

Mix Masters

Experts share
their secrets to
establishing and
maintaining a
quality infield

The composition of baseball infields varies from region to region and groundskeeper to groundskeeper. Sports turf professionals face varying climates as well as other challenges. For example, the infield at Qualcomm Stadium, home of the San Diego Padres, is removed and installed each season because of football. According to Southern Athletic Fields, a Columbia, TN, supplier of commercial infield mix, the best infield mix is what works best for the groundskeeper. Many sports turf professionals rely on local suppliers for materials that are native to their area. With such a wide variance in climates, materials and philosophies, how do you know what is right for your infield? To provide some insight into what might work for you, SPORTSTURF magazine spoke with several sports turf managers to determine what works well for them.

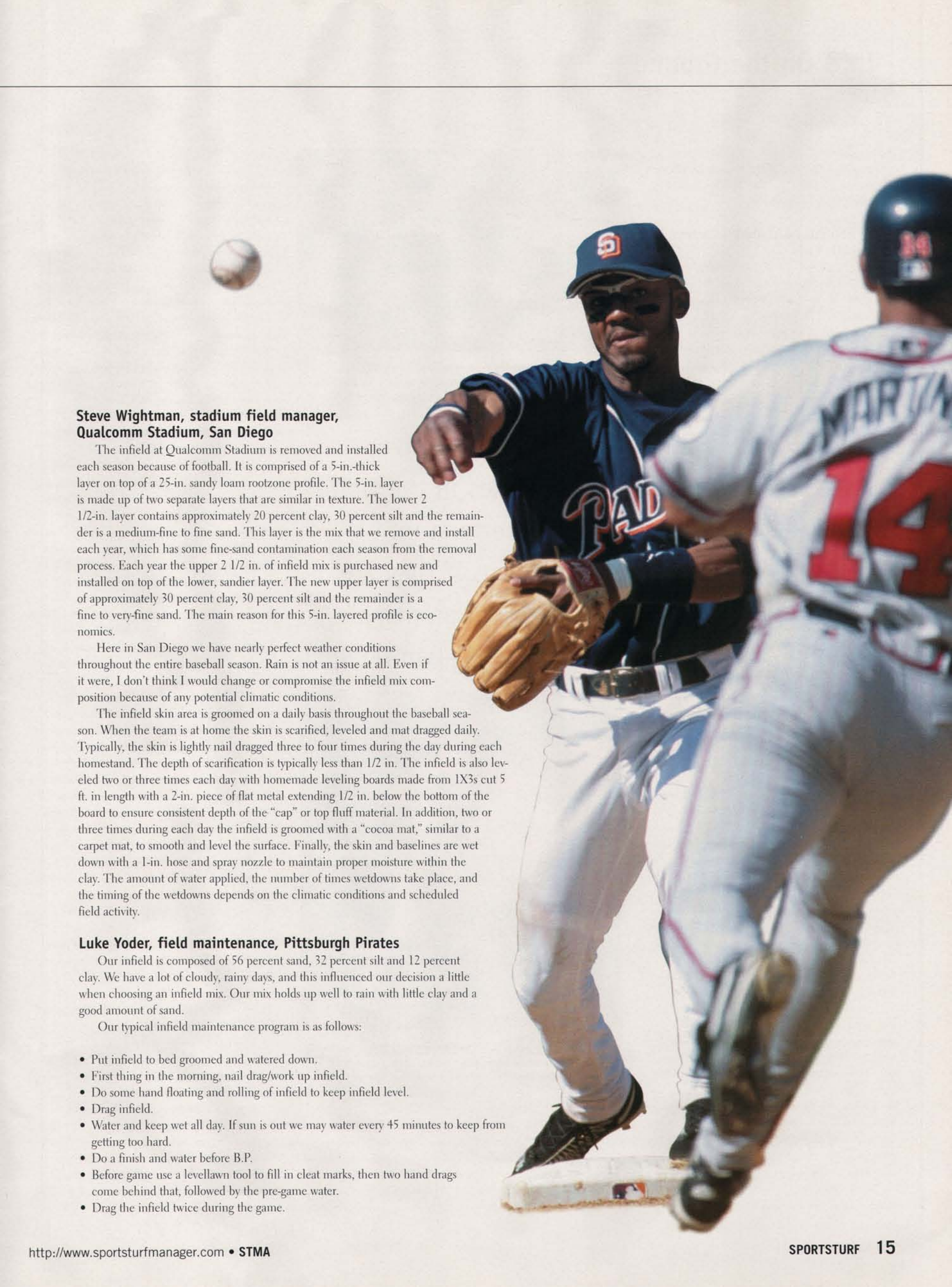
Murray Cook, president, Sports Turf Managers Association

As a rule of thumb, the average clay/sand/silt ratio is 30 percent clay, 60 percent sand, and 10 percent silt. Florida is a bit sandier and less silt. Pro levels will need more clay, but only 5 or 10 percent more.

