



Chapman Field of Cumberland Valley (PA) wins Field of the Year

BY SUZ TRUSTY

Chapman Field of the Cumberland Valley (PA) School District earned the 2002 Sports Turf Managers Association (STMA) Football Field of the Year Award in the High School division. 2002 was a banner year for the field, the school district, and for grounds supervisor James L. Koontz, Jr. and his staff. Chapman Field also earned the STMA KAFMO Chapter Football Field of the Year honors and was named Top Football Field in the Midstate region by the state's major newspaper, Harrisburg's *Patriot News*.

The native soil of Chapman Field is Hagerstown loam. In May of 2000, the field was renovated. A sand grid drainage system was installed running north-south and east-west to a depth of 18-24 inches. This channels water into a subsurface drainage network of four-inch pipe. A 1-percent crown was established to facilitate soccer, as well as football, play. The full-field, in-ground, irrigation system was installed using popup heads. With the majority

of games played at night, the field is equipped with four light posts, each with 30,150-watt light fixtures designed to focus on soccer, as well as football.

Koontz says, "Sodding was originally scheduled for June, but delays pushed back the scheduling. When the large roll sod arrived it was rejected due to poor quality. Small sod squares were laid in mid-July with the hope that the field would be ready for play in late August. Heavy rainfall occurred during the installation process when only part of the sod was in place. Once the field was again workable, they tried to re-lay the sod that had been displaced and lay the sod that had remained on pallets. Some wasn't usable, so new squares were bought in. Though the sod didn't have sufficient time to knit properly, the field was used for the full fall schedule. These events led to stripping the turf and installing large roll sod in the spring of 2001. By fall,

the field was performing to expectations, with only a minor drainage problem. That was resolved in the spring of 2002 when we installed a 4-inch drain on the home team sideline."

Besides Chapman Field, there are nine other inter-conference (PIAA) high maintenance fields on the main campus. The three field hockey fields become lacrosse fields in the spring. The football practice field is the javelin and discus site in the spring. The outfields of both the baseball and softball fields double as sites for fall field hockey games. The three soccer fields are used from early spring through late fall for soccer. Camps and strength conditioning keep some level of activity on nearly all the fields throughout the summer. There are 25 additional fields spread across the six outer school sites that are used for physical education classes and non-conference athletic events.

Koontz had been involved on a part-time basis throughout the renovation process and moved into his full-time position in October 2000. Besides Koontz, the well-organized grounds crew consists of three other full-time employees: Ron Miller, Robert Fitting, and Bill Heckert. This four-person staff is not only responsible for the athletic fields, but also the mowing, mulching, shrub trimming, and all other agronomic services, as well as the equipment maintenance and the painting and snow removal for the District's 221 acres.

Koontz is quick to praise his staff for their dedication and commitment, noting, "Our grounds crew is focused on providing the highest quality possible in the facilities we maintain. Assignments are slanted to their individual strengths as a mechanic, mower operator, and line painter, but all will contribute whatever it takes to accomplish our goals. Key to keeping the program moving forward is the support and commitment of director of facilities Mike Willis and athletic director Dave Bitting."

Chapman Field handles so much action it almost needs a revolving door. The fall sports season begins in mid-August and runs at least through the first week of November. During that period it will host 20 football games, serving the Varsity, Junior Varsity, Junior High and Midget teams, ten pre-game workouts and nine boy's soccer games.

Student Recognition Night takes place on a football game night around the third week of the season. Before the game all students participating in football, cheerleading or band, from the elementary school, junior high and high school, line up on the field to be acknowledged by the crowd. That can put up to 5,000 people on the field. And, before exiting the field, they form a huge "receiving line" for the home team to run through to kick off the game.

In mid-September, the field hosts a 1-night band competition involving 10-11 bands, along with their props, trailers, floats, and acoustics shells. The All-Star Football Game takes the field during the second full week of November as the senior all-star players stage an east-west championship game that also serves as a fundraiser for the Big 33 Championship game.

