

The Penn State recommendation included aerifying all fields three times during spring and summer, and once heavily late in the year. A small slicer-seeder is used each autumn to reseed all heavy wear areas with a mix of perennial ryegrasses and Kentucky bluegrass. Turf in the goal mouths of the soccer and field hockey fields is removed with the sod cutter and resodded. A program of slow-release (sulfur-coated urea) fertilizer has been implemented. All fields are mowed with reel mowers two or three times each week and trimmed with outfront rotaries.

As the fields showed marked improvement during the next few years, support grew for Boltz's maintenance program. His two-man grounds crew, Paul Snyder and John Rank, shared the excitement. "Field maintenance became fun for us," remarks Boltz. "Each year we tried to do more. We began treating all 12 fields on our 50 acres the same. Fred helped us by establishing a schedule for each field and by making it stick."

The school's fertilizer and seed supplier, Gary Marvel with Sports Turf Professional in Elizabethtown, PA, has helped Boltz with soil testing and nutrient recommendations for the past five years. He is also the spark that motivated Boltz to beef up the field marking program at North Lebanon. In addition to seed and fertilizer, Marvel carries Newstripe sprayers and stencils and a line of turf paints.

"Craig and I started discussing ways to get a better handle on field marking, not just for the football stadium, but for all the fields," recalls Marvel. "The school's program was based largely on chalk because it worked well for the cinder track and the skinned areas of the softball and baseball fields. But, a number of fields are used for soccer, football, and field hockey. Craig needed a way to distinguish the different field configurations without killing turf and without rechalking after every rain."

"In Pennsylvania, you need a pesticide applicator's license to use herbicides like Roundup (glyphosate) to create permanent lines," Boltz adds. "We also don't have time to recheck the dimensions each time we mark the fields. If we lost the lines during a heavy rain, we almost had to start from scratch."

Boltz and Marvel worked together to develop a marking plan based on latex turf paint. The idea was to invest money in paint rather than extra crew time. They decided to paint the football lines white, the soccer lines yellow, and the field hockey lines orange. Before each season, they re-



A soccer ball made the NLHS stadium shine for the Pennsylvania state finals.

checked dimensions and applied a one to one mix of the paint to water. Throughout the remainder of the season they refreshed the lines with a more diluted mix of paint on a weekly schedule. By following the existing lines, hours of rechecking and restringing were saved. Between seasons, the paint was removed by the mowers so that the lines for other sports could be painted.

For many of the 35 to 40 events scheduled for the football stadium each year, the crew gets creative with insignias and lettering. Included among the designs artfully painted on the field are the school shield, a helmet in the same school colors, a soccer

ball on an orange circle, crossed hockey sticks in a white circle, and a blue football outlined in gold within a white circle outlined in orange.

"To show how much Paul and John enjoy dressing up the fields, they work overtime to paint the field whether or not they get paid!" says Boltz. "Two years ago we had to cut our budget. As Homecoming approached, I realized that we didn't have money to pay the overtime for them to paint the insignias. When I told them, rather than let the game take place without special touches, they did the work on their own

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NLHS band plays during halftime at a Friday night game.

Turf Painting

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time! They took the colors we had in storage and made them work. It's one of the few chances they have to show off. That means a lot to a grounds crew."

Homecoming is definitely the best time for colleges to show off as well. The proof is the tall stack of letters received the past two years by the administration of Central Missouri State University in Warrensburg, MO. The credit is shared between the university and the Servicemaster crew headed by Vince Patterozzi.

Patterozzi left Southern Illinois University in Carbondale, IL, to join Servicemaster in 1988. As a graduate research assistant in turf, he learned how to manage a wide variety of turfgrasses in the transition zone under the guidance of now retired Dr. Herb Portz. "You can grow almost any type of grass in the transition zone," he states, "but they all have drawbacks, especially when it comes to maintaining a busy schedule of events."

Under Patterozzi's management, the 1,100-acre campus has begun to shine, even during the blistering heat of summer and the frigid cold of the winter. From 30,000



Crossed sticks were painted on the field for the district field hockey finals at NLHS.

annuals planted around campus each year to the 12 athletic fields and 18-hole golf course, CMSU is displayed as an example of the type of work Servicemaster can provide other schools and universities. It is also one of the company's largest accounts, with contract management of both build-

ings and grounds. Servicemaster sends its managers and crews from other campuses to CMSU to train under Patterozzi.