I have found that clay products are hard to locate, and when you find them it is difficult to keep them consistent. There are different types of infield construction methods for installing the clay. Some people place a filter fabric down before laying the clay on the sub surface. Although I do not entirely agree with this application, it may be useful in the removal of the infield clays if you need to turn your baseball field into a soccer or football field.

The most important tip for infield clays is to establish a 4- to 6-in. base of material that is consistent. When adding soil conditioners only install as a top coat into the first 1/2 in. Some fields need soil conditioners throughout the clay profile to assist with drainage, but if you get the right material down the first time this will not be needed. Maintaining moisture in your clays will also help in the overall management of the surface.





**Steve Wightman, stadium field manager,
Qualcomm Stadium, San Diego**

The infield at Qualcomm Stadium is removed and installed each season because of football. It is comprised of a 5-in.-thick layer on top of a 25-in. sandy loam rootzone profile. The 5-in. layer is made up of two separate layers that are similar in texture. The lower 2 1/2-in. layer contains approximately 20 percent clay, 30 percent silt and the remainder is a medium-fine to fine sand. This layer is the mix that we remove and install each year, which has some fine-sand contamination each season from the removal process. Each year the upper 2 1/2 in. of infield mix is purchased new and installed on top of the lower, sandier layer. The new upper layer is comprised of approximately 30 percent clay, 30 percent silt and the remainder is a fine to very-fine sand. The main reason for this 5-in. layered profile is economics.

Here in San Diego we have nearly perfect weather conditions throughout the entire baseball season. Rain is not an issue at all. Even if it were, I don't think I would change or compromise the infield mix composition because of any potential climatic conditions.

The infield skin area is groomed on a daily basis throughout the baseball season. When the team is at home the skin is scarified, leveled and mat dragged daily. Typically, the skin is lightly nail dragged three to four times during the day during each homestand. The depth of scarification is typically less than 1/2 in. The infield is also leveled two or three times each day with homemade leveling boards made from 1X3s cut 5 ft. in length with a 2-in. piece of flat metal extending 1/2 in. below the bottom of the board to ensure consistent depth of the "cap" or top fluff material. In addition, two or three times during each day the infield is groomed with a "cocoa mat," similar to a carpet mat, to smooth and level the surface. Finally, the skin and baselines are wet down with a 1-in. hose and spray nozzle to maintain proper moisture within the clay. The amount of water applied, the number of times wetdowns take place, and the timing of the wetdowns depends on the climatic conditions and scheduled field activity.

Luke Yoder, field maintenance, Pittsburgh Pirates

Our infield is composed of 56 percent sand, 32 percent silt and 12 percent clay. We have a lot of cloudy, rainy days, and this influenced our decision a little when choosing an infield mix. Our mix holds up well to rain with little clay and a good amount of sand.

Our typical infield maintenance program is as follows:

- Put infield to bed groomed and watered down.
- First thing in the morning, nail drag/work up infield.
- Do some hand floating and rolling of infield to keep infield level.
- Drag infield.
- Water and keep wet all day. If sun is out we may water every 45 minutes to keep from getting too hard.
- Do a finish and water before B.P.
- Before game use a levellawn tool to fill in cleat marks, then two hand drags come behind that, followed by the pre-game water.
- Drag the infield twice during the game.

- Post-game, push material back into position areas, level areas, roll areas, drag infield (different pattern each time), and then hand water infield again if tarp is not going on.

Doug Gallant, head groundskeeper, Cincinnati Reds

We use a blend of sand, silt, clay and Turface Pro League Red that is manufactured off site and trucked in. We use a 100 percent commercial mix approximately 5 inches deep. Our blend consists of 60 percent sand, 25 percent silt, 15 percent clay and 10 percent by volume Turface Pro League Red.

The stadium is located in what is known as the transition zone. The spring is typically wet, summers are warm and very humid, and fall is cooler with moderate rainfall. We want infield clay that will drain quickly, but will also have the ability to retain moisture in hot, dry conditions. The whole key to infield management is water. There is a fine line between too much and too little.

