Vos and Team Make Muscatine the Soccer Field of the Year

By Bob Tracinski

Hard work and good ol' Midwestern values prevail in Muscatine, IA, a city of 24,000 located about 30 miles from the Iowa-Illinois Quad Cities area. This community enthusiastically follows youth sports from grade school through college. Adult residents are also active sports participants.

It's here in the nation's heartland that the inviting, user-friendly Muscatine Soccer Complex captures that essence as STMA's 1995-1996 Soccer Field of the Year.

Eight soccer fields spread across the 41-acre complex. Two sand-based fields and four native-soil fields were completed in the first phase of construction. Play kicked off in the late summer of 1993. During 1994, a second building phase developed two additional native-soil fields.

A paved parking area leads up to one side of the chain-link fence that surrounds the complex, enclosing the fields, an administration-concession building, maintenance building, shade shelters and wide paved walkways. The two amended-soil fields are lighted and have bleacher seating for approximately 1,100 people. Eye-catching, low-maintenance landscaping of hardy trees, shrubs and perennials adds to the aesthetic beauty of the setting.

Vos on Board

Establishing a top level complex was the goal of Kevin Vos, hired as athletic facilities supervisor in May of 1993. Vos earned a BS degree from Iowa State University in December of 1988, with a major in horticulture specializing in turfgrass management. Though he initially aimed for the golf course area, his first position, athletic field maintenance at the University of Iowa, changed that focus to sports turf. After three years at UI, he accepted a position as assistant facilities manager of the 17-school Overland Park KS, school district.

The Overland Park experience in coordinating materials and labor, among multiple sites with multiple needs, added to the precision field-care techniques of UI and provided Vos with a balanced outlook for the Muscatine position.

Vos says, "The community was really excited about the new complex and anxious to put it into play. The six original fields had been seeded in the fall of 1992 or early spring of 1993, so I came on board in time for the grow-in and play-prep stages."

"The two amended-soil fields are 80 percent sand and 20 percent Dakota Sedge Peat. Each measures 300 feet by 390 feet. They have a one percent crown. The six native-soil fields are silty-loam with a 1.5 percent crown. These field dimensions are 240 feet by 360 feet."

Constant Maintenance

The six original fields have underground drainage to ensure rapid recovery after rains. Buried, four-inch tiles spaced 25 feet apart run the length of each field. These connect to a six-inch collector drain that runs perpendicular to them at the middle of the field. Water is channeled through the six-inch collector to the city's storm-drain system and eventually to the sanitation department. The amended-soil fields can absorb a four- to six-inch rain and be playable within an hour.

Each of the original six fields have a Toro hydraulic irrigation system covering the total playing area: 2.5 acres for the native-soil fields and 3.25 acres for the amended-soil fields. The system can be programmed to irrigate each field's entire playing surface or to irrigate only critical zones such as the goal and midfield areas. The two added fields are watered manually with a Kifco Water Reel. Outlying areas are watered with the Water Reel or with manual, roller-based sprinklers.

Vos adjusts irrigation levels from one to 1 1/2 inches of water per week, varying with natural precipitation, heat and humidity. Relief from the combination of hot summer days and drying winds is achieved with light syringing. Native-soil fields are watered 24 to 36 hours before use; amended-soil fields eight to 12 hours before use. This maintains good sub-surface moisture for plant roots, while keeping the field surface fast and highly playable.

Vos says, "The fields were originally seeded with a 50-50 mix of the bluegrass varieties Touchdown, Ram I, Nassau and Glade and perennial ryegrass varieties Palmer II, Prelude II, Pinnacle, Affinity and Repel II."

"Native-soil fields are mowed twice a week with a rotary mower to a two-inch height. Amended-soil fields are mowed three times per week with a reel mower to a height of 1 7/8 inches. Other turf areas are mowed as needed, generally once or twice a week. Cut direction is alternated at each mowing. String trimmers are used for edging and grooming hard-to-mow spots."

"We maintain a nearly constant over-seeding process, drill seeding perennial ryegrass during the season if time permits and broadcasting seed to be worked in by players' cleats. Divots are filled weekly with a blend of topdressing material, pre-germinated perennial ryegrass and Milorganite. Fields are watered..."
light when needed to keep the divot-seed mix slightly moist."

