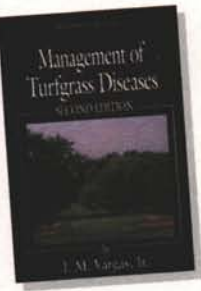


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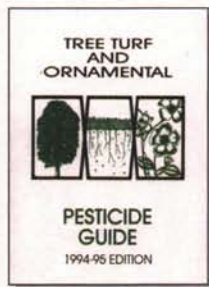
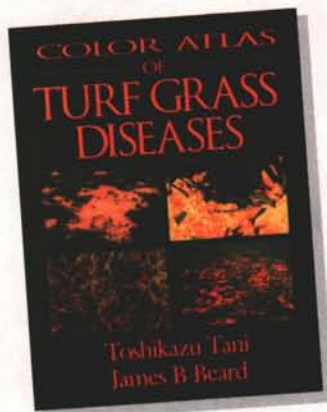


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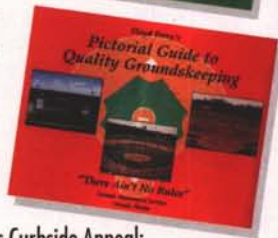
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Preparing Fields for Football & Soccer Season



by Jim Puhalla

Mid-summer brings us face to face with one of the most demanding seasons of sports field management. We're expected to deliver a solid playing surface for the highest-profile sports events of the year. That used to only mean football, but now soccer is growing by leaps and bounds in many parts of the country. The field maintenance task has become even more critical.

Field professionals and athletic coaches share at least one important aspect of their work: the preparations made before the season determine how successful the campaign will be. As Joe Paterno tells his players, "The will to win is important, but the will to prepare is essential."

Inspections

If you haven't already been inspecting your fields regularly, a detailed inspection is a good first step for fall sports preparation. All fields should be thoroughly

evaluated, including the practice fields.

One of the first things to look for is mowing problems. Lots of field prob-

ing amount of clippings on the turf, which can literally kill the grass. What's more, cutting off more than 1/3 of the plant weakens the grass and makes it less resistant to stress.

Look for clean shearing—dull blades tear the grass and make it susceptible to disease. If grass has a whitish cast after mowing, it's a sign of dull blades. Close examination of the grass will probably reveal that the blade ends are shredded instead of cut cleanly.

Inspections should also include a quick look at field moisture. A soil probe/profiler allows you to remove a small core sample four to six inches deep to examine soil moisture. Samples can also be checked for compaction, thatch accumulation, and root development.

High-traffic areas

Watch for weeds in high-traffic areas of the field, especially in the center and bench areas of football



This combination football/soccer field was completely re-sodded in mid-July. With careful watering and mowing, it was ready for competition by Labor Day weekend.

Courtesy: Jim Puhalla

blems occur because the grass is allowed to grow too high, and is cut too short. This spreads an overwhelm-

fields and in front of the goals on soccer fields. In the North, knotweed frequently appears in these areas. This is usually a sign of over-compaction. Relieving that compaction will allow the turfgrass to crowd out the knotweed.

Traditionally, many field managers have given minimal attention to bench areas, but the growth of soccer has changed the demands on these sections of the turf. They are fre-

quently part of the playing area of the soccer field. Make sure you don't neglect bench areas during your inspection.

If you have reached mid-summer and the turf has not fully recovered in the high-traffic areas of the field, consider sodding thin areas only. There's an obvious expense to sodding, but performing the process only on damaged areas is much less expensive than doing a whole field, and it can

assure you of a solid season of field performance.

Warm-season field preparation

Figure 1 is a sample maintenance program that can be tailored to fit the needs of any football field in the warm-season zone. A major southern university uses this schedule on its practice football field. It provides a glimpse of where managers should be in their mid-season preparations for the fall sports season.

Fertilization: The field gets aggressive nitrogen fertilization May through August to maximize growth and recovery of the bermudagrass during its primary growing season. Water-soluble ammonium nitrate acts as the primary nitrogen source; 21-2-20 and 8-24-24 are applied in mid- to late summer to prepare turf for the demands of competition.

Aeration and topdressing: Ideally, core aeration should be conducted in June, though this process can be performed in early July if severe drought conditions are not being encountered. After aerating, topdress the field with 1/4 inch of sand, and then drag it with a chain-link mat to work the sand into the turf.

These cultivation events can be performed as long as the turf is actively growing. Its recovery will be enhanced by the recommended application of fertilizer with high nitrogen rates.

