field of the year

# **University of Virginia** wins Sports Field Complex of the Year

#### BY SUZ TRUSTY

he University of Virginia, Charlottesville, earned the 2003 Sports Turf Managers Association (STMA) Sports Field Complex of the Year Award in the College/University division. This award recognizes the commitment to excellence in overall field quality, safety, playability and appearance throughout the

athletic field program.

Jimmy Rodgers, CSFM\*, joined the UVA Athletics Department in June 2000 as sports field manager. He says, "The University of Virginia Athletic Department has embarked on an aggressive campaign to be one of the best, if not the best, college sports programs in the country. We have adopted a motto that clarifies our intent: 'Uncompromised Excellence.' Over the past two decades, our administration has spent its money wisely on building excellent field foundations, and they currently provide me with the operational support to maintain our sports turf to meet our coaches' expectations. I was extremely honored to accept this award for our University and our athletic department, and am pleased that it did indeed support and compliment our overall goals."

The University of Virginia Sports Field Complex encompasses a group of premium athletic facilities. The main complex consists of a soccer/lacrosse stadium, a baseball stadium, a track and field complex, two natural grass football practice fields, an artificial turf practice field, and three natural grass auxiliary practice fields. The auxiliary fields are used primarily for men and women's soccer and for conditioning and agility drills by all the teams. The football game field, David A. Harrison III Field at Scott Stadium, earned the STMA College Football Field of the Year Award for 2001. Scott Stadium is in the heart of campus, three-quarters of a mile away from the rest of the fields in the main University Hall sports complex. This adds up to 16 acres of close-cut sports turf. There also are 8 acres of common fescue, bluegrass and perennial ryegrass turf areas surrounding the fields and athletic buildings that are under the care of Rodgers and his staff.

With the highly competitive level of the University's teams, the fields are in use nearly year-round. The combination of spring and fall play and summer camps leaves the winter holiday season as the only true downtime. This competitive level also puts the fields in the spotlight.

Rodgers says, "Each of the game fields and each group of practice fields have variations in the soil profiles, the internal and surface drainage, and the types of turfgrasses used. In addition, since we're located in the middle of the transition zone, we're managing warm-season grasses during the hot weather months and overseeded cool-season grasses during the cold weather months while still preserving that Bermudagrass base. We're also constantly adjusting our maintenance programs as we seek to continually improve field conditions to provide our coaches with the best possible playing surfaces, whatever the sport or the season."

#### The fields

Scott Stadium first opened for play in 1931 with a native soil field. This was converted to an artificial turf field in 1978. In 1992, a Motz PAT system was installed with a 12-inch sand-based soil profile, a multi-zone in-ground irrigation system, and Kentucky bluegrass turf. The subsurface drainage tiles, on 20-foot centers, funnel water into a mid-field drainpipe that feeds into a storage tank at one end of the field. The system can be used to either pump or draw water off the field into the storage tank or to draw on the stored water to sub-irrigate the field.

After 2 years of bluegrass play, the decision was made in 1994 to convert to Vamont Bermudagrass overseeded with perennial ryegrass. Structural renovation of Scott Stadium in 1999 and 2000 created additional seating. In spring 2001, the stadium and field hosted a Dave Matthews Band concert that drew 55,000 fans. Through Dave Matthew's generosity, funds were set aside to protect the field's turf. After thorough investigation of all options, Rodgers determined that rental fees associated with using high-end protective covering came close to the expense of renovating and replacing the Vamont. He opted for a geotextile cover to protect the inner profile of the field and selected Tifsport Bermudagrass to replace the Vamont.

He says, "Renovation began in April 2001, two days after the concert and was completed within 40 days. The existing Vamont surface was stripped away, the sand matrix was "blecavated," and a soil fumigant was applied. The field was then laser graded and resodded with Tifsport.

"We have a rim of natural organics that surround the PAT area of the field. The different soil matrixes proved to be a challenge from the nutrient standpoint. Though we sodded wall to wall, these different soil profiles had different responses to our nutrient amendments and thus required some differences in the other maintenance procedures. We found to adequately nurture our new base we needed to cut our Nitrogen (N) application rates from 3/4 to 1 pound per thousand square feet to 1/3 to 1/2 pound per thousand square feet, and apply weekly rather than every 2 weeks. We also raised the height of cut thus increasing the canopy."

Current Head Coach, Al Groh, has used the facility exclusively for football games, though future concerts are a possibility. There are seven home games each year and a spring game. Occasionally, the visiting teams will walk through on the Friday before a Saturday game.

