

should be chosen. Open trenches can be installed on both the turf and the skinned areas. For turf areas, cut narrow trenches up to 1/2 inch wide and eight to 12 inches deep on three- to four-foot centers. In skinned areas, the trenches should be two to four inches wide and eight to 12 inches deep on four- to eight-foot centers. These trenches can be filled with either a uniform sand approximately .5 mm or a calcined clay product. If a calcined clay product is used, it can also be incorporated into the top four inches of the skinned infield to improve drainage there as well.

When drainpipe is used it should be the wrapped vertical type. Install it on the perimeter of the infield with varied patterns in the outfield. The open slit trenches will deposit directly into these pipes, which in turn are connected to four- or six-inch round main drains on the edges of the field. Remember, do not install drainpipe under the skinned area of the infield. Most infield materials become compacted and sealed off. The pipe will not receive water to help playability after a normal rainfall.

At this time the soil areas should be prepared for seed or sod. Always consult your local seed distributor for the best seed mixtures for athletic fields in your particular region.

Remember, do not take short cuts to finish a job quickly. The safety of the playing surface is most important. With proper planning, construction, equipment, supplies, and maintenance any facility can look nice and be safe on a small budget. Stress that the layout and construction of a field must coincide with the available maintenance equipment and budget.

Editor's Note: Marc Van Landuyt, is vice president of Van's Enterprises, Ltd., Mundelein, IL.

MANAGING A BERMUDAGRASS INFIELD

Arlington Stadium, home of the Texas Rangers, has earned a reputation as one of the best fields in Major League Baseball. Players, coaches, and other groundskeepers are impressed by the condition of the bermudagrass field under the care of Head Groundskeeper Jim Anglea and his crew.

However, they might be shocked to see the stadium's field between home stands. That's when Anglea scares management with his renovation practices that leave the field looking thin and brown . . . but only for a few days. He's not guessing. After more than six years with the Rangers, he knows how the turf will respond.

In addition to the height of the bermuda, Anglea pays close attention to thatch and runners.

Frequent vertical mowing is part of Anglea's program to keep the 419 hybrid bermuda growing at all times to make it play up to professional standards. "If a field drains properly and you keep the grass growing, you can have good turf," he contends. "But in the big leagues, you need to treat the whole field as if it is a putting green."

Anglea spoon feeds the bermuda depending upon the game schedule, spe-

cial events, and weather. Some months he may apply two pounds of soluble nitrogen per 1,000 square feet, but he does this in quarter-pound doses. The day before a home stand he will spray with a quarter pound of nitrogen mixed with iron for "a little extra push."

The entire field is mowed daily, weather permitting, and the clippings are removed. With such a rich diet the turf can grow more than 1/4-inch per day. If rain keeps the mowers off the field for more than a day, the cutting height has to be raised. "The grass grows more under canvas," he points out. "If we don't raise the height of cut you can tell the field was scalped by that afternoon." Except for such occasions, the infield is cut between 3/8- and 1/2-inch with Jacobsen walk-behind greens mowers.

In addition to the height of the bermuda, Anglea pays close attention to thatch and runners. Based on the Rangers' schedule, the turf is verticut at least twice a month during the summer. "If the team is away for eight days, we'll put thatching reels on our Toro Greensmasters and thin the grass pretty heavily," says Anglea. "If they're out for four days, we do it lighter." As if that weren't enough, one of the walk-behind greens mowers is equipped with a groomer to lightly thin the infield almost every other day.

The only disease problems that crop up at times are brown patch and pythium. The Arlington crew treats at the first sign of brown patch with Chipco 26019. "Everyone on the crew knows what to look for and we are usually treating within an hour," says Anglea. The crew is also on the alert for pythium whenever the tarp is removed, especially when it's humid. After spraying curatively with Koban one or more times, he

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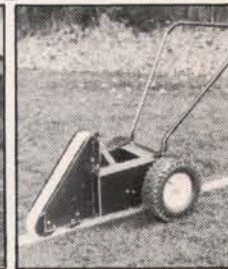


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SKINNED INFIELD RENOVATION



In many cases, skinned infields can be reconditioned by mixing processed clay amendment into the top three inches of soil. The total amount of amendment would be seven to 11 tons per average infield or one 50-pound bag every 60 inches.



The amendment is spread evenly over the infield with a drag. Photos courtesy: Aimcor, manufacturer of Turface.



A disk is used to mix the amendment with the existing soil. After allowing the field to dry for one hour, the infield is dragged again to smooth and level the surface.

turns to Subdue for preventative control.

Twice a year the infield and sidelines are aerified to soften the loam soil and to improve drainage. All cores and debris are raked and removed. Anglea has found aerifying is also a handy way to control lips of dirt in the turf. "We'll make two passes with a greens aerifier in slow gear, pick up the cores, then push the area down with a two-ton roller," he explains. "If you edge the dirt areas frequently and hose the dirt off the grass, you don't need to use a sod cutter to get rid of lips."