It's also wise to dethatch the field in July if the thatch layer exceeds a 1/2-inch depth. After dethatching, topdress and drag as before. Under this regimen, the turf will have about a month to recover before fall practice begins.

Despite accepted wisdom, it's not necessary to dethatch if your thatch layer is less than 1/2 inch deep. An appropriate layer of thatch can help cushion the field surface, and it can keep players out of the mud in rainy conditions. This can be especially helpful for football.

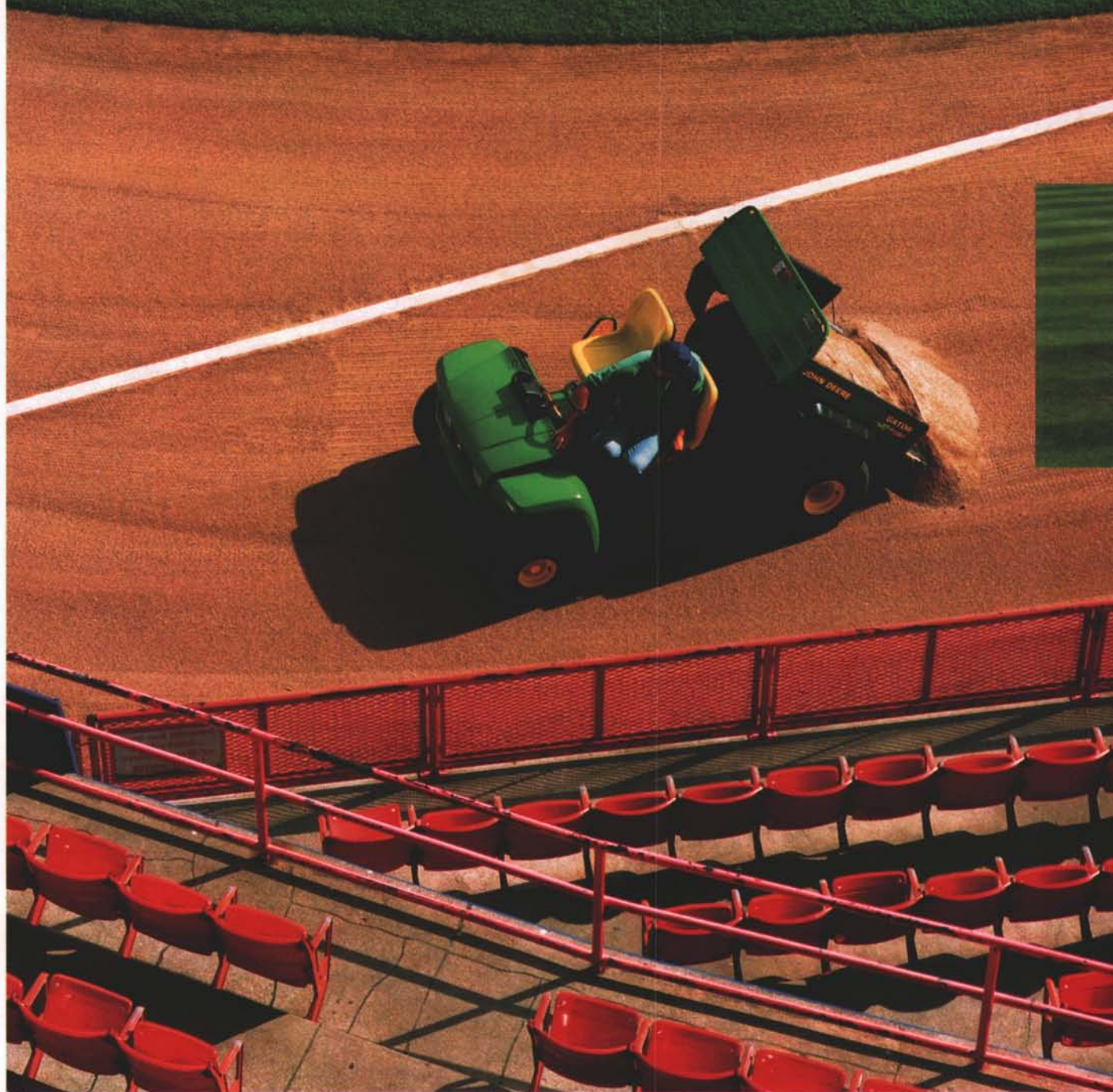
Mowing: Bermudagrass sports fields are typically mowed to heights ranging from 3/4 to 1-1/2 inches. The field in our sample maintenance schedule is cut to 7/8 inch during the season by request of the coaches. The mowing height is raised to 1-1/2 inches