Davenport Field, the baseball facility, was established in its original location in 1975. It was initially a bluegrass/fescue field, which was replaced with artificial turf. It was converted back to natural turf in 1990. A sand-based profile was installed in the infield and foul ground area in conjunction with this conversion. The outfield is native soil augmented with sand topdressing. The field has no internal drainage. A 1% crown from the pitcher's mound back to the 408-foot mark in center field facilitates surface drainage. The Vamont Bermudagrass is overseeded with perennial ryegrass in the fall and the spring. The outfield Vamont is not pure; it has patches of Tifway 419, which makes overseeding more difficult to manage. The warning track is crushed brick. The skinned area materials are augmented and maintained to provide the speed and playability factors desired by the baseball coaching staff.

The college spring baseball season begins in January. The field hosts practices and 30 home games during that period. Fall practices start in September and run

through the end of October. There are also high school baseball tournaments in spring and several camps during the summer. Football occasionally has used the outfield for summer conditioning drills.

Rodgers says, "In 2003, we experimented with the spring topdressing material, using 20% turkey litter combined with 80% Matoponi sand. The sand component gave us the desired topdressing material to combat thatch issues. The organic turkey litter added the desired Nitrogen for the Bermudagrass base coming out of dormancy. The distinctive odor is a factor, but it dissipates within 24 to 48 hours. The results were successful enough to prompt us to repeat this procedure in 2004."

Klockner Stadium is the game facility for men and women's soccer in the fall and men's and women's lacrosse in the spring. It averages 60-80 game events per year, split between the four teams. It hosts some out of season use at the request of any of the four teams using the field. When weather conditions and field use schedules allow, it also may be used for some pre-competition practices.

The Motz Group originally built the field as a sand-based PAT system in 1992. Rodgers says, "After contracting Pythium blight in 1994 when the piping and drain tile backed up and kept the field saturated, the bluegrass turf was replaced with Vamont Bermudagrass and some drain tile was replaced. With the drainage restored, the sand-based profile has done an adequate job of moving water off the field. Over the years, a significant organic layer had built up at the 4-inch depth that restricted water movement at that point. We have begun a comprehensive deep tine aeration program combined with 'super topdressing' and laser blade leveling procedures with varying topdressing materials. We then screen drag the top-

## Field Maintenance Sidebar: The University of Virginia

Football Game Field: David A. Harrison III Field at Scott Stadium: March

Early season maintenance as needed and weather permits

Begin mowing as needed at 7/8 inch height

#### April

Core aeration at 3 to 4 inch depth (early April, after spring game), cores not removed

Begin spoonfeeding 1/2 to 3/4 lb. of N/K per 1,000 sq. ft. at start of greenup of Bermudagrass

Mow at 7/8 inch

#### May

Lower mowing height to 5/8 inch to help transition out perennial ryegrass First full balanced fertilization timed with warmer temperatures to stimulate Bermudagrass.

Core aeration at 3 to 4 inch depth or deep tine coring to 6 to 8 inch depth, cores removed

Topdress with 50 to 60 tons of 90 percent "Matoponi" sand; 10 percent turkey litter compost

#### June

Dethatch if needed, combined with additional topdressing (early June) Slice or core aeration at 3 to 4 inch depth (late June), cores not removed **July** 

Core aeration at 3 to 4 inch depth (six weeks from first field use), cores removed

Topdress with 30 to 40 tons of "Matoponi" sand

Slice aeration three weeks from first scrimmage (late July)

Raise mowing height to 15/16 inch

#### September

Begin perennial ryegrass overseeding; overall applications will reach 25 lb per 1,000 sq. ft.

#### Apply P before overseeding

October-November

Continue overseeding with perennial ryegrass as needed

#### **December-January**

End of season maintenance as needed and weather permits Throughout the Growing Season

Fertilization/nutrient application program in accordance with annual soil

and tissue test results - the amount, source and timing adjusted to fit the

needs of the dominant turfgrass. Generally 8 to 10 lbs. of slow and quick release N per growing season. Slow release combines balanced levels of N and K. Quick release N generally applied as

- 46-0-0 Urea when can assure irrigation control of moisture levels. Light applications of Iron made as needed for field aesthetics.
- Weed, disease and insect control conducted on an as needed basis following IPM guidelines

**Pre-game Practices** 

Clippings collected and removed only on mowing the day before games and game day

Field painting begins on Tuesday of game week and completed by Thursday (Friday for rain day and touch ups)

#### **Baseball Field:**

Mound, batters box, skinned surfaces and warning track maintained to top-level competition standards

Continual maintenance of transition areas from skin surface or warning track area to turf during active play and practice periods

Overseeding in late February or early March at the rate of 8 to 10 lb. per 1,000 sq. ft.