Soil testing is done separately for the native-soil and amended-soil fields. Fertilization programs are based on test results. Vos says, "On native-soil fields, an application of Scotts 40-0-0 or Grass Roots Pro 22-0-22 with minors is made every six to eight weeks at the rate of one pound of nitrogen (N) per thousand square feet. Amended-soil fields are spoon-fed applications of approximately one-quarter pound of N per thousand square feet using Scotts 15-0-30 and Grass Roots Pro 22-0-22 with minors. Ferromec Liquid Iron AC 15-0-0 is applied every four weeks at the rate of six ounces per thousand square feet. Scotts S.T.E.P. is applied twice per year. Non-field turf areas are fertilized two to three times per year at one pound of N per thousand square feet using Scotts 40-0-0. All fertilizer applications are watered in."

**Fighting Compaction**

Soccer in Iowa begins in mid-March and runs through November, with the heaviest concentration of play in the spring and fall. Weekdays in these peak periods will bring team practices to six or seven of the fields for three to four hours each day.

The Muscatine Soccer Complex hosts high school and college teams, local soccer clubs, the YMCA/YWCA, and adult open-league player groups start at age ten and range up to the seniors.

Vos says, "Field use is scheduled through the Parks and Recreation Department. The complex hosted a total of 1,700 games and practices in 1995: 400 games in tournaments; 370 in club use; 50 high school games; 30 for colleges; and 60 for adult leagues. There were 780 practices for all user groups. Game use requests for 1996 are running 20 to 25 percent above 1995 levels. Practices probably would be up too, but we've pretty well maxed out the usable, daylight hours of weekday field time."

Tournaments include the Regional Iowa Games, Iowa Youth Cup (for three weekends each, spring and fall), Iowa High School State Cup (both spring and fall), Muscatine Summer Classic, Iowa State Youth Soccer Association Olympic Development Program, along with college tournaments, high school conference tournaments, district playoffs and various clinics. Major tournaments may involve 60 to 80 teams.

Fighting the compaction of all this play calls for lots of aeration. Vos says, "We generally use slicing times at the beginning of spring green-up to sever bluegrass rhizomes and spur additional growth. We use slicing times in the direction of play every two weeks throughout April and May. In June, September and October we use 3/4-inch coring tines in a 3x3 pattern in one or two directions. We always drag the cores in, and will pick any thatch debris with the Parker Sweeper if it's excessive or play schedules warrant it. Worn areas such as the goal mouth, sidelines, team areas, and turf bordering walkways are aerated additionally as needed."

"If weather cooperates, there's a 1 1/2 week window the first of June for renovation. Fields are mowed at two inches, core aerified in three directions, the cores dragged back in and thatch removed. We drill seed perennial ryegrass into the topdressing mix. The native-soil fields are topdressed with straight sand at the rate of 30 tons per field. The amended-soil fields are topdressed with an 85-percent sand, 15-percent Dakota Sedge Peat mix at the same rate. We irrigate as needed."

Vos also topdresses the amended-soil fields in November to provide turf crowns extra protection from excessive cold and winter desiccation.

Spring of 1996 presented quite a challenge. In mid-March at the start of soccer practice, temperatures were too cold to trigger turf green-up and growth. Rains were minimal, with a two-inch-below-normal deficit until the very end of April. As temperatures yo-yoed up and down the scale, supplemental irrigation and fertilization helped boost grass growth. Then the skies broke, dumping rainfall first at three-day intervals, then two-day intervals, and finally every day. Temperatures still remained below normal, but spiked at times to record highs.

The level of soccer play slows somewhat in the summer, but Vos and crew don't slow down. Fields and sections of fields are rejuvenated during July and August. Play is moved from field to field to allow a two-week or longer recuperation period for high-wear areas.

**The Muscatine Team**

The workload also shifts a bit. Adjacent to the soccer complex is the 50-acre Kent Stein Park with its 18 lighted ball diamonds, hard surface parking, two spacious rest room/concession buildings, picnic areas, horseshoe courts and fishing areas. Little League baseball, girls softball, high school and college baseball and softball, and adult fast pitch/slow pitch softball/baseball games fill the complex.

