduling
99. Appreciation for those before me, Dad
100. Round-up, carcinogen
101. A look back at questions
102. Hurricane-soaked fields
103. Slick Ryegrass

Writing a Q&A July 2015

- Phone call questions → email, text
- Pictures (cell phones)

- I check my writing history of question
- Do my research
- Write a Draft
- Re-write
- Send → Eric the Editor

Q&A's by Category:

1. Personal/Profession - 15
2. Field Construction/Design - 9
3. Mowing/Aerification/Rolling - 9
4. Ryegrass/Overseeding - 8
5. Grass Selection - 6
6. Turf Establishment - 6
7. Weed Control – 5
8. Pesticides/Pests – 4
9. Soil issues - 4
10. Flooding – 4
11. Cold temperature damage – 4
12. Synthetic turf - 4
13. Topdressing - 3
14. Drought - 3
15. Useage/Wear - 3
16. Painting/Colorants - 3
17. Nutrition - 3
18. Irrigation – 2
19. Vandalism - 2
20. Math - 2

Sports Turf Situation Report

1. Constantly fighting results of poor construction
2. Constantly fighting results of overuse
3. Insufficient trained labor for tasks
4. Insufficient "useable" equipment for tasks
5. Insufficient money and resources
6. Overcome by environmental influences
7. Dealing with unreasonable expectations
8. Not knowing best "thing" to do
9. Accumulation of problems
10. Communicating the issues with "others"

Q&A, September 2017

- Most asked questions?
- Hardest question to answer?
- Most controversial column?
- Most unusual question?
- Why is grass green?
- Most insignificant question that just will not go away?

Most Asked?

1. Weed Control
   - General Weed Control Programs
   - Targeting Specific Weeds
2. Grass Selection
   - Species
   - Cultivar(s)
3. Field Use limitations

Weed Control

Grass Selection

TABLE 11. MEAN TURFGRASS QUALITY RATINGS OF BERMUDAGRASS CULTIVARS AT RALEIGH, NC 1/ 2015 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=BEST 2/

NAME	QUALITY RATINGS MAY	JUN	JUL	AUG	SEP	OCT	MEAN
TIFTUF (DT-1)	6.0	6.0	7.0	7.7	4.0	6.7	6.2
PATRIOT	5.0	6.7	6.7	7.7	5.0	5.0	6.0
JSC 2-21-18-V	6.0	7.0	6.7	7.0	3.3	5.3	5.9
11-T-310	5.0	6.3	6.7	7.7	4.0	5.3	5.8
LATITUDE 36	5.3	6.0	7.0	7.3	4.3	5.0	5.8
OKC 1302	5.3	5.7	7.0	7.3	4.3	5.3	5.8
JSC 2-21-1-V	4.7	6.3	6.7	6.7	4.3	5.3	5.7
OKC 1131	5.0	5.7	6.3	7.3	4.3	4.7	5.6
ASTRO	4.7	5.7	6.0	6.0	3.3	4.7	5.1
FAES 1325	4.0	5.7	5.7	5.7	4.0	5.7	5.1
OKC 1163	5.7	6.0	6.3	5.7	3.0	3.7	5.1
TIFWAY	4.7	5.7	5.7	6.0	3.7	4.3	5.0
FAES 1327	4.7	5.3	5.7	6.0	3.3	4.3	4.9
RIVIERA	4.0	4.7	5.7	6.7	4.0	4.3	4.9
CELEBRATION	3.7	4.0	5.7	6.3	4.0	5.3	4.8
JSC 2007-13-S	4.3	4.3	5.7	5.3	4.3	4.3	4.7
FAES 1326	2.7	4.3	6.0	6.0	4.3	4.3	4.6
11-T-251	4.0	4.7	5.3	5.3	3.3	4.3	4.5
MBG 002	3.7	4.3	4.7	5.3	3.7	5.0	4.4
MSB 201	4.7	5.0	4.7	4.7	3.3	4.0	4.4
JSC 2007-8-S	3.7	4.3	5.3	4.7	3.7	4.0	4.3
OKS 2011-1	4.0	4.0	5.3	4.7	3.7	4.0	4.3
PRINCESS 77	3.0	4.0	5.3	5.0	4.0	4.3	4.3
YUKON	3.0	4.7	3.7	5.3	4.3	4.7	4.3
BAR C291	3.0	4.3	5.0	5.3	3.7	4.0	4.2
JSC 2009-6-S	4.3	4.3	4.3	4.3	3.3	4.0	4.1
OKS 2011-4	3.7	4.3	4.0	5.0	3.7	3.7	4.1
12-TSB-1	3.0	3.7	4.7	5.3	3.3	4.0	4.0
JSC 2009-2-S	4.0	4.0	4.0	4.0	3.3	4.0	3.9
OKS 2009-3	3.3	4.3	4.0	4.7	3.7	3.7	3.9
KASHMIR (PST-R6P0)	3.3	3.3	3.7	3.7	4.0	4.3	3.7
NORTH SHORE SLT	3.0	3.3	3.7	3.7	3.7	3.7	3.5
PST-R6T9S	3.3	3.3	3.3	3.3	3.3	4.0	3.4
NUMEX-SAHARA	2.3	3.0	3.3	3.7	3.7	3.3	3.2
PST-R6CT	3.3	3.0	3.3	3.0	3.0	3.3	3.2
LSD VALUE	0.8	0.9	1.3	0.9	1.9	1.1	0.6
C.V. (%)	13.3	12.6	15.3	11.4	18.0	14.8	8.7

