



Photos courtesy of Jason DePaepe

College football Field of the Year

Folsom Field of the University of Colorado

BY SUZ TRUSTY

Folsom Field of the University of Colorado earned the 2002 Sports Turf Managers Association (STMA) Football Field of the Year Award in the College/University division. Folsom Field is on the University's main campus in Boulder.

Football is huge in Colorado. The tradition of the 2001 Big 12 Champions football program began with Gamble Field, the original home of the Colorado Buffaloes. The 10,000-seat stadium was home for 20 years before the opening of the 30,000 seat Colorado Stadium in 1924. The stadium was renamed Folsom Field in 1944 after the death of legendary coach Frederic Folsom. In 1956, the addition of the upper deck increased seating capacity to 45,000. In 1991, the Dal Ward Athletic Center was built in the North end of the stadium housing coaches and administrative offices, locker rooms, training rooms, and weight room. In 2002, construction began on the east side of the stadium, adding skyboxes and club seating, with lights, which will bring seating capacity to over 53,000 by this month's opening.

Before the 1971 season, the playing surface was a native soil topped with natural grass. AstroTurf was used from 1971 through 1998. In 1999, Folsom Field underwent a \$1.2 million renovation, installing a sand-based natural grass field.

Field renovation and new field construction are a nearly continuous process in today's sports environment. It's very beneficial for the sports turf manager to be a part of the pre-construction decisions and the construction project process. Neither Jason DePaepe, athletic field manager, nor any of his three full-time employees were with the University for the 1999 renovation.

DePaepe came to Colorado in June of 2000 as the assistant field manager. He had earned his BS degree in the turf program at Iowa State University and worked in both the turf research program and on Iowa State's athletic facilities. In May of 1999, he joined the Baltimore Ravens where the practice facility was his primary responsibility. He assumed his position at CU in February 2001.

DePaepe says, "Prior to the Folsom Field reconstruction, the decision was made to use SportGrass to provide stability for the new field. SportGrass con-

sists of artificial fibers tufted into a woven backing. The turfgrass is grown intermixed with the artificial fibers and roots down through the horizontal backing. Graff's Turf Farm in Ft. Morgan, CO, laid the SportGrass and applied sand to grow in the Kentucky bluegrass blend. The four varieties selected for the blend were SR 2100, Award, Nuglade and P-105."

Field preparation followed the removal of the AstroTurf and subsystem. DePaepe says, "Four inch drain pipe on 16 foot centers was laid in 4 inches of pea gravel under 10 inches of a soil profile of 92 percent sand and 8 percent peat. An irrigation system was installed consisting of seven zones for the 62,000 square feet of turfgrass. An in-ground, 3 zone, glycol heating system also was installed. Once the field subsurface was completed and the sod was established, the SportGrass sod was harvested and laid on the new sand-based surface of Folsom Field. The field perimeter is 12 feet of AstroTurf which allows access to the field without traffic on the turf."

The conversion from an artificial surface to natural turf received almost daily media coverage throughout the state and became a major discussion topic with the fans. University and athletic department officials and coaches were on hand and the TV cameras were rolling as the first roll of sod was laid. DePaepe says, "The addition of natural grass has made Folsom Field one of the greatest venues to watch college football. The Flatirons at the base of the Rocky Mountains that overlook the University of Colorado provide outstanding views and the short distance from the field to the fans helps them feel more involved in the game."

The new surface brought a new set of challenges. DePaepe says, "The benefit of SportGrass is stability, especially in the first couple of years for a new field. The drawbacks are slow sod establishment, poor rooting, slow recovery from damage, a requirement of special equipment for aerification, and the inability to topdress on a regular basis. The stabilization fibers would be buried by topdressing and thus would be too deep to provide the footing for which they are designed. Raising or lowering an irrigation head requires cutting through the backing of the SportGrass with a saw and cutting a new hole for the head to come up through after adjustment."

Field usage is another challenge facing the CU staff. There are events on Folsom Field every month of the growing season. Activity starts in April with one scrimmage and one spring football game. Graduation comes in May requiring Terraplas over half the field for 3 days. The Bolder Boulder 10K race is on Memorial Day. This event requires Terraplas over the entire surface for 4 days and culminates with 50,000 people finishing the race on Folsom Field. Football camps take the field for one week in June and July require at least one logo to help entice prospective recruits to the CU program. July brings at least 3 days of soccer games plus the annual 4th of July concert with staging and fireworks. Football takes over the field in August with two full contact scrimmages and media/picture day. September has two home games with Friday walk-throughs for both the visiting and home teams. There's also a high school band day in September with on-field performances for 8-10 hours. October brings three home games with walk-throughs. The last scheduled home game is in November, but there remains potential for bowl practice on the heated turf of the stadium.

