



PAINT FROM TRAILER

You can paint your field with any garden tractor by using the ProSpray Trailer from Newstripe. A universal hitch allows the self-contained spray trailer to be connected to almost any small tractor or maintenance vehicle that's up to 60-in. wide.

The ProSpray has two 12-gal. tanks with continuous paint agitation pressurized by either carbon dioxide or an engine and compressor. A bi-directional spray head mounted to a pneumatic swivel caster produces consistent 2-6 in. wide lines in one pass on any terrain, says Newstripe. A handgun with 12-ft. hose is included for stencil work.

800-624-6706

For information, circle 171



WHEN IT HAS TO BE PERFECT

For grounds maintenance professionals, Becker Underwood's Green Lawnger turf paint provides an effective, environmentally friendly, proven alternative to the problem of discoloration of worn, overplayed, or otherwise stressed turf.

Green Lawnger isn't a dye; rather, it is a permanent green pigment, containing no hazardous chemicals, heavy metals, or any other inert ingredients harmful to turf. Formulated for a rich, natural green color, Green Lawnger keeps turf looking fresh and resists wear brilliantly for 10-14 weeks, or until mowing removes the treated surfaces. It can be applied with a variety of different types of sprayers and is available as a liquid concentrate. Depending on the particular ratio of Green Lawnger to water, the intensity of color will vary, so color depth and coverage is always within the applicator's control.

Grounds maintenance professionals in the athletic community also appreciate Green Lawnger's versatility and ease of application. Whether blending in worn areas of stadium turf, brightening stressed or overplayed fields, or keeping dormant grass vivid all season, Green Lawnger is part of many sports turf maintenance regimens, and is key in preparing surfaces for major events.

800-232-5907

For information, circle 162

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Circle 110 on Inquiry Card

In & On the Ground

NCAA-APPROVED

Diamond Pro Athletic Field Marking Dust is perfect for marking all athletic fields. Its bright white appearance improves the aesthetic qualities of all fields and is non-toxic, non-burning and therefore harmless to soil and turf. Diamond Pro Athletic Field Marking Dust is produced to meet and exceed professional and NCAA standards and is available in 50-lb. bags. Diamond Pro Athletic Field Marking Dust and other groundskeeping products are available from distributors across the U.S.

800-228-2987

For information, circle 161



CUT LABOR COSTS

The field crew of Norfolk Public Schools, is enjoying a much more pleasant job with field marking, thanks to their TruMark RS-500.

Mark Nathan, one of the crew members, performed field tests on the first production model. "Our walk-behind field painters were worn out, the job was tedious and required a lot of walking to keep our six fields painted. The second day that I tested the RS-500, I knew we had to have one. I'm amazed at our line quality, especially considering that I'm running at 250-280 feet per minute. We can layout and paint a new football field in two hours, and reline a field in 40 minutes. Our athletic director has had a

lot of compliments on the appearance of our fields," says Nathan.

Man-hours were reduced by more than 50 percent using the RS-500 with its 40-gal. capacity and twin Shur-Flo pumps. The RS-500 has a 14.5-hp Briggs & Stratton gas engine and a four speed manual transmission.

800-553-6275

For information, circle 163

STMA winner uses Game Day

Don Skeens, grounds director of Glynn County, GA, Board of Education has been using Game Day athletic field marking paints since 1995 on all of his athletic playing and practice fields. "We are extremely pleased with the quality of the field marking paint. In addition to the excellent pricing, we have found the paint to be quick and easy to mix in the appropriate portions, fast drying, and very durable," says Skeens.

A sports turf professional that takes pride in the appearance of his fields, Skeens was awarded the STMA's 1998 High School Football Field of the Year Award. "For a field to look its best, the lines have to be bright and crisp, and the colors vibrant and true. Game Day delivers custom colors on time and



matched to the team logos. The concentrated formula of 8010 Bright White allows us to dilute with water to help stay within our budget. The durability of the paint allows us to paint several days before our games, and the grass always grows back vibrant and healthy. I highly recommend Game Day field marking paint for any

athletic field, at any level."