Figure 1. Warm-season maintenance program

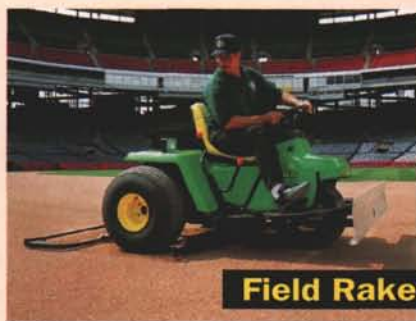
Sample Maintenance Schedule (Warm Season)							
Field Name: _____		Address: _____					
Type of Field: <u>Football Practice Field</u>		_____					
Condition: <u>good</u>		Compaction: <u>limited</u>					
Type of Grass: <u>Tifway bermudagrass</u>		Drainage: <u>surface drainage - good</u>					
Type of Mower: <u>5 gang reel</u>		Irrigation: <u>installed automatic system</u>					
Type of Soil: <u>native clay</u>		Thatch: <u>1/4" to 1/2"</u>					
Soil Test:		Notes: <u>primary wear between hash marks</u>					
Year: <u>1997</u>	Phosphor: <u>65</u>	<u>and blocking sled at NE corner</u>					
pH: <u>6.7</u>	Potassium: <u>300</u>						
Time of Year	Fertilization	Aeration	Topdress	Overseed	1/3 Rule Mowing Ht	1" Week Watering	Weed Control
May	13-13-13 1 lb N	12" solid tine	1/4" and drag		7/8"		2.4-D plus MSMA spot treat
June	34-0-0 1.75 lb N	12" hollow tine	1/4" and drag		7/8"	as needed	2.4-D plus MSMA spot treat
July	34-0-0 1.75 lb N	dethatch if needed	1/4" and drag		7/8"	30 min. every day	
August	21-2-20 1 lb N				7/8"	30 min. every day	
September	8-24-24 1/2 lb N		1/4" and drag after overseed	20 lbs/1000 perennial ryegrass	7/8"	as needed for overseeding	
October	34-0-0 1 lb N			spot seed	7/8"	as needed	
November					7/8"	as needed	
December					1 1/2" every 2-3 weeks		
January					1 1/2" every 2-3 weeks		
February					1 1/2" every 2-3 weeks		
March					7/8"		
April					7/8"		

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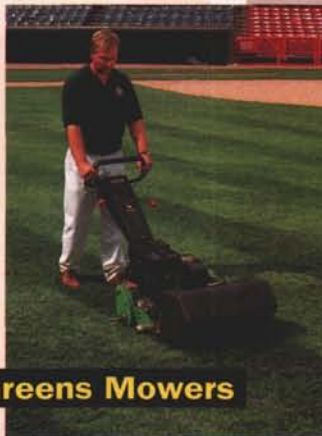
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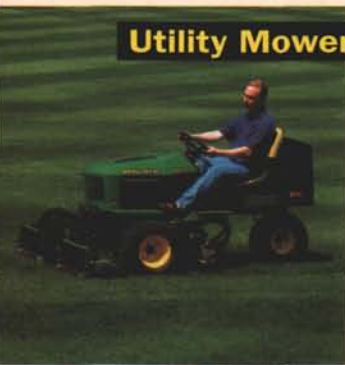


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in late fall to promote winter hardiness in the bermudagrass.

If you let your fields grow higher in the off-season, be sure to reduce the height gradually during the season. Cut the turf as often as required to keep the 1/3 rule in effect. For best results, mow two to three times per week throughout the active growing seasons of the bermudagrass and ryegrass—even when a field is not in use during the summer. It's a common mistake to neglect the field during the off-season, only to have the first practice or game date sneak up before the field is ready.

Watering: Bermudagrass typically needs one to 1-1/2 inches of water per week during the summer months to maintain active growth. The watering program should deliver deep and infrequent irrigation.

Cool-season field preparation

Cool-season turfgrasses run through an annual cycle of strong active growth in the spring and early summer, followed by dormancy in the hottest part of the year, and then another strong growing season in late summer and fall. Many maintenance practices used for cool-season fields take this annual cycle into consideration. **Figure 2** is a sample maintenance program that can be tailored to fit the needs of any football facility in the North.

