Scott Field of Mississippi State University Earns Football Field of the Year Honors

BY SUZ TRUSTY

Scott Field of Mississippi State University earned the Sports Turf Managers Association 2003 Football Field of the Year honors in the College/University division. The Scott Field site on the campus in Starkville, has been in continuous use for football since 1914. Since that time, the stadium has undergone numerous renovations and expansions. Lighting was installed in 1986. The most recent stadium expansion, completed in 2001, added an upper deck with skyboxes and 8,700 seats to the east side of the stadium, bringing the seating capacity to 55,500.

The field has also undergone many renovations. Bart Prather, MSU Sports Turf Manager, says, "The current field is a Prescription Athletic Turf (PAT) sand-based soil system that was installed in 1977. It was the second collegiate field in the country installed using this system, and was the first Bermudagrass field. This is a straight sand field, with no organic material added to the soil profile. The PAT system includes the standard extensive subsurface drainage system with a pump located approximately 30 yards beyond the north end zone. For the most part, the field is gravity-drained, but we can use the pump to pull water through the system to maintain a dry playing surface before and during heavy rain events. Though we generally pump only two to five times a year, it's an effective tool to have in our overall field management program.

"The sand-based PAT system is not continuous around the perimeter of the field. The soil profile is sand-based from sideline to sideline, and at installation (for reasons unknown), only one-half of each end zone was installed with sand. All the field surrounds are a heavy clay soil that is very subject to compaction and requires separate irrigation and fertility strategies. We use tarps to reduce turf damage on the sidelines, but wear from foot traffic by cheerleading crews is always an aesthetic problem. The irrigation system is a Toro Monitor II hydraulic system with Toro 640 heads installed in the field at 48 foot spacing."

Prather inherited his "green thumb" as both his parents were raised on farms and the growing aspect just came naturally. His first sports turf experience came during his sophomore year of high school. As a player on the school's baseball team, he helped with field maintenance. At first he thought coaching would be his career path. He graduated from Meridian Community College and then spent a semester at the University of Southern Mississippi on a baseball scholarship before transferring to MSU for the sports turf program. After graduation, he became sports turf manager for War Memorial Stadium in Little Rock, where he oversaw a field conversion from a synthetic surface to natural turf. Next, he moved to the head spot at the University of Arkansas in Fayetteville, where he oversaw the conversion of that football field to natural turf. He accepted the MSU position five years ago.

So, when extensive renovation was necessary for Scott Field in 2002, it was easier for Prather and his staff. He says, "Laser leveling was used to return the crown to a zero percent grade. We want the water to infiltrate straight down and percolate through the sand profile rather than surface drain to the heavy clay surrounds. The field was fumigated to control soil-borne nematodes and any potential Bermudagrass contamination. Then the field was sprigged with MS-Choice Bermudagrass using custom row planting."

MS-Choice Bermudagrass is a unique tetraploid cultivar (often referred to in the turf industry as a "common" Bermudagrass) that was selected, developed, and patented by Mississippi State University. It is marketed nationally as Bullseye Bermudagrass.

"We initially selected this grass for its genetically dark green color and exception-
al canopy density,” notes Prather. “It has more of a lateral growth habit than other bermudagrasses and it resists scalping during mowing in the early to mid-fall months. MSU had replaced our previous Tifway 419 bermudagrass turf with the MS-Choice before the 1996 season. We had been very impressed with the improved tolerance to wear, so we knew it was the turf we still wanted.

“We’re just starting our third season with the new MS-Choice and it seems to be getting even better the more mature it gets. We’ve learned that it will initially appear a little leggy, more like common bermudagrass, as it comes out of dormancy, but will develop a dense canopy within three to four weeks into the growing season. The high density does make getting good seed to soil contact a challenge when we do our overseeding with perennial ryegrass. We drop the mowing height from 5/8-inch to 1/2-inch, verticut and sweep the field in multiple directions, and then put down the seed. We had tried a less aggressive program the first time we overseeded and the rye really struggled to take hold. Since so many of our games are televised, our goal is not only to provide the best possible bermudagrass base for playability, but also a pleasing appearance on the screen. We’re far enough south that the transition back to bermudagrass is generally easier. We do speed the process by spraying out the perennial ryegrass with metsulfuron right after the spring football game.”