How much can it take?

Sep 2001, March 2017

Establish Yearly Usage Maxims

(2 – 4 – 6 – 8 – 10 Rule)

200 hr or less – sustain good field conditions

400 - 600 – good field conditions with some thinning and localized wear areas

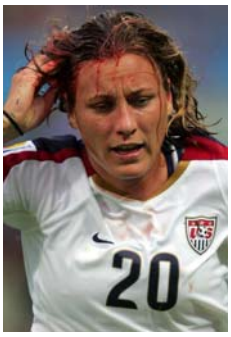
800 - 1000 – fair field conditions; expect thinning and wear

1000 or more –expect significant thinning, turf loss, surface damage, increased risk of athlete injury

Practice Area Opportunities

Hardest to Answer?

- What to do when there is blood on a field? July 2010
  - No report found of HIV or hepatitis transmission from turf
  - Rubber gloves
  - Body Fluid Clean Up kits
  - Mild detergent solution or 10% bleach, allow 10 minutes.
  - Water flush



Most Controversial?

- Using alternative cleat designs to reduce damage to sports turf. Aug 2003

Most Unusual Question?

In sports, being a GOAT is nothing baaa-d - The Washington Post
https://www.washingtonpost.com/...goat.../c996e368-1eff-11e3-94a2-6c66b668ea55_...

Sep 19, 2013 - This week I thought we would look for **GOATs**. What's a **GOAT**? Sometimes people call the player who messes up to lose the game the **goat**. But the **GOAT** that I mean is the Greatest of All Time: **G-O-A-T**. So let's find **athletes** competing these days who are the Greatest of All Time at what they do. Consider ...

Goat Prank Closes Burns High School Football Field In Lawndale, N.C. For 6 Months

A prank at Burns High School in Lawndale, N.C. has left the school's football team without use of its field for the next six months.

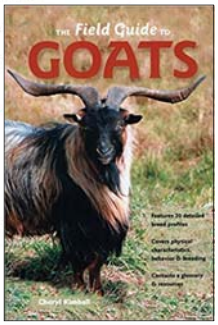
The night of Thursday, Oct. 18, several unnamed students released 10-12 goats belonging to the school's agriculture department onto the field at Ron Greene Stadium.

According to Donna Carpenter, the school system's public information officer, the extended closure of the field was due to a recent outbreak of E. coli in Cleveland County, ABC News reports.

There have been just shy of 100 cases of E. coli, and one small child has died. *The Charlotte Observer* reports the outbreak was linked to the Cleveland County Fair, and health officials are investigating the petting zoo as a possible source.

Principal Aaron Allen told the *Observer* that school officials applied a bleach-based compound to the track surrounding the field, but that it was impossible to clear possible E. coli bacteria from the grass and soil.