Joe Anderson, co-chair of Suntec Paint and developer of Game Day, says, "We specifically formulated Game Day to be used on athletic fields. It is environmentally friendly, contains no harmful products, and is easy to use."

800-333-1104

For information, circle 137

PAINT FOR TURF

Game Day athletic field marking paint is specifically formulated for the sports turf professional that demands the best in quality and service at a reasonable price.

Game Day 8010 Bright White is used by professional

teams, universities and colleges, high schools, cities and municipalities, and parks and recreation departments to stripe and decorate their playing fields.

Game Day 8010 is environmentally friendly and contains no ingredients that are harmful to the grass. Its concentrated formula allows the user to dilute with water to achieve the level of brightness desired. It is easy to mix and apply, and clean up is quick with soap and water.

800-333-1104

For information, circle 164



SPRAY FROM CANS

Franklin Paint Co. developed its Game Day product in response to customers who wanted to spray paint directly out of the cans to cut mixing time. This product is just stir and spray.

Franklin's Winning Streak water-soluble paint has been their flagship product for more than 40 years, and now the Winning Streak Premium product is used by 60 percent of their customer base, including by the New England Patriots and Harvard.

800-486-0304

For information, circle 168



COACH-INVENTED MEASURING TOOL

Craig Milburn is an athletic director and coach who invented a method of measuring and setting up fields called the E-Z Right. The pre-marked measuring device eliminates tapes for laying out fields. Made of

clear-coated, 1/4-in. aircraft cable with looped ends and color-coded marks for all your necessary measurements, it comes in a roll-up reel. The kit includes two stakes and instructions.

"With this product we had no problem setting up and maintaining lines for the six fields the Giants needed. The simplicity and ease of using E-Z Right saved us countless hours. We now use it to set up and maintain our practice and Division II game fields; the accuracy results in near perfect lines," says Rich Kopp, director of operations, New York Giants Summer Camp, Albany, NY.

800-762-5060

For information, circle 165



Greater Job Security.

When you're faced with discolored or dormant turf, break out the Green Lawngr®. Easily applied with most sprayers, Green Lawngr adds the healthy, natural shade of green you want. It won't wash off or wear off, either. The color lasts until you mow it away. Golf course superintendents and groundskeepers across the country rely on Green Lawngr for its consistent performance. Like all Becker Underwood products, it's manufactured under strict ISO guidelines to ensure quality. Green Lawngr is the most widely used turf paint, and it's still the best.

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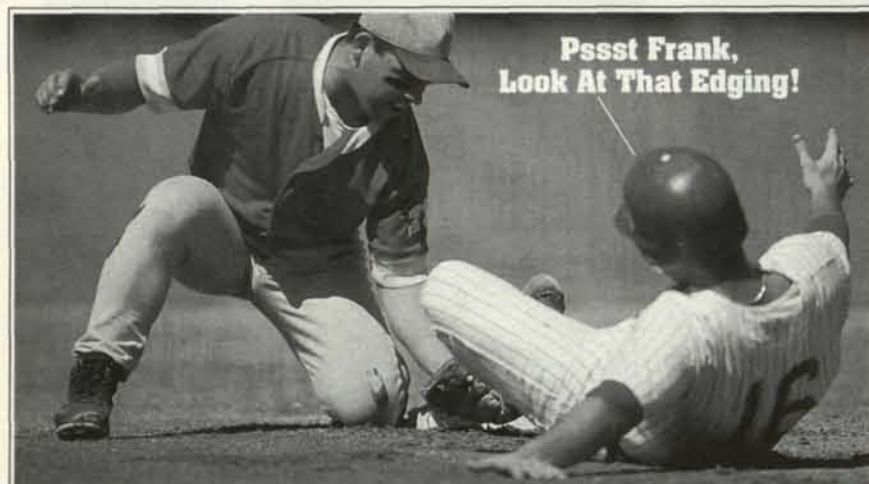
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In & On the Ground



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Economy Aerator

Now you can afford to breathe life into any sports field. This low cost, 62" aerator has no hydraulics or mechanical linkages for easy use and low maintenance. Hooks up to any vehicle in seconds.