Koontz says, "We do attempt to rotate fall field use to get two days vacant each week to work in needed maintenance. We also try to schedule almost a full week off in mid-October so we can cover the field to spur seed germination to increase turf density for the end of the playing season."

"With the every increasing number of events and a state-ranked powerhouse football team always on the verge of a state Quad A title, we need seating for 8,000 people. It's not uncommon for there to be up to 10,000 people at a rival game and at the first regional playoff game we've also earned the right to host two of the last three years during the second week of November."

Koontz and crew put the field through an extensive post-season maintenance program, then cover it from around Thanksgiving through the end of



Cumberland Valley School District just completed a \$75 million renovation and expansion to keep up with community growth.

March. During this only true downtime for the field, they still check it every other day, moving the anchoring sandbags and monitoring turf conditions.

The spring season brings six girl's soccer games, back to back Junior Varsity and Varsity, and four boy's and four girl's lacrosse games, all played between the third week of April up to the third week of May.

Summer action includes a three-hour per day Midget football camp in June that drew over 50 in 2003 and a second one the third week in July that drew 20. Cross-country uses the field for summer practice and there's summer strength conditioning for all sports that puts players on all the fields. There are some former players now active in the NFL who also use Chapman Field for conditioning during the summer.

ing the summer.

The award-winning field conditions were achieved despite other extreme challenges. By early 2002, most of the East Coast had endured 2 years of severe drought conditions. Koontz says, "In February of 2002, the Governor declared a drought emergency for Cumberland County and limited water use to one watering per week. All irrigation schedules required approval by the state's Department of Environmental Protection and, once approved, county and local governmental agencies, including the local police department, were notified of

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"Once established, the scheduling was set. If the football field irrigation was scheduled for Monday we had to irrigate then, even if there was light rain on that day, because we would not be able to irrigate that field again until the next Monday. That base level of moisture was essential for field preservation. All water use had to be rationed, the use measured and reported, no matter what the water source. That wasn't an issue for us. We use city water and were already metering it."

Though the restrictions were severe, they were much improved over the water use ban of the drought emergency 4 years earlier. The KAFMO STMA Chapter, the Pennsylvania Golf Course Superintendents Association, and the Penn State extension team joined together to present a solid case of safety, environmental and economic issues to the Department of Environmental Protection that earned water use rights for athletic field and golf course preservation during drought emergencies. Koontz says, "The use of wetting agents proved valuable as a way to 'stretch' our irrigation plan. We applied it at the start of each irrigation cycle to help percolate and even out the water. We also found it helped speed seed germination. Being blessed with a wet spring, we were fortunate not to have to turn on any irrigation until June 17. Once fall rolled around, tropical storms Isidore and Lilli supplied the needed rainfall to help us through what could have been an extremely difficult season."

In many ways, the 2003 weather pattern has been even harder for sports field management. A wet winter and very wet, cold spring started the cycle. Koontz says, "We've really had to think out of the box to balance the fertility, irrigation, and other maintenance practices through all the weather fluctuations in order to maintain turf density and quality. We cover Chapman Field over the winter and generally remove the cover by the end of March. Because of the weather, we didn't remove the cover until the second week of April. The turf was lush and tender so we needed to baby it into shape for the start of soccer the third week of April. We spike aerated, reseeded, and applied fertilizer and biostimulants. It held up well through the spring soccer and lacrosse season, with only a bit of thinning in the middle of the field."

"We started a more aggressive program right after lacrosse, in our first downtime of the season. We went in with deep tine aeration, dragged the cores back in, topdressed with 85 percent sand and 15 percent peat, and seeded with our bluegrass blend. We also started foliar applications of biostimulants with some additional soluble fertilizer on a 2-3 week scheduling based on temperatures,

rainfall, and turf conditions. This was supplemented with granular fertilizer applications. We generally maintain a 1-5/8-inch mowing height during the growing season, with a three-times a week mowing schedule adjusted to the turf growth. During this wet, rainy spring period, we allowed the turf to reach a 2-inch height, to reduce overall mowing hours.