Our infield is nail dragged daily to keep the top 1/2 in. loose. It is then mat dragged to re-establish grade and fill any low spots, and lightly rolled. Then water is applied as needed, usually 2-3 times per day in hot, dry weather. We also use infield tarps to cover the dirt areas when the team is on the road for an extended period. This prevents the infield from drying up and turning into a concrete slab.

Dan Douglas, director of stadium grounds, Reading Phillies

The Reading Phillies' infield is a mix of a variety of materials applied over the last 50 years. The top 6 in. is a commercial mix of one form or another. The top 2 in. is a newer material, slightly different from the bottom 4 in. We use a mix called Professional Diamond-Tex from Martin Limestone, Inc. in nearby Lancaster, PA. It is a manufactured mix, which means they purchase and mix the soils to achieve the desired color and consistency. Professional Diamond-Tex is approximately 60 percent sand, 30 percent silt and 10 percent clay with 100 percent of the particles passing through a #8 sieve.

Reading is on the northern fringes of the transition zone. During the playing season we can bounce around between cool and wet and hot and humid. The Professional Diamond-Tex is slightly lower in clay content than other commercial mixes, which allows it to accept more water during a rain. This allows us to play through some inclement weather. However, the mix has enough clay to provide the base material the stability it needs during ideal playing conditions. No matter what the weather, I can tweak the playing conditions of the skinned area either with a hose or the efficient use of topdressings.

Each spring, at least 2 weeks before the season starts, we will add more infield mix, till, level roll and topdress the infield. The base material will be monitored and leveled as needed throughout the season. Daily maintenance consists of lightly scarifying and screening as needed, topdressing as needed, watering as needed and tarping as needed.

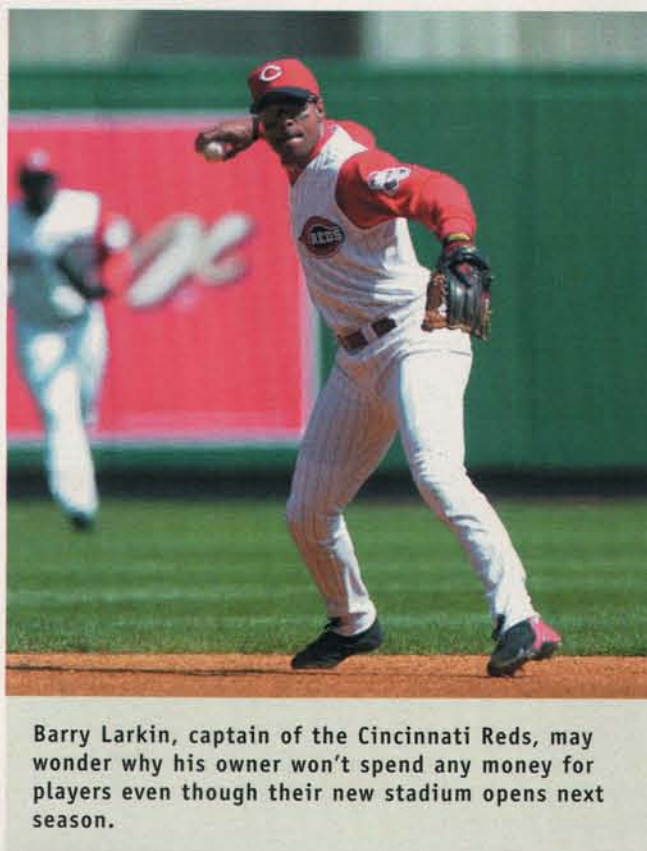
Infield mixes should be considered the base material. This base should be kept free of depressions, but maintain the proper slope to encourage surface drainage. A topdress-



PNC Park's field looks terrific; too bad Buc fans' team is one that Bud Light Selig quotes as having "little or no hope . . . of reaching postseason."

"The most expensive infield mixes in the world will not perform up to expectations if they are not cared for properly."

—Dan Douglas



Barry Larkin, captain of the Cincinnati Reds, may wonder why his owner won't spend any money for players even though their new stadium opens next season.

ing should be applied to this base material. The ball should be bouncing off the topdressing, not the base material (infield mix).

The most expensive infield mixes in the world will not perform up to expectations if they are not cared for properly. Constant leveling, scarifying and screening is essential, but the most important element is water. Excess moisture can be controlled through the use of topdressings. However, many fields lack the ability to add moisture. Dry infields become hard, uneven and unsafe. Before a lot of money is spent on importing an infield mix, a facility should provide adequate access to water and dedicate the resources[dash]both equipment and personnel[dash]to maintain the infield properly to ensure safe playing conditions.