Transition out perennial ryegrass at end of spring playing season Summer renovation of turf wear areas as needed, worked between

camps, strip and resod heavily worn areas, sprig areas of lesser wear Begin preparations for overseeding in late August, apply P as needed

according to soil test analysis, dethatch in combination with first seed application

Spring and fall cultural and fertilization programs focused on perennial ryegrass needs; summer cultural and fertilization programs focused on needs of Bermudagrass base

Weed, disease and insect control conducted on an as needed basis following IPM guidelines

#### Soccer/Lacrosse Game Field:

Early spring core aeration at 3 to 4 inch depth, cores not removed Spring dethatching if needed based on visual evaluation

Deep tine deep tine coring to 6 to 8 inch depth, cores removed

Super topdressing with "Matoponi" sand with particle size greater than.5 mm; screen drag topdressing to fill aeration holes

dressing into the deep tine 4 x 4-hole pattern. We have matched the topdressing material to existing field specifications adhering to a sand particle size greater than .5 mm. This has greatly improved the drainage."

Thatch levels in the Vamont Bermudagrass are effectively controlled by aggressive mowing practices and by maintaining a small layer of topdressing sand in the immediate blade layer. The field is overseeded with perennial ryegrass in September to facilitate late fall and early spring play. Lanigan Field has an infield turf area surrounded by an artificial surface track. It serves as a public use field for the University and the Charlottesville general community. The football team also may use the infield for conditioning programs in the summer. Activity is nearly year-round, with someone using the turf or track whenever weather permits.

The inner track area has a native soil profile with no internal drainage system. It has no crowning for surface drainage to prevent water accumulation on the track surface. It is the only non-irrigated athletic turf on campus. The grasses are a combination of turf type tall fescue and bluegrass, with a bit of common Bermudagrass infiltrating in some areas. The turf area bears the brunt of the most damaging throw events as the training and competition site for hammer, discus, and javelin. Shot put pits and jump pits also are located within this facility.

Rodgers says, "The only down time for our practice fields occurs from mid-December to mid-January. Spring sport practice may start as early as January 20 and summer camps run throughout most of the summer. The real key to keeping our practice fields under grass cover is to keep compaction to a minimum and keep our fields draining as well as we possible can."

Core aeration at 3 to 4 inch depth; screen drag cores and additional topdressing

Slice aerify early August

Deep solid tine aerification in September before onset of cold weather

Fertilization/nutrient application program for Bermudagrass generally 6 to 8 lbs. of slow and quick release N per spring and summer growth period. Slow release combines balanced levels of N and K.

An application of 13-24-12 at the rate of 1 lb. of P per 1,000 sq. ft. precedes overseeding.

Sulfates of Potash applied throughout fall and early winter based on soil test analysis.

Weed, disease and insect control conducted on an as needed basis following IPM guidelines

#### Soccer/Lacrosse Practice Fields: Upper Grass Practice Field Football Practice Fields: McCue Football Practice Fields

Prepare fields for renovation in early May

In late May, core aerate, topdress and fertilize per specifications; 1 to 1.5 lb. of N/K monthly during active growing season

For soccer/lacrosse: late May or early June: sprig Bermudagrass in moderate wear areas; resod heavy wear areas

For football: sprig between hash marks, spot resod in heavy wear areas

Deep tine or core aerate in fall combined with topdressing and overseeding

Weed, disease and insect control conducted on an as needed basis following IPM guidelines

#### **Public Use/Track and Field facility:**

Fertilization program for mixed turf-type fescue and bluegrass turf includes N applications from late August through December, light N application at spring green-up, K applications during summer

Spring and fall core aeration followed by topdressing with blend of native topsoil and sand matched to existing soil profile

Turf maintained with rotary mower

Weed, disease and insect control conducted on an as needed basis following IPM guidelines

Jump pits and Shot Put pits maintained to competition level standards

Track surface maintained to competition level standards

Cambridge drainage systems have been installed on both of these native soil fields. Both fields now will perk at a specified 5 inches per hour. The Tifsport Bermudagrass is overseeded in the fall with applications generally beginning around September 15 and running through mid-October at the rate of 10-15 pounds of perennial ryegrass per 1,000 square feet. Rodgers shoots for overseeding on Tuesday mornings to allow the players to cleat in the seed during the two heaviest practice days. The lighter activity on Thursday and Friday, and off days on Saturday and Sunday, provide a time frame for fertilizer and biostimulant applications along with controlled irrigation to get the seed up and going. Rodgers says, These are the hardest used fields on the complex and, as such, can receive excessive wear. They often are used at least six days per week from late July until the football season ends, which could be Christmas if the team is going to a Bowl game. Team conditioning drills begin in early February. Spring brings a total of 20 practices as mandated by NCAA and it is in full pads, with full contact, going full bore. Coach Groh understands all this and does everything possible to encourage his coaches to rotate drills and practice locations to preserve turf condition."