Precision Top Dresser

Fast, uniform, versatile. Patented chevron belt lets you handle top dressing, lime, crumb rubber, gypsum, calcine clay, compost and even overseeding with precision. Level fields and amend soil consistently.



For details and the name of your local dealer, call

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SMITHCO'S LINER

The new Smithco Top Liner V offers five exclusive features that make lining easier and more accurate, says the company. First there's the Eaton hydrostatic drive that is quiet and low maintenance; and, two spray boxes, front- and side-mounted, featuring opposing double-tip spray nozzles for better paint coverage, optimum agitation, and application brightness.

An electric clutch and Tee-Jet electric foot switch make it easier to control painting, says Smithco, and a Z-gate shifter ensures accurate speed and stays where you put it.

Also new from Smithco is the Line Star, a walking liner that features hydrostatic drive that eliminates problems caused by compressors, pumps, belts, etc.

877-833-7648

For information, circle 136

LOOKING GOOD

Making you look good is what Broyhill products can do for your facility. This Kombi line marker is a self-contained, self-cleaning, walk-behind paint line-marking system, featuring a 5-gal. poly tank, 8-in. fill and strainer basket, 1.5-gal. rinse tank, 12-v diaphragm pump, three-position marking shoe mounts, and adjustable line width (1 1/2- to 4 in.).

Other Broyhill products include Fastliner, a self-cleaning line marker that easily attaches to Broyhill's Highlander, John Deere's Gator, and Club Car vehicles and can operate at speeds up to 15 mph. Fastliner Concentrated Paint makes brilliant white lines even on poor surface conditions, says the company, and the concentrate dilutes 5:1 while the mixture stays in suspension and can remain in tanks of Kombi or Fastliner up to 14 days (remix and resume painting).

The Starliner large poly hopper saves refilling time of marble dust. Stainless steel frame, brush auger helps feed product evenly, and 4-wheel design allows for no gate operation, and wind skirt.

800-228-1003, x34

For information, circle 173





MARKING MACHINE

Newstripe has added the NewRider 2000 to its extensive line of field marking and maintenance equipment. The NewRider's

55-gal. tank can paint up to 22,000 feet of 4-in. line, which is the equivalent of four football fields, says Newstripe, as well as line up to 25,000 feet per hour.

The unit has an all-welded structural steel chassis, 10-hp commercial grade engine, dual paint pumps, and hydrostatic transmission. It features center and side-mounted dual spray heads, seat-based operator controls, rear hitch, and dual in-line filters. The NewRider 2000 comes standard with a handgun for stencil and other special painting needs.

800-624-6706

For information, circle 170



FACTORY-DIRECT PRICING

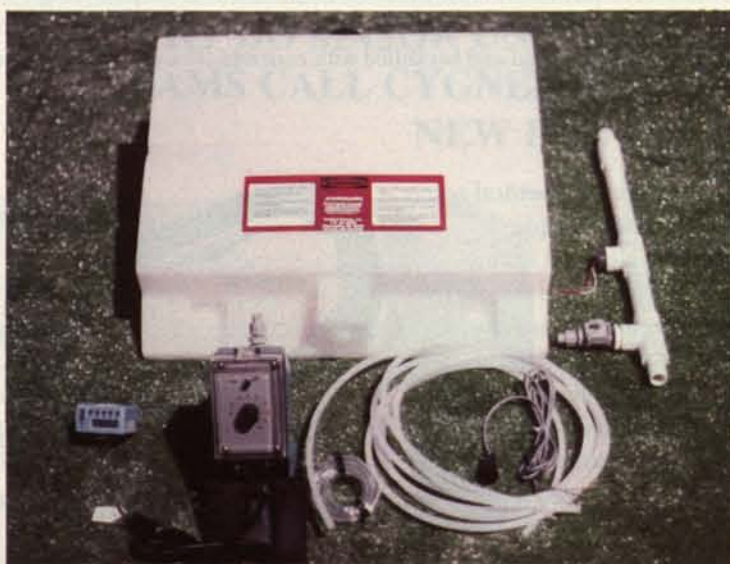
Carbit Paint has manufactured industrial coatings and specialty products since 1925. "Carbit Natural" is a popular line of water-based line marking products for natural and artificial turf. The company says these products are finely milled to prevent clogging and are concentrates, so that they can be reduced to give extended spreading rates without sacrificing hiding power.