One of the areas he covers in his classes is field painting. "The first thing we do is go over the various products and paints on

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Turf Painting

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the market and discuss the qualities of each," says Paterrozzi. "I stress to them that all petroleum-based paints and some latex paints will harm turf. Brightness and the amount of pigment are important in turf paints, since you can use less paint to achieve the same results.

"The goal is to paint the turf, not the soil," he states. "Every fall we verticut all painted areas to break up any residue in the soil. Since I don't have to take the lowest bid, just stay within my budget, I buy paint based upon its effect on turf. We've done our own tests and use Mautz products."

Paterrozzi selected three fields on the CMSU campus to demonstrate the value of painting. The baseball field was an old mixture of tall fescue, Kentucky bluegrass, and ryegrass with a relatively poor irrigation system. Athletic Field Foreman John Byers and his three-man crew added more sprinkler heads and interseeded with a mixture of improved Kentucky bluegrasses and perennial ryegrasses. "The new ryegrasses come closest to providing good year-round turf in this area," Paterrozzi points out.

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The following March, the infield was covered with a geotextile fabric cover to force early greenup. But it was the next step that really impressed the Mules baseball team when they took the field in April. All lines on the turf were painted instead of using marble dust. Then, on the grass right behind home plate, the crew painted a big red "C" outlined in white. The athletic department was so ecstatic with their new diamond that they presented Paterrozzi with a plaque of commendation.

The football practice field was Paterrozzi's next target. Again, he drill seeded with improved Kentucky bluegrass and perennial ryegrass. Then he started painting the lines as before, but with brighter paint. The crew didn't stop there,

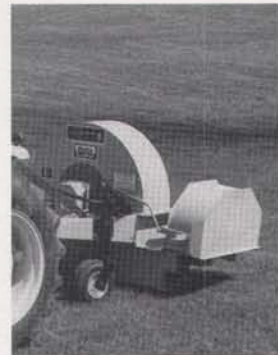
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Turf Painting

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they also painted the hash marks and numerals the same as the stadium field.

Now that he had made an impression on the athletic department, he focused his attention on Vernon Kennedy Stadium and the homecoming game that fall. Three years before, it had rained during homecoming and the Mules played in mud. With that vision lingering in the minds of the administration, Patterozzi and Byers went to work.

The field had been seeded with common bermudagrass in 1984. "The problem was the bermuda wasn't aggressive in the fall," comments Patterozzi. An attempt to add bluegrass and ryegrass to the field in the fall of 1986 was unsuccessful as it was too late to stand up to the cleats of the players in midfield.

"I'm a firm believer in reseeding," Patterozzi admits. "We have started reseeding between the hash marks with 15-20 pounds of perennial ryegrasses [a mix of Manhattan, Pennant, and Stallion from Pennington Seed] after every home game. Bermuda is a good base for overseeding. We push it with fertilizer and use iron



Paul Snyder (left) and John Rank (right) mark the junior varsity soccer field at NLHS.

before games to improve the color. We're ready with fungicides just in case we get any pythium."

By the fall of 1989, Vernon Kennedy Stadium field was ready for homecoming. The crew had created a pattern of alternating dark and light turf every five yards by mowing in opposite directions. All that was missing were the lines, hash marks, and numbers. The crew went to work with its

Smithco sprayer and one compressed air marker.

As Mule fans and alumni arrived for the game, they couldn't help but notice that instead of the standard red C in the center of the field, there was a huge red and white helmet with homecoming 89 spelled out on top. The endzones were white with CMSU in red letters on one end and MULES on the other. The contrast of the bright letters

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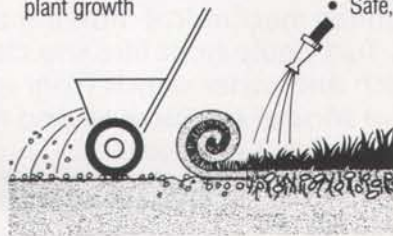
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and helmet on the dark green turf was impossible to miss.

That year, Patterozzi earned the trust of the university. Ever since his ideas have not been questioned. He has converted the softball field and one large intramural field to Nu-Mex Sahara, a recently introduced seeded bermudagrass. He plans to overseed the fields this fall with perennial ryegrass. By using two aggressive seasonal grasses, he hopes to beat the heat and the cold of the area.