Connie Rudolph, head groundskeeper, Midway Stadium, St. Paul, MN

The infield of our baseball field is composed of a product called Agralime, which is a crushed aggregate (limestone). Agralime is a local source of infield mix coming from Bryan Rock Company, of Shakopee, MN.

The typical climate conditions in Minnesota during the summer are pretty average. We have our extremes, but usually the temperatures are in the 70s and 80s during June, July, and August. The humidity is average to high and our rainfall is also average. Because we do get periods of rain, this infield works well because it drains well. Following a substantial rain we can usually play within an hour after working on the field.

We need to water the Agralime, like other mixes, to keep it moist for optimal playing conditions, but I feel the overall maintenance hours are reduced with this type of infield material because of its drainage capabilities and no need of a tarp.

Our maintenance program is like most others. We have the field graded once a year to keep the slope up and we add a ton of amendment every other year. As needed we edge, fill low spots, nail drag, and sweep the edges. Daily, we water and drag before and after games.

Additional tips I would offer would be to add an amendment as needed to increase water filtration and water holding capacity. If you have a limited labor budget, consider adding irrigation heads that only cover the infield so you can still have control over the infield moisture without wasting a lot of people hours.

John Mott, superintendent, RecSport Grounds, Ohio State

Our base mix is 70 percent clay and 30 percent sand with a geotextile rock barrier at approximately 12-in. depth. The top surface is 100 percent Diamond Pro vitrified clay.

Game conditions vary from 32 degrees Fahrenheit to 100 degrees Fahrenheit. Early spring can be very wet. The summer months can yield very dry and hard conditions. The vitrified clay topcoating helps on both counts. In 2001, we did not have a single rainout when the rain stopped by 1 p.m. Diamond Pro has demonstrated excellent characteristics for helping keep some moisture in the base material during dry periods and letting us get on the skin shortly after wet periods.

The skin to turf threshold is edged a minimum of three times a year. If conditions dictate we will edge more often. Usually a student can maintain these by hooping the vegetation on a weekly basis. The batter's boxes and pitching areas, which are lined with clay bricks, are repacked as wear dictates. The areas around the bases, which tend to get excessively worn out, are repacked once a week. This requires the moving back of the top layer of Diamond Pro and packing with a small driveway roller. The fields are level dragged

once each week with a drag

designed to put material in the low areas and cut it off the high areas. Daily maintenance is done by using either a mat drag or a Kromer with a broom on the back. We usually wet down the skin with dust control irrigation before starting the daily grooming.

We use a leveling type drag to maintain grade, fill low areas, and remove high areas. A Kromer with a scarifier, water tank, and broom on the back are used to do finish work. A Cushman with a mat drag may be substituted for the Kromer.

Heather Nabozny, field superintendent, Detroit Tigers

The base of my infield skin consists of a loamy soil. The mechanical analysis is 15 percent clay, 46 percent silt and 39 percent sand. The infield soil is native to Ohio and is custom blended for our field.

Here in the Metro Detroit area of Michigan our climate varies. Our spring is typi-

Moisture management is the most critical maintenance practice we do to ensure a consistent playing surface.

—Mike Boekholder

cally wet and mild 50s to 70s. Our summer is generally a mixture of sun and rain, with temperatures in the 70s to 90s. During the fall our temperatures go back down to the 50s to 70s, and we get a mixture of sun and rain.

The main reason that I continue to use this type of infield soil mixture is because it has a considerable amount of silt, which softens up well with water. However, it is not so soft (loose) that players would lose traction.

I wet the infield skin between 3 to 6 times daily depending on the weather. We nail drag it daily and we use small nail drags that we walk by hand. We then mat drag again and rewet. We follow up the rest of the day with waterings. We drag between home and visitors batting practice and then again at pre-game. We drag three times during the game. Post game we rake and broom the clay from the lips, rake up the debris into piles and remove them from the skin. We then drag the skin one more time before we leave for the night.