Vos says, "Both the soccer complex and the park are included in Muscatine's Parks and Recreation Department. In addition, there are two city parks with ball diamonds. Our regular crew and nine seasonal staff members maintain these facilities. We have a tremendous crew, capable, dedicated and cooperative."

Vos oversees four part-time, on-site supervisors. Each supervisor is responsible for monitoring and operating the complex during usage. Besides minor pre-game set-up, this includes ensuring that teams are using the assigned fields at the correct times, and that city rules for the complex are being followed. Supervisors encourage and assist with site cleanup, serve as damage control agents and provide a safer, smooth-running facility.

Vos says, "Joe Wagner, athletic facilities technician, has major responsibility for the maintenance and repair of equipment, buildings and the irrigation system and assists with field maintenance. His knowledge, proactive approach and precise record keeping ward off problems. Scott Meerdink, groundskeeper, tackles aeration, fertilization, field painting and care of landscape plantings. Bill Fletcher, equipment operator, concentrates on mowing."

"But there's no 'it's not my job' attitude. Work assignments overlap, and everyone continued on page 10
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is willing to do whatever it takes to meet the needs of the facilities. Our high-quality fields and this Field of the Year honor reflect the great effort and dedication of the entire staff."

On the personal side, Vos says, "My wife, Robin, is terrific. She's always supportive, a real partner and source of ideas. And our son, Matthew, at 18 months, loves the whole soccer experience. His excitement, about the games and the complex, is contagious.

"The whole team is always looking for ways to do things better, faster and more efficiently," says Vos. "Our staff knows we're always open to suggestions and will give most reasonable options a good try, whether it means altering maintenance methods or equipment use."

Trade's Tricks
A safe, healthy stand of turf is Vos' top priority, and he has a whole arsenal of "tricks of the trade" to make sure that the priority is met.

All fields are painted once per week when used: game fields in white J.S. Sports Turfcoat and practice fields in yellow. Fields are laid out according to precisely measured string lines in the spring and restrung every few weeks to keep lines straight and accurate.

"Because of referee wear along the sideline areas, we move sidelines out three feet and back in, while still staying within the official size field for each age group," says Vos. "The team areas are moved at the same time, either positioning them along the 'new' sidelines, or moving both team areas to the other side of the field.

"Because of the large turf playing surface and overall field layout, we can move the entire field to spread wear. If the 'window' is tight when we shift all or part of the field, we use green paint to block out the old white lines to alleviate confusion. We match the paint shade to turf color as closely as possible."

Vos denotes practice fields with yellow dotted lines that run perpendicular to
game fields where space permits. Practice fields also will be offset running parallel to game fields to keep practice field size closer to regulation game size.

Vos says, "When there are different age groups using the same field area for games on the same day or weekend, game fields for the younger player group will be painted in yellow solid lines running perpendicular to the white-line game field for the older players. Our crews then move the portable goals to the appropriate spot for the game on that size field. We've found this spreads the wear better than dedicating certain fields to specific levels of play."

"Prior to games, crews post signs in the goal mouth stating 'no warm-ups shall be allowed in the goal areas.' We provide a goal area and goal away from the game field for teams to use for practice. These off-field goals are generally set in the area between fields and are moved from week to week, again to spread the wear."

These "extended field" methods increase the overall turf area that receives premium care, but they control excessive wear. To date, the complex has needed no supplemental sodding in any areas of the field.

Vos follows IPM practices, applying pesticides only as needed and where needed. A pre-emergent control generally is applied to surrounding turf areas in April. None is applied to the fields. Weeds are spot treated with post-emergent controls and fungicide control products only as necessary. The complex has required no insecticide applications.

"No matter how much we accomplish, there's always a wish list of things we'd like to do and improvements we'd like to make," says Vos. "We're always striving to make the fields just a little bit better. Probably best of all is the sense of satisfaction that comes from watching your efforts bring about a safe, playable arena for players of all ages to improve their skills and have fun."  

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