He also doesn't hesitate to use green turf paint after overseeding in the fall. "Immature rye is much lighter than mature ryegrass," remarks Patterozzi. "The fields can look mottled in the fall because of this. One light application of green paint covers up the light patches and makes the turf appear much better."

Little touches can make a big difference if you're managing a showcase facility, and that includes parks. Bob McClone, superintendent of parks for New Britain, CT, goes the extra mile for Willowbrook Park. The whole community benefits largely because the New Britain Red Sox play their home games at the park. Rather than devote special attention just to the baseball sta-



Stencils in place for painting bank at Baseball City, FL, spring training center for the Kansas City Royals. Photo courtesy: Newstripe, Inc.

dium, McClone treats the entire park the same. That includes softball, football, and soccer fields.

"This is not a park, it is a highly-maintained showplace," admits McClone. "In addition to the Red Sox, two local high schools play their home games at Willowbrook. All fields have a dense, dark-green stand of Kentucky bluegrass and perennial ryegrass. All fields are carefully

striped three times a week with reel mowers.

Once a week all fields are touched up with Brite-Stripe from Pioneer. Soccer fields receive a coat of yellow while white is used for all other sports. The football fields receive the full compliment of lines, hash marks, and numbers. Soccer fields also feature all regulation lines for goal

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RECREATION INDUSTRY LEADERS MEET WITH PRESIDENT BUSH

Members of the Recreation Roundtable, a group of chief executive officers from 25 leading companies in the recreation industry, met recently with President George Bush to discuss ways in which the current administration could enhance America's outdoor recreation opportunities.

The Roundtable representatives presented ideas for a national recreation strategy to meet the country's growing and changing outdoor recreation needs. Their ideas included using greenways and byways to ensure opportunities for linear recreation, improving access to public waters for boating and fishing, and protecting open space near urban areas.

The representatives offered their assistance in developing equitable approaches to funding recreation programs. They stressed the benefits of utilizing partnerships between public and private entities to help pay for needed recreation improvements.

President Bush reviewed key actions of

his administration and noted the major expansion of recreation programs at the Bureau of Land Management and the U.S. Forest Service. Sheldon Coleman, Roundtable chairman, and Dick Nunis, vice chairman, informed the President of the organization's work in the key areas of improving public access to recreation option information and promoting America's recreation opportunities overseas.

"The President has frequently demonstrated his love for the outdoors," Coleman stated. "We knew he would understand the importance of the issues we brought before him."

President Bush was honored later by some 400 guests at the Sheldon Coleman Great Outdoors Award dinner. The President was selected to receive the 1990 award for his personal efforts to gain passage of the Wallop-Breaux Trust Fund for boating and fishing, for his elevation of recreation and wildlife programs on federal lands, and for his "America the Beautiful" initiative.

IRRIGATION DETECTIVES SEARCH FOR WATER-SAVING CLUES

Using a specially equipped van, irrigation experts are "on the road" toward assessing the adequacy of commercial urban irrigation systems, to reduce water waste and teach more efficient watering methods to the citizens of west central Florida.

The project is a cooperative effort between the West Coast Regional Water Supply Authority (WCRWSA), the USDA Soil Conservation Service (SCS), and the University of Florida's Institute of Food and Agriculture Sciences (IFAS). Its goal is to teach water conservation practices to high-volume water users.

The research van houses a newly engineered mobile irrigation laboratory. It stops at condominiums, restaurants, shopping centers, college campuses, and neighborhoods selected by water authority officials. Fedro S. Zazueta, an IFAS associate professor and water management specialist, designed the van's equipment and computer software.

An engineer from SCS and a WCRWSA technician are operating the mobile laboratory. They initially perform a visual survey of a given site, looking for any obvious

problems in its irrigation system. Then the technical investigation begins.

First, a pressure test detects any leaks, clogs, or broken parts and evaluates the system's design. A uniformity test is then performed, using catch-cans to measure how evenly water is distributed. Finally, the test results are fed into the van's computer. It holds all known soils data for Florida, plus the state's weather reports for the past 30 years.

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The reason for all this high-tech activity is very basic, according to Sydney Park-Brown, an extension agent for Hillsborough County, FL, who conceived the project: "If we can reduce the amount of water being used, it will stretch what we've got."