

# Athletic fields: why renovate?

## Experts from all over the country discuss how to prepare fields for summer play.

■ When spring rolls around many fine turf areas, particularly athletic fields, need renovation.

This is particularly true in 1992 because of extremely dry conditions in many parts of the country last growing season.

Dr. Charles Peacock of North Carolina State University recommends renovation where the site isn't acceptable but desired turfgrass nevertheless covers more than 60 percent of the playing field. (If turf cover is less than 60 percent, Peacock says re-establishment—destruction of the old field, complete site preparation and replanting—is a better alternative.)

Other reasons to renovate include:

- excessive thatch (greater than one inch thick)
- poor soil conditions (compaction, rock layers, buried foreign matter, etc.) or
- severe damage by traffic, diseases, insects, etc.

Peacock says to check thatch thickness and root density to determine how much vertical mowing can be done.

"The first step should be an examination of the root system by grabbing a handful of turf and trying to pull it out of the ground," Peacock says. "Sparse or shallow-rooted turf is easily pulled out of the soil. Vertical mowing poorly-rooted turf in a weakened condition is not advised."

**Turf wear**—According to Dr. Vic Gibeault of the University of California at Riverside, traffic causes soil compaction, soil displacement, turf wear tolerance and turf displacement. Any of these problems is also reason to renovate.

Turf wear, Gibeault says, is a "vertical crushing and horizontal displacement" influenced by turf species, cultural practices, environmental conditions and/or type and intensity of play.

The most wear-tolerant grasses are, says Gibeault (in order):

- 1) zoysiagrass,

- 2) common and hybrid bermuda-grasses,

- 3) turf-type tall fescue, and

- 4) Kentucky bluegrass.

Before renovating, determine which species is best-adapted to your situation.

**Renovation**—The steps in renovation, Peacock says, are:

- 1) Kill unwanted vegetation with either a selective or a non-selective herbicide.

- 2) Mow those trouble parts of the field as short as possible, taking into considera-

tion the type of grass.

- 3) Verticut to pull up thatch. If thatch is an extreme problem and the existing grass is healthy enough, you may want to verticut a second time at right angles to the first pass.

- 4) Vacuum or rake up the debris, and mow once more to smooth the surface.

- 5) Apply a thin layer of topdressing that is compatible with native soil.

- 6) Reseed or replant.

**Drainage problems**—Areas with drainage problems can either be re-graded or topdressed.

"When re-grading, establish a crown on the field's long axis and carefully grade to a 1 to 1-1/2 percent slope toward the sidelines" or foul lines, notes a University of

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## SAMPLE ATHLETIC FIELD FERTILIZER PROGRAM

For natural soil and modified soil fields where soil tests show minimal\* to adequate levels of phosphorus and potassium, or no soil test has been made.

Nitrogen source	Time of application			
	Late spring	Early summer	Late summer	Early fall
	Pounds of N-P <sub>2</sub> O <sub>5</sub> -K <sub>2</sub> O per acre applied			
50% or more of the N derived from a slowly available source	60-30-30		100-50-50	
or 25% to 49% of the N derived from a slowly available source	60-30-30		50-25-25	50-25-25
or water soluble N	40-20-20	30-15-15	50-25-25	40-20-20

\* Additional P<sub>2</sub>O<sub>5</sub> and/or K<sub>2</sub>O should be applied where soil test indicates need.

Source: Penn State University



Many athletic fields will require renovation due to last year's drought conditions.

Minnesota extension pamphlet.

"Heavy topdressing in depressed areas and in the center of the field, with lighter applications along the sidelines, gradually gives the desired surface drainage."

Penn State University says that at least 80 percent of the topdressing sand be between 2.0 and 0.5 mm or between 1.0 and 0.25 mm.

**Aerification**—If hardness from compaction is a problem, consider aerifying.

"Simple aerifiers can be the best investment you can make," says Chip Toma of the Kansas City Royals. "The jury is still out on pulling cores, but as long as you can get air and water to the rootzone, you'll be doing some good."

Roger Moellendorf of the Green River (Mont.) Parks and Recreation Department, hires one person each summer whose job is strictly aerification. "All our fields get it at

least two times per month," Moellendorf says.

**Overseeding**—Though best done in late August or early September, you can overseed in early April in cool-season areas.

The Lawn Institute recommends a mixture of 50 to 75 percent Kentucky bluegrass and 25 to 50 percent creeping red fescue at a rate of 4 to 5 lbs./1000 sq. ft.