Scott Field is dedicated to football. It hosts two weekend camps per year, usually in mid-June or late July. The Bulldogs’ spring season runs from mid-March to mid-April. This puts six or more practices or scrimmages on the field plus the season wrap up Maroon and White game. Players report for the fall season and two-a-day practices around the first of August and will scrimmage on Scott Field at least three times during the second week of August. It will handle another three to six practices spread through the fall season. The Bulldogs play a six to eight game home schedule. In the recent past, the field has hosted university commencement exercises and selected high school football games at the request of university and athletic department officials.

“Weather is always a factor. By late May, we’re into the mid-80s with humidity in the mid-80s. Our summer temperatures hit the hundred plus degree range occasionally and average in the low to mid-90s with humidity levels consistently in the high 90s. It can be tough on our crew and we start work by 7:00 AM to help work around it. The good part is the bermudagrass thrives on it. We try to wait as late as possible to overseed each season because of the heat impact on the perennial ryegrass, but we must let the schedule dictate the timing. We do want the rye coverage once the Bermuda goes dormant. During the winter, our average low is in the upper-20 to low 30-degree range, though we can dip into the teens and single digits. Then we deal with

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early morning frost. With the new addition on the east side of the stadium, we have to wait a bit later to paint to allow the sun to hit the field.”

Prather, and Assistant Sports Turf Manager Jason Smith, manage all of the MSU athletic fields working directly for the MSU Campus Landscape Department. The MSU Athletic Department contracts with the Campus Landscape Department on a yearly basis for the maintenance of the athletic fields. In addition to Scott Field, there are two grass football practice fields, a new generation synthetic turf practice field, the women’s soccer and softball fields, Dudy Noble Field for MSU baseball, and the track and field facility. They also oversee the grounds in the northwest part of campus, which include those surrounding the Athletic Department and the Coliseum. Prather also has one full-time landscape turf individual on staff to care for these areas and help on the fields if needed.

All of the athletic fields double as the on-site training facility for MSU students that aspire to become sports turf managers. Under the supervision of Prather (MSU class of 1994) and Smith (MSU class of 2002), the daily management activities on MSU athletic fields are performed by students majoring in Golf and Sports Turf Management. This cooperative arrangement between the MSU Plant and Soil Sciences Department, the MSU Campus Landscape Department and the MSU Athletic Department demonstrates their strong commitment to student education while providing a superior level of training for the students.

Prather says, “Since Jason and I are both graduates of the program, we know what they’re getting in the classroom and how we can best support that with actual field management experience. We work closely with those overseeing the program, previously Dr. Jeff Krans and Dr. Mike Goatley, and now Dr. Barry Stewart and Dr. Gregg Munshaw.

“While the hands-on athletic field experience is open to all students in the turf program, we encourage those who know sports turf management is what they want to do to join our crew. We’ve found these are the ones who not only work hardest and do the best job for us, but who also ask the most questions and are most eager to take on every aspect of field care, so they gain the most from it. We, as an industry, need to reach out before the college program to get the attention of the next generation that this is a great way to combine a love of sports with a career in turf. We also need to find opportunities for high school level students to gain some equipment-based background. Unless they come from a farm, nursery or landscape background, many of the college students have no experience operating equipment other than a car or golf cart.

“We try to start the students in the areas they have the greatest interest in, base-
ball, softball, football, and then expand their program so they gain a broad level of experience. They'll be handling all aspects of maintenance and operating all of the equipment. We demonstrate how things should be done, have them work on it until they can demonstrate to us that they are competent, and then give them the responsibility to take on an assignment and complete it to our standards. All this has to fit around their class schedules, so they also learn how to set priorities and work as part of a team."