DePaepe and crew decided to face these challenges with an aggressive, proactive approach. He says, "Field components and usage schedules were not what we would have chosen, but we do whatever it takes to provide the best fields possible. We, as a crew, just have to 'Make It Work!'



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"The first few years of a sand-based field are when the majority of footing issues occur. As the field matures, it naturally becomes more stable. SportGrass worked as designed and provided us stability during the first few seasons. By 2001, our field was maturing and we decided to try to alleviate some of the inherent problems with the SportGrass system by attempting removal of the horizontal backing, the component we felt was the weak part of the system. The goal is to turn our SportGrass field into a more normal sand-based Kentucky bluegrass field. In doing this, we will improve our recovery time, increase our rooting and root depth, and be able to topdress more regularly. Our strategy is based on long term goals rather than a season by season plan."

Key to accomplishing this is frequent core aerification. "This requires the use of a Soil Reliever or Vertidrain," says DePaepe. "Smaller machines just bounce off the SportGrass backing instead of penetrating it. We began aerification in March of 2001 using 3/4-inch hollow tines with 4-inch spacing. We traveled the field in two directions and removed the cores. We repeated the process in April, May, June, July and August, always varying our starting points to begin creating a 'Swiss cheese' pattern of holes in the back-

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ing. In September and October, during the football season, we switched to solid tines. In December, after the season, we once again core aerified and picked up the cores before putting the field to bed for the winter.

"The stability of the backing gave us an advantage, as we were able to aerify that frequently without creating the 'soft' effect we probably would have experienced on a traditional sand-based field. We've also experienced low humidity and low temperature during the summer time so we could aerify and not put too much stress on the grass."

DePaepe repeated the same aerification schedule throughout 2002 and to date in 2003. He says, "The results are exactly what we were looking for. The SportGrass backing has been compromised drastically. We knew however, that by removing that much core material without topdressing, we would get to a point when we had to start putting some sand into the field."

"We debated the effects topdressing would have on the artificial fibers, both for maintaining footing as the players' cleats make contact and for protection of the grass plant crown.

While, over time, the fibers will get deeper with topdressing, we feel they'll still offer some crown protection and the improved turfgrass rooting and strength will alleviate any traction issues. We topdressed for the first time this past spring, applying a 1/8 inch layer of straight sand, matching that of our soil profile. A second 1/8-inch application was made the end of June. We're also planning to put down a light topdressing between games, 1/32 of an inch or less, to add a bit of grit to the field. We'll be adding more sand than the amount of material we'll be removing through aerification until we feel enough of the backing has been removed to make our field more like a traditional sand-based field. At that point, we'll change our strategy again and begin topdressing more equally to what we are removing during aerification."

Carrying through on their 'Make It Work' strategy, DePaepe and crew apply this same combination of innovative and proactive approaches to all aspects of the turf management program. Juggling the water issue during 2002 is another example. DePaepe says, "The Folsom Field irrigation system is capable of using domestic water or ditch (raw) water. Having two sources of water proved crucial last season as Colorado was hit with one of the worst droughts on record. We were able to keep the field supplied with enough water to sustain the turf while relying heavily on the raw water supply. It allowed us to preserve field quality while receiving the least amount of public pressure. Rainfall has been much better in 2003, bringing reservoirs closer to normal levels and greatly easing water restrictions."

DePaepe uses the field's heating system to extend both ends of the season. The biggest advantage is the safety factor, keeping the soil temperature warm enough to keep the ground from freezing for late season play. Combining the

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After 27 years of AstroTurf, Folsom Field underwent a \$1.2 million renovation in 1999, including a sand-based natural grass field.

soil heat with turf blankets also helps trigger grass plant action earlier in the spring, gaining 3-4 to weeks of extra growth in preparation for the April game. He says, "The heating system isn't designed for melting snow. Snowfall will sit on top of the blades. We still plow snow from the field for games when necessary. We also turn off the system and allow the turf to go dormant between the end of season field maintenance in the winter and time to start the spring growth cycle."

CU has two regular sand-based practice fields. SportGrass had been installed on the third practice field at the time of the Folsom Field installation. This field was converted to a Prestige synthetic turf infill system in October of 2001. That field is located in the lighted section of the practice field complex.

