



The staff at North Lebanon High School painted a blue and gold shield on the field for the 1986 homecoming game.

**G**eorge Toma, head groundskeeper of the Kansas City Chiefs, doesn't particularly like being called a painter. The title doesn't reflect his broad experience with professional sports turf dating back to the '50s in Wilkes Barre, PA.

It was Toma who took the semidormant bermudagrass at the Los Angeles Coliseum in 1967 and made it brilliant green for the first color broadcast of the Super Bowl. He didn't stop with the turf and the white lines. He matched the team colors of the Chiefs, the Green Bay Packers, and the logo of the newly formed National Football League to dazzle television viewers across the coun-

try. For each of the 23 subsequent Super Bowls, Toma has, to some degree, used paint to fill television screens with a rainbow of color on an otherwise gray winter afternoon.

This story, however, is not about Toma. Instead, it is a documentary of how turf painting has spread from professional sports (including golf) to local high schools, parks, and universities across the country. Toma deserves credit for helping inspire this movement.

One excellent example of field painting at the high school level can be seen in Toma's home state of Pennsylvania. Each

year, at homecoming, the students and alumni of North Lebanon High School are treated with a field that rivals the Coliseum in Super Bowl I. The stadium lights illuminate a 30-foot-diameter gold and blue shield outlined in white, the insignia of the school's football Vikings. In the endzones the initials NLHS and the word Knights are in 20-foot-tall gold letters. The numbers are painted red, as are the diagonal stripes in front of both benches. Rivals have little doubt whose field this is and how seriously North Lebanon takes football.

Craig Boltz, superintendent of buildings and grounds for North Lebanon School District, isn't aware of Toma's contribution to his field. He just knows that the school's staff and students are exceptionally proud of the condition of all the district's fields...and he intends to keep it that way.

Painting snuck its way into North Lebanon as part of a commitment by Fred Gahres, the high school principal, to make the school's fields safer. "In 1983, John Harper and Don Waddington came down From Penn State to assess the condition of our fields for a research project they were doing," recalls Boltz. Gahres, a former All-American soccer player and coach in the days when coaches had to mark their own fields and drive the bus, took Harper's and Waddington's suggestions seriously on how to improve the school's fields. The following year, the District purchased an aerator, a set of reel gangs, a slicer-seeder, and a sod cutter.

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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.



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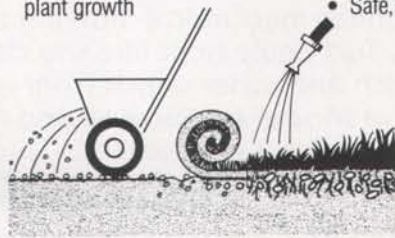
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and helmet on the dark green turf was impossible to miss.

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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## Turf Painting

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areas, penalty areas, and the center circle. The foul lines, on deck circles, and coaches' boxes on the softball and baseball are painted instead of chalked.

"We can make one field ready for two different sports by using a second color," states McClone. "We've noticed that paint lasts longer and looks brighter than chalk. It also saves us time because we don't have to remeasure." The park's six-man crew keeps one gasoline-powered and two compressed-air line markers busy much of the year.

While painting has brought very dramatic results on sports fields, it has served golf courses in more subtle ways. Nearly all golf courses use paint in some form for marking ground under repair, out of bounds, and cart path traffic control. Much of this type of work is accomplished with the use of aerosol cans of paint. A superintendent can mark a two-inch line more than 1,000 feet long with a single 16 ounce can of aerosol paint, says Tom Moderow with American Marking Corp. of Omaha, NE. If temporary lines are desired for a tournament, the superintendent can use spray chalk.

*"Once you find the right paint and ratio of paint to water, the color is indistinguishable from the overseeded turf."*

The key to aerosols is they must work in an upright or inverted position. Conventional aerosols will not spray when held upside down. They may also contain propellants or pigments which can harm turf. Be sure to specify that you need products safe for turf when buying aerosols.

In the South and West, some superintendents opt to paint dormant bermuda instead of overseeding it. In areas where bermuda does not go completely dormant, some superintendents may apply a light spray of green turf paint before important

tournaments. Harold Vaubel, superintendent at La Costa Country Club in Carlsbad, CA, sprays banks where overseeding is difficult to make his course perfect for the Tournament of Champions in January. "Once you find the right paint and ratio of paint to water, the color is indistinguishable from the overseeded turf," says Vaubel.