"Within a week of the end of lacrosse, conditions changed to hot and dry, with temperatures consistently ranging into the 90s. We had no measurable rainfall until July 21. We gradually reduced the mowing height to 1-5/8-inches

and maintained that height. Then the skies opened with 3-1/2-inches of rain within 3 days, and temperatures dipping into the 75 to 80 degree range. By the first of August, we repeated the aggressive program we'd used right after lacrosse, this time in preparation for the fall football season."

Koontz earned his BS degree in agronomy and environmental science from Delaware College. He incorporates this into his sports turf management program along with all of the background gained in his current position and through experience working on his uncles' farms, in a landscaping company, and on the golf course.

He notes the careful planning and management of water, fertility, and biostimulants help him balance turf conditions to avoid putting any fungicides on the field. He also alters his bluegrass blend each year for overseeding applications. Selections are based of color, disease resistance, and other performance factors. The 2002 bluegrass blend developed for him by his supplier contained P-105, Tsunami, Touchdown, Blacksburg, Chicago 2 and Rugby 2.

He says, "I've found I get the best results by feeding the soil rather than focusing on the plant. If the total inputs throughout the year keep the soil healthy the turf top growth will reflect that. I look beyond the N, P, K and pH to the micronutrients, tracking things like the balance between the calcium and magnesium. I use gypsum to provide calcium, keep the

soil loose, and harden the plant. We do soil tests twice a year. I choose the biostimulants based both on those results and on what the products contain, such as phosphoric acid for basic Pythium control. I also limit perennial ryegrass use to the end of the football season, applying no more than 600 pounds throughout that period, to gain the greatest benefits from the disease resistance of the bluegrasses.

"We're constantly adjusting the program, looking for ways to make our best results even better."

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



The award-winning field conditions were achieved despite enduring 2 years of severe drought conditions.



Jim Koontz says, "It's a team effort and we're totally committed to accomplishing our goals."

Chapman Field Maintenance Program

All season

Mow 3x week at 1 5/8-in., adjust if necessary. Irrigate to meet turf needs and use schedules.

March

Field covers checked every other day to monitor turf conditions; covers remain on field until temps reach 60 degrees

Fertilize with 11-4-21 with gypsum at 1 lb. K per 1,000 sq. ft.

Apply needs-matched biostimulant package at 3 oz. per 1,000 sq. ft.

Apply soluble 20-20-20 fertilizer at 1 oz. N, P and K per 1,000 sq. ft.

Spike aerate; seed 50 lbs. bluegrass blend (containing 6-8 pre-specified varieties)

April

Fertilize with 11-4-21 with gypsum at 1 lb. K per 1,000 sq. ft.

Apply needs-matched biostimulant package at 3 oz. per 1,000 sq. ft.

Apply soluble 20-20-20 fertilizer at 1 oz. N, P and K per 1,000 sq. ft.

Apply soluble iron at 4 oz. per 1,000 sq. ft.

Spike aerate; seed 50 lbs. of bluegrass blend

May

Fertilize with 10-2-5 chicken-based compost at 1 lb. N per 1,000 sq. ft.

Apply needs-matched biostimulant package at 3 oz. per 1,000 sq. ft.

Apply soluble 20-20-20 fertilizer at 1 oz. N, P and K per 1,000 sq. ft.

Apply wetting agent at 6 oz. per 1,000 sq. ft.

Core aerate, drag cores, and vacuum debris

Topdress with 85 percent sand/15 percent peat/Seed 150 lb. bluegrass blend

Apply amino acid package at 2 ounces per 1,000 square feet

Apply soluble PK package at 3 ounces per 1,000 square feet

June

Apply needs-matched biostimulant package at 3 oz. per 1,000 sq. ft.

Apply soluble 20-20-20 fertilizer at 1 oz. N, P and K per 1,000 sq. ft.

Apply wetting agent at 3 oz. per 1,000 sq. ft.

Treat broadleaf weeds and crabgrass if needed following standard IPM procedures

Apply grub control if needed following standard IPM procedures; spike aerate

July

Apply needs-matched biostimulant package at 3 oz. per 1,000 sq. ft.