The product line is nontoxic and washes with soap and water, and is formulated to resist the damaging effects of sun, rain, snow, ice, foot traffic, and brushing.

Carbit Natural is sold and shipped directly to users, which enables them to get factory-direct pricing.

800-288-2320

For information, circle 172



ELECTRIC FERTILIZATION

TechTurf™ has developed a computerized electronic fertilization system that works with any irrigation system. The two basic components, a digital electronic flowmeter and electronic metering pump, work together to dispense the exact water-to-fertilizer ratio needed, regardless of water pressure or flow rate, says the company. No operator programming is required.

Unlike other systems, this system measures the water flow rate up to 20 times per second and automatically adjusts the chemical feed rate to keep the ratio precise. The systems are available in main water line sizes of 1-in. (pictured) and up, and chemical tanks of 7 1/2 to 300 gal.

866-784-0490

For information, circle 176



BRIGHT WHITE

Pioneer's® BRITE STRIPE athletic field marking paint produces lines up to 400 percent brighter than standard paints under UV lights for night games, thanks to its exclusive formulation of Halogen 2000™ and OPTIWITE™ optical brighteners. The extra bright look not only ensures compliments but results in more accurate spotting of field positions for all, says Pioneer.

BRITE STRIPE can be applied with any bulk paint striper and dries ready to play in less than 1 hour. Custom color blending is available in addition to 16 standard colors, to make team logos pop off the field.

800-877-1500

For information, circle 174

Three Elements to lighting your sports field

By Jeff Rogers

Playing under lights turns a game into an event. Lights focus attention on the action, players get more excited, and bleachers swell with fans. As the lights come up, an ordinary field becomes a stage capable of fulfilling dreams.

When planning a sports-lighting project, three design elements must be understood: lighting, structural, and electrical.

Lighting

Sports lighting must meet players' needs, so should provide a specified quantity and quality of light on the field. The required quantity (level) of light is determined by the players' skill level, the speed and size of the ball, the number of spectators, and any television requirements.

Manufacturers should provide calculations stating both initial and maintained light levels. Initial light levels state the light produced when the system is new, while maintained gives the light to be maintained on the field throughout the system's life.

Your project's specifications should also require uniformity, or evenness, of light on the field. Poor uniformity is a safety hazard for players, and unpleasant for spectators. To ensure smoothness, ideal lighting design provides no variation in light greater than one percent per foot.

Manufacturers use computer-generated models called point-by-points. These models are used to evaluate the quantity and quality of proposed lighting levels. It is extremely important that each manufacturer determine how many fixtures are needed to achieve desired light levels, but don't base your decision on a designated number of fixtures. All 1,500-watt metal halide lamps produce the same amount of light. However, superior reflector design allows some manufacturers to use light more efficiently. By controlling spill, or wasted light, and redirecting it onto the field, the second manufacturer has created more efficient fixtures, as well as eliminated environmental or residential concerns that derail many lighting projects.