In Jackson, MS, Stan Reedy has two months in the winter where the bermuda at Castlewood Country Club is dormant. Since Castlewood is private and play drops significantly in the winter, he doesn't have to be as concerned about traffic damage to his dormant bermuda. "I've tried overseeding, painting, and just leaving the greens dormant," he states. "The members who play during the winter get used to playing on the painted greens. It just depends on whether we want to spend the money that winter on overseeding."

Reedy uses a Spray Hawk walk-behind boom sprayer to paint his greens. "It takes about five gallons to go over three greens in two directions," adds Reedy. "We pull the sprayer behind us instead of pushing it so we won't get footprints or wheel marks. By the time we finish painting in one direction, the paint is dry enough for us to go the other way. Then, we come back two or three times during the winter just to touch up the color." Both Vaubel and Reedy have been using paint from Green Graphics in Albuquerque, NM.

Reedy also uses aerosols to direct carts away from his greens. "We paint orange lines in front of the greens to restrict carts most of the winter," he adds.

Manufacturers caution that the best way to keep sprayers from plugging is to follow directions precisely, mix the paint well, screen the paint before mixing it with water, and cleaning the equipment after each use. "We advise our customers to pour the paint through a nylon screen before adding it to the tank," says Debbie Williams at Diamond Paint in the Des Plaines, IL. "Good paints won't foam when mixed either."

"It's important to clean the sprayer and screens carefully after each use," advises Ron Hage with Little Mfg. in Abilene, TX. "Run the sprayer with just water after you're finished to clean all nozzles thoroughly. During use, it's helpful to keep the pressure within an acceptable range to achieve uniform coverage."

Ron Zienkiewicz with W.A. Cleary in Somerset, NJ, maker of Greenzit, stresses the importance of using products designed



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for turf. "You don't want the colorant to contain lead, cadmium, or any mercurial mildewcide," cautions Zienkiewicz. "It must dry rapidly and not wash or rub off once dry. Experience will tell you which paints last the longest."

There is one other option to overseeding and painting for small worn or discolored patches of turf," says Jim Kelsey of Partac Peat Corporation in Great Meadows, NJ. "Colored topdressings are now available to conceal the dirt or thatch. You can see tan through the turf in areas that are overseeded lightly. Green topdressing conceals the tan from overhead cameras and makes the hole area appear greener."

One final comment from a groundskeeper concerning paint comes from Boltz at North Lebanon School District. "Schools and parks operate on relatively tight budgets," he says. "We don't have the best irrigation systems and can't always take advantage of fungicides or pesticides to keep our turf perfectly green and uniform. We are also under pressure to minimize the exposure of students and athletes to pesticides. Sometimes it makes more sense to paint turf for a special event rather than spend the money throughout the year to have perfect turf."



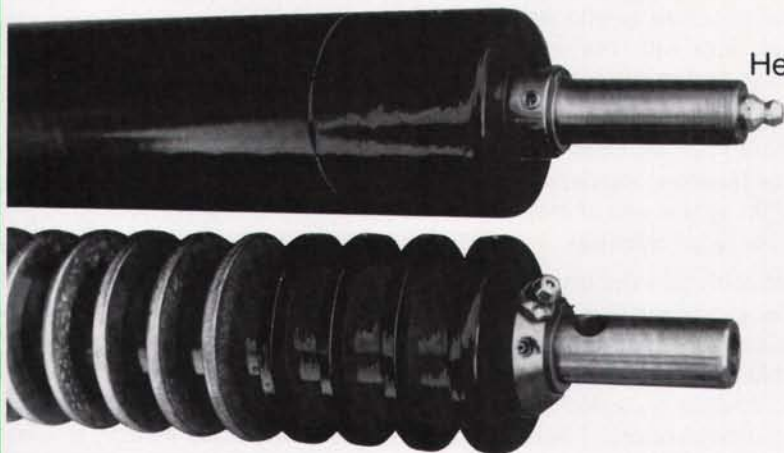
Using stencil to paint numbers on football field. Photo courtesy: Newstripe, Inc.

There clearly are ways to help turf out when it is not in its peak growing season, has fallen to some unforeseen catastrophe, or must look its absolute best for a major event. Painting, when done correctly with the right products, won't harm turf and will help the superintendent's or sport turf

manager's reputation. There is nothing to be embarrassed about, say those who use paint. If they use it for the Super Bowl, there should be no reason why you can't use it for your sports facility. It's simply a valuable part of professional turf management. ☺

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