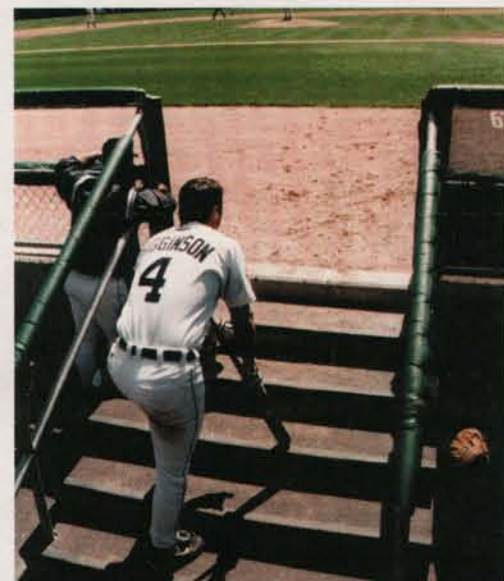
Mike Boekholder, head groundskeeper, Victory Field, Indianapolis Indians

Our infield mix is composed of approximately 30 percent Tennessee red clay, 8-10 percent silt and 60 percent angular fine to medium sand. All of our infield mix has been purchased from the same supplier. It is a blended material; the supplier blends the clay percentage up to the amount we prefer. The mix is just the sand/silt/clay mix. There are no other additives, such as calcined clays, etc. We blend Stabilizer powder into the mix ourselves each fall and top our infield skin with a combination of Diamond Pro vitrified and calcined clay infield conditioners weekly throughout the playing season.

We have typical Midwest weather, lots of thunderstorms and heavy downpours in the spring and summer. We do have a lot of humidity. I use a mix that is a bit on the sandy side, because I like the way it packs and retains its moisture. I'm not sure that I would increase my clay content more even if I didn't have as much rain to deal with on a daily basis. Our infield depends on surface drainage primarily to remove excess moisture, not percolation of the excess moisture through the infield mix.

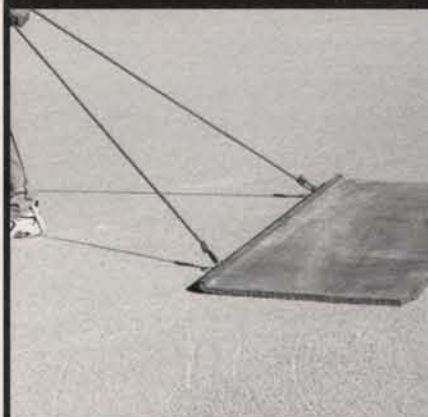
Our infield is watered several times a day, even when the team is out of town. Moisture management is the most critical maintenance practice we do to ensure a consistent playing surface. On game days, the infield is nail dragged by hand and mat dragged by hand. We alternate dragging directions to ensure that the grade is maintained as close to specifications as possible. We add infield conditioner on a weekly basis to maintain the proper top cushion on the skin. Edges are broomed nightly after games, and power washed with a high-pressure hose nozzle at least once a month to ensure no lips build up. The infield skin is raked with a field groomer and rolled after each game.

We groom our infield primarily by hand with a 3 x 3-ft. homemade nail board. We mat drag with 6 ft., 6 in.-wide homemade mat drags, again pulled by hand. After games, a John Deere 1800 field and bunker rake is used to "rake" the infield, removing all cleat marks from the skin. We use a sand trap type rear attachment as opposed to a tray groomer that would simply smooth the surface rather than raking it lightly. This unit is not used to put a finished surface on the infield, but rather to remove cleat marks from the clay base of the infield.



Heather Nabozny, Detroit's award-winning groundskeeper, can keep her mound perfect, but the Tigers' pitching staff surely won't be.

FLOAT YOUR FIELD Like The Pros!



Give your infield skin the finished look of a professional's with Beacon's Cocoa Mat Drags. Available in hand drag size (6' x 30") and tow-behind size (6' x 4' with or without optional leveling bar).



For more information, call 800-747-5985 or visit www.ballfields.com

Circle 106 on Inquiry Card



FIELD CONDITIONER

Turf-Prep sports field conditioner can help eliminate standing rainwater on your fields when it's applied at season's start. The porous soil profile creates a capillary system that absorbs large amounts of water in a short amount of time. It also helps reduce injury risks by acting as a cushion on the field's surface and minimizing slippery conditions. Its heat-treated particles will not blow away during dry, windy days, which reduces your costs.

Pioneer Manufacturing/800-877-1500
For information, circle 166



LOW PRESSURE ROTOR FOR LARGE SITES

Hunter Industries has introduced the I-60, a low precipitation turf rotor that provides 50-66 ft. of irrigation coverage where low water pressure is a concern. The product operates at 40-60 psi and doesn't require a booster pump.