Figure 2. Cool-season maintenance program

Sample Maintenance Schedule (Cool Season)							
Field Name: _____		Address: _____					
Type of Field: <u>Football Game Field</u>							
Condition: <u>good</u>	Compaction: <u>yes - middle & bench</u>						
Type of Grass: <u>blue/rye</u>	Drainage: <u>installed pipe drain system</u>						
Type of Mower: <u>60' rotary</u>	Irrigation: <u>installed automatic system</u>						
Type of Soil: <u>clayloam</u>	Thatch: <u>1/2" sides - 0" middle</u>						
Soil Test:		Notes: <u>knotweed (middle & bench area)</u>					
Year: <u>1996</u>	Phosphor: <u>85</u>	<u>some clover - crabgrass (N end)</u>					
pH: <u>6.5</u>	Potassium: <u>350</u>	<u>check sprinkler head elevations</u>					
Time of Year	Fertilization	Aeration	Topdress	Silt-seed	1/3 Rule Mowing Ht	1" Week Watering	Weed Control
April	18-24-12 1/2 lb N 50% SRN	core entire field	for surface leveling	bluegrass middle & bench areas	2"		
May	24-5-11 1/2 lb N 50% SRN	12" solid tine aeration		blue/rye touchup spots	2 1/2"	light frequent intervals	
June		core 50' each side			2 1/2"	deeper less frequent	
July	16-0-31 1/2 lb N 25% SRN				2 1/2"	deeply	spot treatment
August		slice middle		primed ryegrass middle	2"	deeply	
September	32-5-7 1 lb N 50% SRN				2"	cautiously	
October	20-5-10 1/2 lb N 50% SRN				2"	cautiously	
November	1 lb N after last mowing	core entire field	for surface leveling	now or April	2"		



Letting grass get too high and then trying to rapidly reduce the height to mid-season levels can spread an excessive layer of clippings that will kill the grass. It's best to work down to competition heights gradually, while still observing the 1/3 mowing rule. *Courtesy: Jim Puhalla*

Fertilization: During the summer, one application of 1/2 pound of nitrogen and one pound of potassium helps preserve plant health during periods of greatest heat. It also enhances the turf's ability to resist disease.

Aeration: Aerating frequently helps make turf stronger. Vary your equipment use according to the season, and tailor your program to your fields' particular needs. In the summer, core only the sides of the field. Stay off the middle and any other newly seeded areas; the grass plants are not yet mature enough to withstand the stress of aeration.

If you choose to aerate late in the summer, be sure to fertilize and water the turf to maintain active growth. Spiking or slicing in August opens up the soil to air and water and won't disrupt the surface. These techniques can be continued throughout the playing season on a bi-weekly schedule.

Mowing: In July, grass should be higher than at any other time during the year. A height of about 2-1/2 to three inches is optimal. Three to four weeks before the first game, begin lowering the height to game height. Remember to reduce height gradually by taking off no more than 1/3 of the grass plant at any one mowing. This gradual reduction in advance of the season will allow turf to recover from the lower cutting height and be fully ready for play.

Mowing height is another area which is affected by the shared use of a single field for football and soccer. Most soccer coaches and players want the field to be cut shorter than the typical northern football field. If your field will host both sports, begin reducing the height four to five weeks before the season.

Special notes

When establishing a field preparation program for the Transitional Zone, use a program that is appropriate for the type of turfgrass being used on the field. Prepare warm-season varieties according to the warm-season program, and cool-season varieties according to the typical northern program.

Q: What do all of these teams have in common?

Oakland A's
 Arizona Diamondbacks
 University of Texas Longhorns
 San Diego Chargers
 University of Southern California Trojans
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 Arizona State University Sun Devils
 San Francisco 49'ers
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Preparing Fields

In the South, the program outlined in **Figure 1** should be followed on most native-soil fields, game fields, and practice facilities. If the stadium field is overseeded, many field managers choose to overseed the practice field to closely simulate game conditions.

In the North, most teams with one practice field that must host 100 practices will be practicing on dirt by the end of the season. From a preparation standpoint, limit damage by applying one pound of nitrogen each month in June and July, before the field is being heavily used. Combined with careful mowing and watering practices, this aggressive fertilization program should allow the field to hold up much better to the demands of the season.



A badly damaged football bench area can disrupt the playing field for soccer on a dual-use field. The yellow line is the touchline of the soccer field. This area can be sodded to restore playability in six weeks. *Courtesy: Jim Puhalla*

It must be said that effective preparation for fall sports should begin at the conclusion of the previous year's season. Steps that can be taken now will have some effect on the health of the turfgrass culture, but substantially upgrading a football or soccer field takes months to achieve. □

Jim Puhalla is president of Sportscape International, Inc., of Boardman, OH, and Dallas, TX. He is author, with Mississippi State University professors Jeff Krans and Mike Goatley, of a forthcoming book: Sports Fields—A Manual for Design, Construction and Maintenance.

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