Structure

The two structural components of a lighting system are luminaire assemblies and poles. Each component affects the initial cost, life-cycle cost, safety, and quality of a project. The luminaire assembly, consisting of a lamp, reflector, ballast mounting, cross-arm, and mounting hardware, should be engineered as a single unit with known structural strengths to ensure the quality of maintained light on the field. The luminaire assembly must be sufficient to support fixtures, weighing up to 60 lbs., or the original aiming pattern of the fixtures may be altered, losing proper quantity and uniformity of light. When aiming patterns are disturbed, the only way to restore light levels is to re-aim fixtures, a costly and time-consuming process.

Aiming at the time of installation is also costly, and can be avoided. Technology exists allowing manufacturers to pre-aim fixtures in the factory and eliminate the initial aiming and re-aiming problems that often accompany installation.

Three types of poles are commonly used in sports lighting installations—wood, concrete and steel. Wood poles, usually the least expensive to purchase and install, have high maintenance requirements that devour initial savings. Exposure to rain, wind and even sun causes wood to warp and twist, which can create serious fixture alignment problems.

Concrete poles are often less expensive than conventional steel poles and can be direct buried. However, concrete poles are heavy, expensive to set, with high freight costs.

Steel poles come in two options. Conventional base-plate steel poles require expensive concrete foundations with anchor bolts. An alternative steel pole design avoids costly foundations with a galvanized steel pole shaft that slip-fits over a concrete base set directly into the ground and backfilled with concrete. This allows easy installation, resulting in reduced costs.

Electrical

A sports lighting electrical system should be safe and simple.

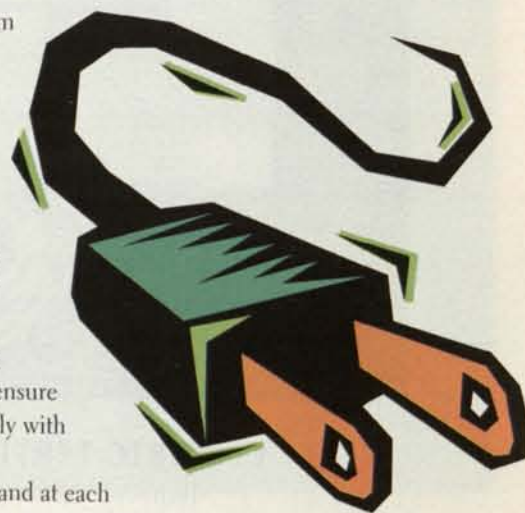
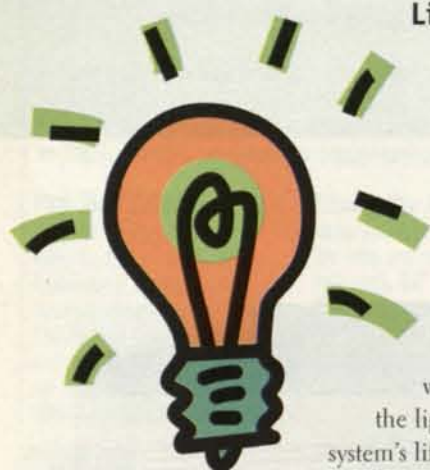
Although the electrical requirements for athletic fields are specialized, they are far less complex than most commercial and industrial applications. Electrical systems that comply with the National Electric Code, as well as state and local codes, coupled with luminaire assemblies that have Underwriters Laboratory approval, ensure that an installation will operate safely with minimal electrical maintenance.

Grounding at the service center and at each pole is needed to ensure safety. Grounding for lighting protection should be designed and installed according to National Fire Protection Association (NFPA) Code 780. Safety disconnects on each pole provide additional protection. Individual fusing of each fixture avoids gang failure of the lights and eliminates costly emergency repairs.

By keeping several additional factors in mind, the likelihood that a lighting project will please administration as well as players and spectators is enhanced. First, compare the warranties offered by different manufacturers. How long are each, and what items are covered? Multi-year part and labor warranties reveal confidence in the product.

Next, be sure to develop clear-cut specifications concerning how the project should be built, and its expected results. Definite standards prevent unacceptable substitutions, and bids that are overpriced to cover the uncertainties of an under-defined project. **ST**

Jeff Rogers is the vice president of developmental sales for Musco Sports Lighting, Oskaloosa, IA.