Brad Richards, Anglea's assistant, is primarily in charge of dirt work and pre-game preparations. "The goal is to have the field ready the day before a home stand starts," says Anglea. "That way you have time to correct any problems."

The dirt is worked and watered every day, whether or not the team is in town. One problem Anglea and Richards have noticed occurs when the team has been out of town for a few days: The dirt gets loose with no one playing on it. So, for the first game of a

home stand, the basepaths are watered and rolled to pack them down. Then a nail drag is used to loosen up the top 1/2-inch and blend in calcined clay as needed.

The turf is kept on the dry side for games. Any hot spots are hand-watered.

At the end of the season, Anglea and his four-man, year-round crew oversee the field with perennial ryegrass. The reason is to make sure the field will be in perfect condition for the opener the following April. While 150 pounds of a blend of three differ-

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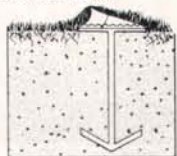
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Baseball Infields

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ent varieties would be enough for a standard infield, the Ranger crew sows almost 500 pounds. "On average, the 419 would be growing by April," admits Anglea. "But in this area we can have late cold spells or even snow in March. Overseeding is an extra touch that makes the field perfect for the players when the season opens."

By June, the ryegrass surrenders to the bermuda and Anglea's maintenance program. "We don't have a problem with tran-

sition here," he explains. "For 81 games a year, this field is the best we can make it."

The crew clearly shares his goal. In addition to Richards, Randy Cummings, John Kirchner, and Ron Masters are almost fanatical about details, from the straight lines in the mowing pattern to the matching slopes of the mound on the field and those in the bullpens. Arlington Stadium is smaller than some of its rivals. But visiting teams like to play there because of the field. It's enough to make all teams wish they had bermudagrass in their stadiums.

MANAGING A KENTUCKY BLUEGRASS INFIELD

By Greg Petry

Maintaining bluegrass infields requires a combination of people management and agronomics. Although bluegrass "heals" relatively quickly following stress, it cannot take unrestricted use placed on it by scheduled games, practices, and special events. Whether the field is bluegrass or another species, guidelines or ground rules should be established to control its use. Cooperation and communication must exist between the groundskeeper, those scheduling the field, and those using it.

Kentucky bluegrass is characterized as a "cool season" grass but it must withstand extremely hot summer baseball seasons. It forms a dense, smooth, dark green playing surface ideal for baseball. Kentucky bluegrass spreads vigorously by underground stems called rhizomes to quickly fill in worn areas. The rhizomes also hold the turf together to help it resist damage from tearing.

Irrigation is a must to achieve and maintain a quality bluegrass infield. Often late spring and summer have high temperatures coupled with drought. Many bluegrass infields are installed with great pride and expectations, only to deteriorate because water is not available in sufficient quantities during critical periods of heat and drought. During the summer, when game play is at its peak, rainfall is at its lowest level and temperatures are at a maximum. The result can be fatal for a bluegrass infield.

Therefore, when constructing an infield, don't even consider a pure bluegrass infield unless an adequate supply of water is available at the site. If installing an irrigation system is not feasible, consider a "skinned" infield until irrigation can be installed.

The growth characteristics of bluegrass require that an intensive maintenance be established. Proper irrigation, fertilization, aerification, and overseeding must be programmed on a regular schedule to maintain quality bluegrass throughout the playing season.

The maintenance program begins in April with a soil test to check nutrients and

soil pH. Kentucky bluegrass grows best in a pH range of between six and seven. As the crew begins edging and dirt work, a preemergence herbicide (Balan) is applied to the turf.

In May, the infield is aerified twice with hollow 1/2-inch tines followed by treatment with granular sulfur as indicated by the soil test. A slow-release 19-5-9 fertilizer is then broadcast on the field. Emerged weeds are knocked out with Trimec and the disease-control program begins with an application of Chipco 26019 for brown patch. During May the irrigation system is checked, repaired, and adjusted. A twice-a-week mowing schedule is put into effect using reel mowers set at 1 3/4 inch.

As temperatures rise in June, a wetting agent is applied to assure deep and uniform wetting of the soil and to help reduce the frequency of irrigation. Grubs are treated with Diazinon and Bayleton is applied for dollar spot control.

Today people are very environmentally conscious of pesticide applications. Therefore consideration should be given to applying pesticides only when necessary and only at rates needed to control the problem. Consult a specialist before including pesticides in your program.

In July, humidity coupled with high temperatures requires close attention to irrigation and diseases. A half rate of wetting agent is applied and irrigation is scheduled only to run in the early morning instead of at night. Efforts to control brown patch, dollar spot, and summer patch are stepped up with an application of Bayleton early in the month and Daconil 2787 toward the end of the month. Fungicides are rotated to avoid any problems with resistance.

August is tournament time in our district's parks. The turf is aerified early in the month. Potassium and phosphorus are applied as a 6-25-25 fertilizer before overseeding with a mix of three Kentucky bluegrasses and three perennial ryegrasses. We borrow a topdresser from the parks district's Bonnie Brook Golf Course to apply a sandy loam for Grosche Field, our main stadium. Any low spots are