Apply soluble 20-20-20 fertilizer at 1 oz. N, P and K per 1,000 sq. ft.

Apply wetting agent at 3 oz. per 1,000 sq. ft.

Fertilize with 10-5-8 composted sludge at .75 lbs. N per 1,000 sq. ft.

Spot treat weeds if needed following standard IPM procedures; spike aerate

August

Core aerate, drag cores, and vacuum debris

Seed 200 lbs. bluegrass blend

Fertilize with 10-5-8 composted sludge at .75 lbs. N per 1,000 sq. ft.

Apply amino acid package at 2 oz. per 1,000 sq. ft.

Apply soluble PK package at 3 oz. per 1,000 sq. ft.

Apply wetting agent at 1.5 oz. per 1,000 sq. ft.

Spike aerate; seed 50 lbs. bluegrass blend during the last week of August

September

Fertilize with 23-4-10 with gypsum at .75 lbs. N per 1,000 sq. ft.

Apply soluble multiple nutrient package at 4 oz. per 1,000 sq. ft.

Apply second soluble multiple nutrient package at 4 oz. per 1,000 sq. ft.

Apply soluble 3 percent Silicon package at 1.5 oz. per 1,000 sq. ft.

Seed 50 lbs. bluegrass/perennial ryegrass mix each week

October

Apply needs-matched biostimulant package at 3 oz. per 1,000 sq. ft.

Apply soluble 20-20-20 fertilizer at 1 oz. N, P and K per 1,000 sq. ft.

Seed 50 lbs. bluegrass/perennial ryegrass mix each week

Apply soluble multiple nutrient package at 4 oz. per 1,000 sq. ft.

Apply second soluble multiple nutrient package at 4 oz. per 1,000 sq. ft.

Apply soluble 3 percent Silicon package at 1.5 oz. per 1,000 sq. ft.

Apply wetting agent at 1.5 oz. per 1,000 sq. ft.

Put on field covers during week of field downtime and on daily basis if needed

November

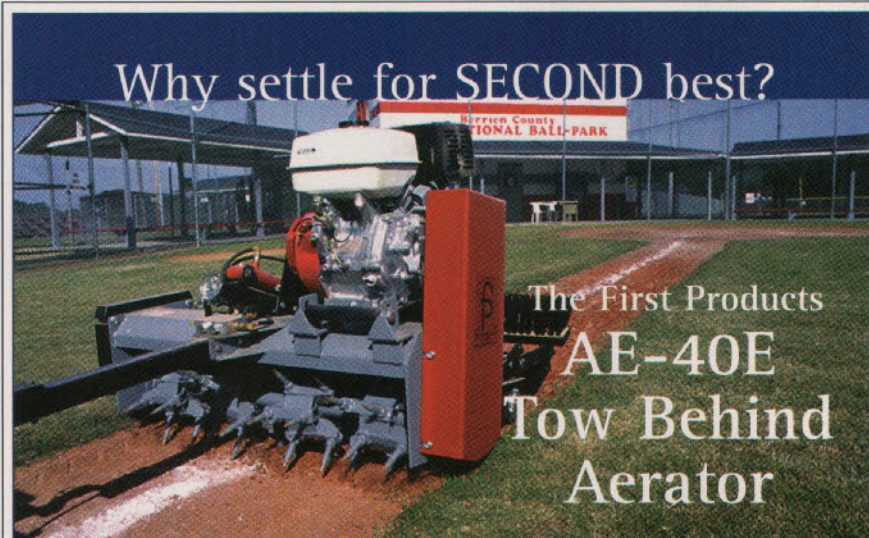
Core aerate, drag cores, and vacuum debris; seed 200 lbs. bluegrass blend

Topdress with 85 percent sand/15 percent peat; apply soil amendment at 50 lbs. per 1,000 sq. ft.; apply soluble 4-0-10 with iron

Cover field by Thanksgiving

December through February

Field cover checked every other day, anchoring sandbags moved, turf conditions monitored.



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