ABC News reports that the Cleveland County Health Department inspected the field after the goats were captured and, based on the state's recommendation, elected to close the stadium for at least five months -- the amount of time it takes the virus to die.

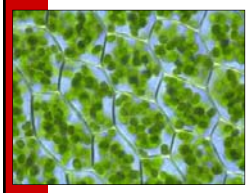


Jan 2013

Why is Grass Green?

- There is no such thing as a bad question! April 2004

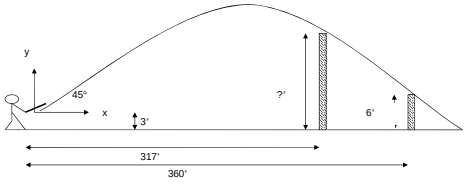
Why is it NOT green?



"Three ingredients to the good life: learning, earning, yearning." Chris Morley

Most Insignificant Question that Will not Go Away? Oct 2004

How high to build an outfield fence/wall?



fence would need to be: 45 feet 5 inches

(Green Monster is 37.2 feet high, 310 feet from home plate)

Other Noteworthy Questions

Construction Designs

- Alternative slopes (Mar 2002)
  - Architect called for 1.5% from centerfield towards goals . . .

- Field Over landfills (July 2002)
  - 1.5 to 2% slope from sideline to sideline due to landfill digging limitations . . .
  - Over 180 ft, 0.5% is almost 11 inches.

Best Mower to Use?

Maximize with what you have!

Overseed Removal Products

- Kerb (Pronamide)
- Manor [or Blade] (metsulfuron)
- TranXit GTA (rimsulfuron)
- Revolver (foramsulfuron)
- Monument 75WG (trifloxysulfuron)
- Corsair (chlorsulfuron)
- Certainty (sulfosulfuron)
- Katana (flazasulfuron)

[many of these have activity on other weeds, including broadleaf weeds]

Best Mowing Height? Aug 2005

Hybrid bermudagrass

- ✓ "Sweet Spot" ¾ to 1 ½ -inches
  - Best wear tolerance
  - Most leaves per stem
- ❑ 1 ½ to 2-inches not bad but will see
  - Shoot density decline
  - Blades more prone to wear
  - Fewer plant to recover
- × > 2 – inches should be avoided

Low areas and drainage, Feb 2005

Hurricane flooding, Nov 2017

Carter-Finley during Hurricane Matthew
October 8th

Aerification

June 2003, May 2011,Sep 2014, May 2015

- Core fields regularly
  - Low traffic – once or twice per year
  - High traffic – two to five times per year
- Use hollow tines when possible.
- Heavily compacted areas may require deep tine or shatter tine aerification and/or more frequent aerification.
- Effects may only last a month!

Help with the Decision to Close?

March 2013

Know your Irrigation

Jan 2002, June 2004, Jan 2008

Paint your fields green! Nov 2010

Picking a new grass is like picking a new car . . .

March 2009, Jan 2017

Managing "Abandoned Fields"

Sep 2009, July 2016

Start with a General Management Plan

- Mowing (equipment, HOC, frequency, etc)
- Aerification (equipment, frequency, etc)
- Fertilization (products, rates, timing, etc)
- Weed Control (products, rates, timings, etc)
- Irrigation - if available (timing, amounts, etc)

Manage All Your Surfaces

Slide 33

GM1 Grady Miller, 1/8/2018

For Groups of Fields, Establish Field Categories and Relate them to Maintenance Levels, Budget, Use

- Championship
- Tournament
- Recreational

or

- Game
- Practice
- Class/Recreation

Synthetic Turf Management,

May 2012, May 2013

Where do I get Help? July 2012

- Fellow “Field Managers”
- STMA members
- University Extension Service
- Other turf managers (e.g., golf course)
- Local schools (labor, knowledge, etc)
- Periodicals
- Online Help
  - University sites
  - Search engines (e.g. Google.com)

Publication Resources

Appreciation of those that help you along the way . . . May 2017

Always looking for Questions:

grady_miller@ncsu.edu

SportsTurf
MANAGERS ASSOCIATION

Experts on the Field, Partners in the Game.