"Pre-germinate seed to give grass the fastest possible start," writes Dr. Eliot Roberts of the Lawn Institute. "Mix seed with expanded mica such as vermiculite (concrete aggregate grade) at a rate of 2 mica to 1 seed.

"Moisten the mica slightly, and mix in the seed. Then add water until mixture is thoroughly wet. Cover with a plastic tarp and keep moist for 7 to 9 days with temperature held at about 70° F.

"When most of the seed has started to germinate, mix with a processed sewerage

sludge fertilizer until dry enough to spread. Calibrate the spreader for the proper rate and sow promptly. After seeding, water the field immediately and keep moist."

**Fertilization**—"Recovery is more rapid if turf is properly fertilized immediately," Peacock notes.

Test the soil to determine fertilizer needs. "In lieu of a soil test," Peacock adds, "a 16-4-8 fertilizer with micro-nutrients is suggested, at a rate which will provide 1 lb. of soluble nitrogen per 1000 sq. ft."

Also, if soil pH needs correcting, lime should be spread and worked into the soil profile during cultivation.

**A final tip**—Do not use pre-emergence herbicides immediately following re-planting. This may inhibit root formation. "Weeds are better handled with a post-emergent after the first mowing," Peacock concludes.

—Jerry Roche

## Don't underestimate worth of hand sprayers

■ It's difficult to imagine professional lawn and landscape service without small compression sprayers. Yet the hand sprayer is often given too little regard by professional users.

It's dumped into the back of service vehicles, sometimes dropped and, every once in a while, inadvertently drop-kicked. Then the user scratches his or her head when the unit leaks. Or when the sprayer hose clogs.

Slowly, that's changing. Appreciation for the compression sprayer grows as the green industry moves to spot/target applications of materials. Pump-up sprayers are well suited for many of these uses.

Gene Short, sales manager for Green Garde/Division of H.D. Hudson Manufacturing in Chicago, offers these suggestions for choosing, and safely using compression sprayers:

- Professional applicators should use professional sprayers. "What's worse than showing up on somebody's lawn with a sprayer in your hands just like the one hanging in the customer's garage?" observes Short.

- Polyethylene is a good material for a lawn/landscape sprayer, says Short. It's lightweight and corrosion resistant. Short prefers stainless steel nozzles, although brass nozzles are dependable and long-lasting too.

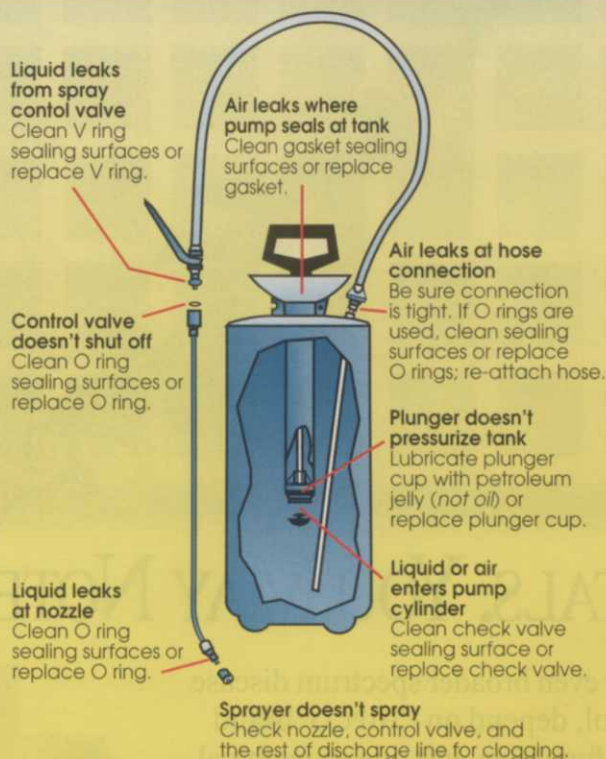
- Look for a sprayer with a removable spray hose. If it becomes clogged, it'll be easier to unclog. The hose should be PVC graded.

- Purchase a sprayer with a funnel top. It's easier to fill without spilling material.

- Wear appropriate safety gear—gloves, boots, goggles—when filling the sprayer, particularly when handling concentrated pesticides.

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## SPRAYER MAINTENANCE



### PREVENTIVE MAINTENANCE

1. Clean tank and flush out discharge line after every use.
2. Keep inside of tank dry when not using. Store upside down with pump removed.
3. Apply petroleum jelly (not oil) to plunger cup once a year, more often if necessary.
4. Occasionally oil spray control valve, plunger rod, and nozzle threads on cap.

Source: H. D. Hudson Co.