Funding concept leads to lighting installation

When someone has a good idea, it is sometimes referred to as a light going on in his or her head. A good idea by one high school parent booster was enough to light up an entire football field.

There are five high schools in Illinois School District 211. Three of the district's schools have lighting systems that were purchased with money raised by parent booster clubs. According to Steven East, director of purchasing and facilities for District 211, when the district looked into the possibility of getting lights for its Hoffman Estates High School, one of the boosters came to East with an idea. The booster does engineering work with Sprint, a global communications provider, and made the recommendation about a possible deal between Sprint and the school district.

East contacted Sprint about the concept and District 211 was able to strike a 10-year agreement with Sprint in which Sprint paid for four light towers as well as any electric bills associated with the use of those towers. The contract also includes two 5-year options. As part of the contract, Sprint also handles all maintenance on the light towers. In exchange, District 211 allowed Sprint to place a cellular antenna at the top of one of the light towers.

According to East, the cellular antenna still had to comply with village zoning laws and construction regulations. In other words, Sprint did not circumvent any state or local rules by getting permission to use



Illinois School District 211 was able to strike a 10-year agreement with Sprint in which Sprint paid for four light towers as well as any electric bills associated with the use of those towers.

the high school's light standards for cell tower placement. However, Sprint did accomplish its goal of placing a cell tower in a needed zone and found a willing participant by striking a deal that benefits both sides. The cost of the system is approximately \$125,000-\$130,000 for materials and installation, according to Musco Sports Lighting.

"I don't know if the local bank or church would have been as willing to let Sprint put its tower on their property," said East.

According to East, an added benefit for Sprint is the positive public relations standing it gained with local residents by doing something good for the community.

The lighting system consists of four 80-ft.-tall Musco sports cluster light standards. Sprint presented District 211 with the site plan and a recommendation for the type of lighting system, but District 211 had final approval.

Although the Sprint cellular antenna tops only one of the four light standards, the other three standards are all rigged to accommodate cellular antennae. District 211 retained the right to form contracts with other cellular companies for the use of those light standards.

East said that he could foresee similar deals being beneficial to schools throughout the county. He added that any school districts entering into similar deals

should look closely at the site plan being proposed by the cellular provider, because the school district should get light standards it likes. -John Kmitta

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Around the Grounds



REMOVE ROCKS, SAND, MULCH EASIER

RockVac can remove rock and mulch from landscape beds, gravel, glass, wood chips, debris, even sand from a bunker, says the manufacturer. Powered by a Honda 24-hp engine, this 850 cfm vacuum system draws material through its heavy-duty hose into a steel hopper, which is then gravity-dumped into a wheelbarrow, skid loader, bucket, or trailer. The manufacturer says jobs that used to take 5-6 crew members now can be done faster and cleaner with two men and a RockVac.

800-822-0295

For more information, circle 184



REDUCED SPILL AND GLARE

Hubbell Lighting's Sportsliter® SLS Series Spill/Glare Optics reduces environmental concerns by reducing spill and glare to players, spectators and surrounding neighborhoods by as much as 95 percent in professional, collegiate, scholastic, community and recreational athletic stadiums. Its innovative optical design produces excellent field beam control, increases fixture efficiency, and reduces wind loading, says the company.

The Sportsliter precision-engineered internal faceted specular louvers capture light from the lamp arc tube and reflector. Re-directing light back into the usable field beam creating a luminaire that's 30 percent more efficient. Unwanted glare is greatly reduced with 13-degree vertical and 35-degree horizontal cut off of the arc tube.

The internal louvers also reduce wind loading by as much as 28 percent and reduce dirt accumulation associated with external systems.

540-382-6111 or contact Ball Products at 800-767-BALL

For information, circle 185

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NEW MEMBER SWEEPSTAKES!!

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