On field painting day, Prather will pull in three full time employees to assist, with the students rotating in and out from class to do all the trimming and assist with numbers, hashes, etc. He and Smith tackle all of the large area painting (end zones, borders, and middle emblem). Prather says, "We have a stencil man. Buddy Gentry, who owns a local sign shop, has been stringing out our end zones and laying out our middle emblems for over 30 years. The department hires him, but the dedication is all his. He's developed a set of stencils that can do nearly all the letters of the alphabet, just by turning them in different directions. In another long-term relationship, we rely on Tra DuBois and World Class Paint to supply whatever we need and they've always come through for us."

Solutions to past mistakes in field painting and to vandalism demonstrate the innovative attitude of the turf maintenance staff. A few years ago, the goal line "G" was accidentally painted at the 5-yard line of the north end zone on the Thursday before a game. To remedy this, Prather painted a "Dawg Paw" over this spot, thus masking a serious problem, and attracting much positive attention from the game day crowd. Several years earlier, vandals had used diesel fuel to write letters of the Greek alphabet near the mid-field logo. The turf staff quickly designed a logo to honor the memory of a recently deceased student athlete that also masked the damage caused by the vandalism.

Prather says, "One of the most important things we want our student staff to learn is how to set up a good management program and then understand how to adapt it to fit turf needs, weather conditions, and use scheduling. Being able to read a field, to look at it and adjust the program as we do with Scott Field, is the kind of education we want to give them."

Rick Cleveland, one of the state's leading sportswriters, in an article last year that focused on the conversion of natural turf athletic fields to synthetic turf at other facilities, wrote: "Mississippi State does not have any such plans, and if you could grow grass like State can, you wouldn't either. We can debate the merits of the respective football programs from here to doomsday. (Heck, Mississippians do that every day.) But, on this point, there is no debate: State grows grass better than the other two. It ain't even close. You want to go to college to learn how to grow grass, then go to State. Those folks can sure enough grow grass."

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### Annual Maintenance Program for MSU's Scott Field

**January - February**
- Apply 10 N/1000 sq. ft (21-0-20 SRN) in late February

**March - April**
- Preparation for spring football
  - Immediately following the spring game, spray with met sulfuron for ryegrass control.

**May**
- Vertical mow in 3-4 directions, deep tine aerify
  - Apply 10 N/1000 sq ft with 20-0
  - Apply K/1000 sq ft with 0-0-24 (14% Ca)
- Apply 1000 lbs. 15-2-15 organic fertilizer to game field and surrounds

**June**
- Deep tine aerify 2-3 times
  - Core aerify early June, drag in cores, blow off turf debris
  - Apply 10 N/1000 sq ft with 15-5-10 and 21-0-0, every 7-10 days
  - Apply K/1000 sq ft with 0-0-24, (14% Ca)

**July**
- Deep tine aerify 2-3 times
  - Apply 10 N/1000 sq ft with 15-5-10 and 21-0-0, every 7-10 days
  - Apply K/1000 sq ft with 0-0-24, (14% Ca)

**August**
- Roll field with 4-ton roller as needed (after scrammages or games)
  - Apply 10 N/1000 sq ft. with 21-0-20 SRN in mid-August
  - Apply 10 N/1000 sq ft with 15-5-10 and 21-0-0, every 10-14 days

**September**
- Roll fields and repair divots immediately after games
  - Apply 10 N/1000 sq ft with 21-0-0 or 15-5-10 either after games or as needed
  - Apply 1000 lbs. 15-2-15 organic fertilizer to game field and surrounds

**October - December**
- Roll fields and repair divots immediately after games
  - Vertical mow and sweep field in multiple directions before overseeding.
  - Overseeded field: 20# of pure live seed/1000 sq ft with Champion QQ Perennial Ryegrass. The initial application of ryegrass is made around Oct. 1 depending on the game schedule.
  - Apply 0.5# N/1000 sq ft with 15-5-10 or 21-0-0 as needed.

**Additional treatments as needed:**
- Three days prior to each game spray field with soluble Fe and S micronutrient package for a burst of color without shoot growth.
- Make fungicide and insecticide applications as necessary following standard IPM practices. Primary insect pests of are fall armyworms and bermudagrass mites.
- The diseases which are most common are Pythium blight on the overseeded perennial ryegrass and leaf spot/melting out (incited by Drechslera sp. or Bipolaris sp.) on the bermudagrass.

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