DePaepe says, "I was against the practice field synthetic turf installation at first, but our coaches wanted it especially to prepare for play on similar systems during inter-conference games. Since then, I've come to see it as an advantage in the practice facility situation. Before that installation, we would plow snow from all three practice fields, hope for sun to

provide some melting, and deal with the aftermath of practice in those conditions. Now we only plow snow from the synthetic turf field. The coaches also hold practices on that surface rather than the natural grass practice fields during other potentially damaging weather conditions. This gives our players an acceptable place to practice and allows us to keep the natural turf in better condition on the other practice fields. I'm still a strong supporter of natural turf in most situations, and especially for the stadium game field, and our coaches and players prefer the natural turf."

DePaepe and crew work directly for the athletic department, concentrating mainly on outdoor sports facilities, but also helping move equipment or whatever else is needed to support the indoor sports programs.

Construction and renovation continue. The four-acre soccer practice facility and the outdoor track facility are both undergoing renovations this summer. Upgraded tennis courts also are under construction. Field security has been another challenge at Folsom Field. DePaepe says, "This year has been especially challenging with the skybox construction project. At night, the only barrier to the field is an eight-foot temporary construction fence. This has allowed several night football games on Folsom Field by trespassers. We look forward to the completion of the construction project and take heart in knowing the stadium addition will be a great benefit to our athletic department as a whole."

With this project, as with all the other elements of DePaepe's turf management program, it's a given that he and his crew will Make It Work!

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Suz Trusty is communications director for the Sports Turf Managers Association. She can be reached at 800-323-3875.

Folsom Field Maintenance Program

March

Evergreen tarps are removed and aeration program is started
Core aerate with 3/4-inch hollow tines on 4-inch spacing in 2 directions - remove cores
Broadcast 150 pounds of bluegrass after every aerification
Topdress with 1/8-inch layer of sand
Seed worn areas in preparation for spring game
Mow three to five times per week at 1.25-inch height of cut

April

Aerate with 3/4-inch hollow tines on 4-inch spacing in 2 directions - remove cores
Broadcast 150 pounds of bluegrass after every aerification
Hand seed after spring game
Fertilize with increased Phosphorous for seed germination
Mow three to five times per week at 1.25-inch height of cut

May

Alter aeration schedule for post event compaction
Core aerate with 3/4-inch hollow tines on 4-inch spacing in 2 directions - remove cores
Broadcast 150 pounds of bluegrass after every aerification
Mow three to five times per week at 1.25-inch height of cut

June

Aerate with 3/4-inch hollow tines on 4-inch spacing in 2 directions - remove cores
Broadcast 150 pounds of bluegrass after every aerification
Topdress with 1/8-inch layer of sand
Increase Potassium to 1 pound for this month to reduce summer stress
Hand seed with bluegrass after field events
Mow three to five times per week at 1.25-inch height of cut

July

Aerate with 3/4-inch hollow tines on 4-inch spacing in 2 directions - remove cores
Broadcast 150 pounds of bluegrass after every aerification
Hand seed with bluegrass after camps
Mow three to five times per week at 1.25-inch height of cut

August

Aerate with 3/4-inch hollow tines on 4-inch spacing in 2 directions - remove cores
Broadcast 150 pounds of bluegrass after every aerification
Hand seed with bluegrass after scrimmages
Mow three to five times per week at 1.25-inch height of cut

September

Aerate with solid tines
Broadcast 150 pounds of bluegrass after every aerification
Sweep after games to remove debris
Hand seed divots with pre-germinated bluegrass
Topdress with 1/32-inch layer of sand following games

Iron applications prior to first home game

Mow three to five times per week at 1.25-inch height of cut

October

Aerate with solid tines in 3 directions
Broadcast 150 pounds of bluegrass after every aerification
Turn on heating system to maintain soil temperature of 55 degrees F.
Sweep after games
Hand seed with perennial ryegrass after games
Topdress with 1/32-inch layer of sand following games

November/December

Aerate with solid tines in November
Aerate with 3/4-inch hollow tines in December - remove cores
Broadcast 150 pounds of bluegrass after every aerification
Mow as needed at 1.25-inch height of cut
Sweep after games
Hand replace divots after last game
Topdress with 1/32-inch layer of sand following games
Seed and topdress before putting evergreen tarps on for winter
Turn off heating system for winter

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