The latest addition to Hunter's line of gear-driven rotors, the I-60 has a 3-in. pop-up height and is available as a full circle or adjustable arc (40-360 degrees) model.

Hunter says the unit can save you money; for example, installation expenses are cut because no pump is necessary, and smaller pipe can be used because less water is needed to run the system, while overall maintenance costs are reduced because less energy and water are needed.

The unit has the single nozzle Precision Distribution Control system with a gear-driven diffuser pin, and drain check valve that checks up to 10 ft. of elevation change.

Hunter Industries/800-733-2823
For information, circle 163

TURF SYSTEM

Southwest Recreational Industries has received patent approval for its AstroPlay brand turf system, including the "Thatch Zone" or "Root Zone" feature of the synthetic turf.

A feature of the system is the construction of the infill. It includes two layers, with the first, which may be composed of all rubber particles, installed in the Thatch Zone. A second layer, installed on top of the first, may include rubber and sand, with the ability to tailor the quantities of the components of the infill for a particular field.

The AstroPlay system brings resilience, uniform traction, and durability to multi-purpose play applications, says the manufacturer, who also makes AstroTurf.

Southwest Recreational Industries/800-233-5714
For information, circle 169



The thing practically crawls up walls.

This may very well be the most versatile tractor line on the globe. To be versatile, you've got to do two things: be agile and be user-friendly. Lots of old guard tractors are so big and clunky that they're hard to maneuver. Yes, they're durable, but difficult. Options can cost you.

Carraro tractors offer a unique array of ergonomic and operational functions built in, and are engineered for simplicity, comfort and increased return on investment.

A patented system called "Actio" in all Carraro tractors lets the chassis

articulate to all terrain types and each wheel independently grips the ground for superior balance and stability. The center of gravity is so low that it virtually hugs the turf. Each wheel being the same size means you get equal ground pressure on all 4 wheels, all the time.

Other neat features include a completely reversible seat and control system that changes direction in seconds, loads of attachments that mount front, back and even on top, as well as powerful, yet fuel minimizing engines that help keep operations costs down. Call us for our free video and more details.



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950 Sathers Drive
Pittston Township, PA 18640
1-800-597-5664
Tel: 570-602-3058
Fax: 570-602-3060
www.redexim.com

Circle 107 on Inquiry Card



LINE MARKERS

NewLiner heavy duty dry line marking machines can line athletic fields, running tracks, golf course boundaries, or even parking lots for special events. Newstripe has these models available with capacities of 50 or 100 lbs. of material. They also feature: galvanized steel components; large diameter tires for easy rolling over rough terrain; oversized cushion grips; handle-mounted control levers; precise control over 2- and 4-in. lines; and an 18-mo. Warranty.

Newstripe/800-624-6706
For information, circle 165

PRE-BLENDED

Rock & Earth Technology's Sunset Red blended infield mix has base material of 70% sand/30% clay; silt is blended with 10% (by volume) Hydrocks calcined clay field conditioner. This results in a beautiful rich red infield mix which insures a safe and playable field, says the company.

The product is delivered "pre-blended" and in bulk for one-step installation. All that is required is scarification of the existing surface, spread the new product and yell "play ball!"

For field renovations requiring conditioner only, the company will deliver Hydrocks in bulk or 1 cu.yd. Super Sacks.

Rock & Earth Technologies, Inc./770-778-5692
For information, circle 170



SPRINKLE, SPRINKLE

The EZ Adjust Series sprinklers from Toro are available in high-pop, lawn pop-up, and shrub models. All arc, flow, trajectory, and radius adjustments can be made from the top of the sprinklers, which are clearly marked with laser-etched indicators.

The top arc adjustment permits settings from 30-360 degrees and a easily seen red band on the riser allows quick verification of the setting. A left-arc indicator is visible on body and cap. The sprinklers have X-Flow feature that shuts off water flow while the system is running. Water pressure maintained in the sprinkler body holds up the riser, leaving your hands free to make arc or nozzle changes without getting wet.

The units are vandal resistant; a Smart Arc feature returns the sprinkler to its preset arc in case of tampering, and a slip clutch prevents gear damage by vandals.

The Toro Company/800-664-4740
For information, circle 164



WATER-SAVING SPRAY HEAD

The Institutional Spray, a new multi-featured spray sprinkler to high traffic areas, is available from Hunter Industries. Choose from 4-, 6-, or 12-in. pop-up sizes.