The Upper Grass Practice Field and the other two Olympic-sport sized practice fields are used for soccer and lacrosse. These fields have a native soil profile that has been augmented by topdressing with sand. Each has a .75 to 1% crown for surface drainage. The goal is to keep full turf coverage on the fields year-round. The Vamont base is overseeded with perennial ryegrass primarily to provide this turf coverage for lacrosse in the spring. The NCAA soccer season for both men and women is in the fall, the NCAA lacrosse season for both in the spring. For the sport in their competition season, either soccer or lacrosse, one practice field is dedicated to the women's team, one to the men's team. The third practice field is shared by the men's and women's teams of the other sport. During the summer months the fields are shared by all four teams for camps and conditioning.

The UVA Turf Field is a synthetic playing surface. It was originally built on an old practice football field in 1995, a gift from a former football alum to help the team prepare for late season and bowl games. While the football team still has use priority, they have opened this field to other teams and it cur- (continued on page 33)

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#### field of the year

(continued from page 11) rently is used primarily by field hockey. The field was resurfaced in 2003. The decision was made not to use one of the infill synthetic turfs, as the field hockey coaches like the faster speed of the older style turf and prefer it for ball bounce and stick contact factors. The 90,000-square foot surface is watered by six Nelson Big Gun irrigation heads both to provide the wet playing surface for maximum ball play and performance and to reduce surface temperatures during the high heat periods of the year. The field is monitored daily for pickup of any on-field debris and is swept weekly with a riding sweeper. The surface is combed annually to keep the synthetic blades separated from friction heating. In the fall, the field is painted with soccer, football and field hockey lines. In the spring, men and women's lacrosse lines are painted.

Rodgers says, "As a turfgrass manager, having this field is a huge plus. When the weather becomes inclement enough that turf damage occurs on natural surfaces, our coaches have been most cooperative in rescheduling practices on the artificial surface. This certainly helps our overall preservation of the natural turf fields."

#### **Challenges of Mother Nature**

As if all this weren't enough, Rodgers and crew faced two years of opposite extremes, thanks to the whims of Mother Nature. It all started with dry stretches in April and May 2002 that meant constantly adjusting the irrigation and main-tenance programs through the baseball season. Then the June heat hit timed with the worst draught central Virginia had experienced in 100 years. From June through the end of August there was no measurable rainfall. In August, irrigation was restricted to twice per week. On September 17, 10 days before the football game with Clemson, the city and county shut off all outside irrigation, including that for sports fields and even stipulated no water was to be used for the stadium bathrooms.

Rodgers joined in the University and City discussions about hosting the games, exploring the possibility of bringing in 11,000 gallons of quarry water to get some softness and playability on the fields and securing a bank of "porta-johns" to accommodate the crowds.

He says, "Six days before the game we got a beautiful inch of rain. Then the fall rains started and kept coming. From end of September throughout November, we received adequate rainfall. The Ravinna reservoir started to refill and irrigation was once again permitted by mid-November. Then we had the wettest winter ever and the precipitation just wouldn't stop. By October 2003 we had a surplus of 26 inches above normal. The extreme differences we had from one year to the other were incredible.

"After doing everything possible to preserve moisture in 2002, we were incorporating every technique we could devise to alleviate it in 2003. We increased core aeration. We added multiple deep tine spiking, 6 to 8 inches in depth, to avoid surface disruption while opening up channels to move the water from the surface and through the soil profile. Mowing took place whenever we could operate the equipment. All the fertilization programs were adjusted to compensate for the additional growth. The baseball skinned surface required twice the conditioner usually used. We kept in constant communication with the coaches and administration to keep them up to date on field conditions and, thanks to their cooperation, we were able to keep the fields in play. It's been a real joy for all of us from a field management standpoint to have normal weather patterns in 2004."

Rodgers credits his staff for much of the program's success. He says, "I have what I consider the best grounds crew in America with full-time staff members Henry Shifflett, Tracy Burge and Scott Anderson. During the spring and fall seasons we're assisted by part-time student staff members who quickly catch the enthusiasm and dedication it takes to maintain fields to our standards."

Rodgers also taps into the best turfgrass resources around. He says, "My respect for the Virginia Tech Research Center is unparalleled. I'm pleased with the extent of their knowledge and expertise and their cooperation in sharing that information. I greatly appreciate the terrific service they provide to all of us across the state."

\* The CSFM designation acknowledges the individual has attained Certified Sports Field Manager status through the rigorous Certification program developed and administered by the Sports Turf Managers Association.

Suz Trusty from Trusty & Associates is a member of our Editorial Advisory Board. She can be reached at suz@trusty.bz.

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