The units feature a built-in pressure regulator that maintain water pressure at an optimal 30 psi and eliminates misting and fogging; this technical advance means more controlled and efficient irrigation with wide pressure variations or significant elevation changes. Hunter says that with consistent water pressure, you can save up to 25 percent in water costs.

The regulator also acts as a flow control device if a nozzle is ever removed or damaged. Water loss at the affected head is reduced up to 70 percent while the rest of the system continues to operate.

Hunter Industries/800-733-2823
For information, circle 167



SAFER INFIELDS

BEAM CLAY special mixes for infields, pitcher's mounds, home plate areas, and warning tracks are used by more than 100 professional teams (including eight of the last 10 World Series champions), 600 colleges, and thousands of towns and schools worldwide.

As a one-stop source for baseball surfaces and supplies, BEAM CLAY offers more than 200 infield products from distribution centers nationwide, including regional infield mixes blended for specific climates and for every state.

Partac Peat/Beam Clay/800-247-BEAM
For information, circle 171



TURFACE
Pro League Red

Color • Conditioning • Performance

RED CALCINED CLAY CONDITIONER

Turface Pro League Red is the only patented red calcined clay conditioner. It combines a rich red color with proven infield conditioning benefits that create excellent sliding and fielding surfaces.

The product is unmatched in drainage and absorption qualities for maximum rainout protection, says the company. Pro League Red absorbs more water and conditions infield soil better than crushed aggregates, says manufacturer Profile Products.

The conditioner requires about half the tonnage of aggregates to obtain a 1/4-in. coverage on an infield, says Profile.

Profile Products LLC/800-207-6457
For information, circle 157

"PORTABLE GREENHOUSE"

Reemay lawn and garden blankets can be used in spring and fall to provide warm and moist conditions. The lightweight polyester blankets retain warmth and moisture similar to a greenhouse. The blankets retain moisture by slowing the evaporation rate, which means seeds will germinate earlier and grass will grow faster. Sunlight, nutrients, water, and air can all pass through these blankets.

Standard size is 12 x 15 ft. but custom sizes are available.

Properly cared for the blankets should last several seasons.

Reemay/800-321-6271
For information, circle 168



STAINLESS STEEL ROTOR

Rain Bird announces the newest addition to its family of rotors: the 5004 stainless steel rotor (5004SS). With a radius of throw of 23-50 ft., the new rotor is specially engineered for mid-size commercial turf areas. The stainless steel riser provides added toughness to deter vandals in public turf areas. In addition, there is a built-in slip clutch mechanism for added protection of the gear drive.

This rotor comes with a nozzle tree that includes low angle, Radius+ and the patented Rain Curtain™ nozzles. All nozzles are interchangeable from the front of the rotor and arc and radius adjustments are made from the top requiring only a flat-blade screwdriver.

Backed by a 5-year trade warranty, the 5004 stainless steel rotor is equipped with Rain Bird's proven water-lubricated gear drive for durable, reliable operation.

Rain Bird/520-741-6100
For information, circle 158



INFIELD MIX

Mar Mix is an ideal infield mix ranging from 60-80% Sand and 40-20% Clay. This material is used throughout the Eastern Portion of the US. Maker Southern Athletic Fields (www.mulemix.com) says it has the following qualities: superior red color; high quality and uniformity; creates firm surfaces for proper footing; and works well with amendments to create a more playable surface.

Professional stadiums, park and recreation departments, high schools, and Little Leagues use Mar Mix.
Southern Athletic Fields/800-837-8062
For information, circle 162

Thatch Problems?

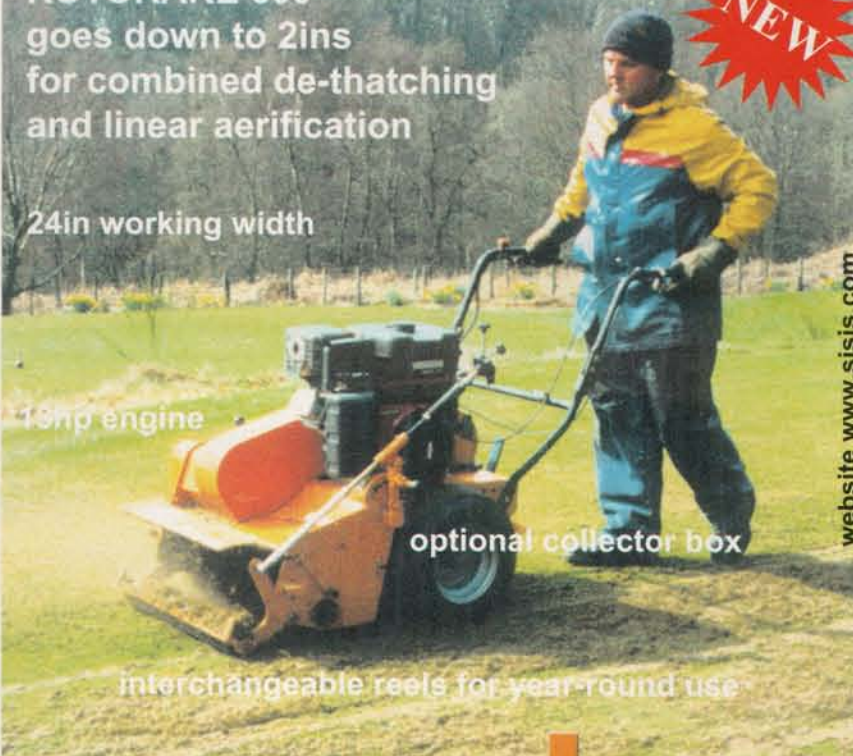
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Phone: 864 261 6218 Fax: 864 261 6932
E-mail: fdc@sisis.u-net.com

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Circle 109 on Inquiry Card



TURF RENOVATION TOOL

Basamid®, a granular soil fumigant, is used for turf renovation to help rid turf of existing vegetation in addition to dormant weed seeds such as poa annua, which can germinate up to 40 years after dormancy. Golf course superintendents have recently discovered its unique benefits of providing long-term and complete control of unwanted pests while establishing new fairways.

Features and benefits include: labeled for lawn and turf renovation, golf course construction and renovation, lawn and turf seedbeds, ornamental field production and ornamental landscape beds; eliminates weed seeds, nematodes, grasses and soil diseases; granular formulation is easy to use, product is activated by soil moisture; offers 24-hour re-entry interval, allows reseeding in as little as 10-12 days; as a non-restricted product, it requires no complicated application equipment or tarps, thereby reducing labor costs and cost of plastic disposal.

BASF/800-545-9525
For information, circle 147



MORE WEED CONTROL

PBI/Gordon's new herbicides, marketed under the ProForm™ brand, contain EPA-approved carfentrazone-ethyl in combination with phenoxies and dicamba, which broadens the weed control spectrum and adds systemic activity, the company says.

SpeedZone and PowerZone feature protox inhibitors that result in a different plant response. "It looks different," says Gordon's Doug Obermann. "The carfentrazone-ethyl causes weeds to turn brown and crisp. They just dry up and blow away."

In addition to acting faster, the new products actually perform better in cooler weather, says Obermann. "It's a great product for early spring and late fall." He adds that the fast response espe-

cially controls clover and spurge. "It smokes them in about a week. You'll see visual results in 24 hours or less and dead weeds in days."

The EPA classifies carfentrazone a "reduced risk pesticide" and the new products' toxicological profile earned them a "caution" signal word on the packaging.

PBI/Gordon/800-821-7925
For information, circle 174

NON-CHEMICAL MOLE CRICKET WEAPON

MicroBio, a Becker-Underwood subsidiary, introduces Nematac S, a bio-pesticide that uses a natural enemy instead of chemicals to control the pesky mole cricket.

Nematac S is a nematode-based bio-pesticide formulated in a water-dispersed carrier that is applied as a high volume spray. It is based on a specific beneficial nematode called *Steinernema scapterisci* that was identified as a pathogenic parasite by the University of Florida.

Exclusively licensed by MicroBio, a UK based company, the beneficial nematodes in Nematac S become active when applied to a soil profile and use mole crickets as hosts. The microscopic nematodes enter inside the mole crickets and release lethal bacteria. The mole cricket becomes a food source for the nematodes, which will reproduce and continue to attack the mole crickets infesting the turf. The nematodes in Nematac S attack only insects so they will have no ill affects on plants.

First introduced in the United States from Central America through ports in Florida, mole crickets quickly spread throughout the southeastern US and recently have begun showing up as far west as Texas. The mole crickets can grow to 3 in. in length and cause considerable damage to turf by burrowing into the soil and eating the roots of grasses. Nematac S does not pose the environmental risks associated with many of the current products being used, such as runoff into water basins or possible toxicity issues for applicators and other people coming in contact with the treated area.

Becker-Underwood/800-232-5907
For information, circle 175



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