



Mixing chemicals, circa 1940-1950.
Note: no protection (but what an outfit!).



A Leyland steam-powered mower designed for sports turf.



An early out-front reel mower (low rider).
Note the steel tires on the tractor (circa 1930s).



The world's first electrically operated mower, circa 1926.

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Mower to Consider

by Bill Klutho

There's more to consider than "just" cutting grass. Mowing is a frequently repeated maintenance task that affects turfgrass condition, playability and field appearance. The match between equipment and your mowing needs also impacts labor hours expended and thus your overall budget.

Because manufacturers constantly are upgrading their machines and introducing new technology to the marketplace, your options in mower

selection are better than ever. Take the time to research which combination of mower types will accomplish your objectives most efficiently and cost effectively.

Turf Concerns

Consider the type or types of turfgrasses used on the athletic fields you maintain. Will you be using one mowing height range and level of mowing frequency on a bermudagrass field throughout the playing season? Or, will you be switching to a different

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mowing height and level of mowing frequency when that field is overseeded with perennial ryegrass? Do you use one type of turfgrass on your game fields and another type on your practice fields? Do all of your athletic fields use the same type or types of turfgrasses, but other turfgrass types



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are used on the other areas of the properties you maintain such as the space surrounding a stadium or the landscaped sections of a school campus? How do these variations affect your mower needs?

For example, with a quad of baseball fields, will your crew use a walk behind reel mower for the infields and ride on reel mower for the outfields? Or, will they use a ride on reel mower for all field areas, but adjust the height of cut between the infield and outfield areas of the fields? Or, will they use a reel mower on the infields and a rotary mower on the outfields, or a rotary mower on all the field area?

Will the mowers be stored on site with one crewmember generally handling all the infield mowing and a different crewmember all the outfield mowing? Or will the mowers be used by a dedicated mowing crew with the mowers transported from a central maintenance location to different mowing sites each day?

Consider mower size and maneuverability issues in relation to field mowing patterns. Will the operator use a rotary mower for all the turf area of a multiple field soccer complex? Or, will each field within the complex be mowed in a cross-field pattern, with the operator moving from field to field?

Consider operator comfort, especially with dedicated mowing crews. Operator comfort translates to reduced fatigue and higher productivity. When making mower selections, ask crew members to assess the little things such as the placement of controls within the operator station and the ease of cutting height adjustment.

Mowing Time Comparisons

Obviously, the wider the cutting unit, the greater the area cut with each pass. But a ride-on rotary mower with a 60-inch cutting unit and a walk behind reel mower with a 30-inch cutting unit may both have a place in your mower line up. Actual mowing time for different sized mower decks can be calculated by using the John Deere formula listed below:

108.9 divided by
 $(\text{mph} \times 0.9 \times (\text{mower deck width in inches})) = \text{hours to mow an acre}$

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Investigating the Match Factor— Equipment Purchasing Considerations

Getting a job done right requires the right tool at your fingertips. This is also vital for creating beautiful results in the least amount of time. Without the right equipment, turf maintenance can be like trying to mow a soccer field with a pair of scissors.

"With so many machines and so many applications, the customer and the salesperson need to find the right machine for the job," advises Mark Nelson, Manager of Product Training at Textron Golf, Turf & Specialty Products. With the wide range of equipment available today, you should consider the following factors to assure the best match for you and your facility:

Duty and durability Any machine, e.g. a mower, needs to be durable in all conditions. It should stand up to the most extreme heat and humidity without breakdowns. While a strict maintenance schedule is necessary to achieve long service life, engines should be designed for strength and performance. When you are researching and comparing utility vehicles, investigate an engine's towing ability to avoid potential problems later.

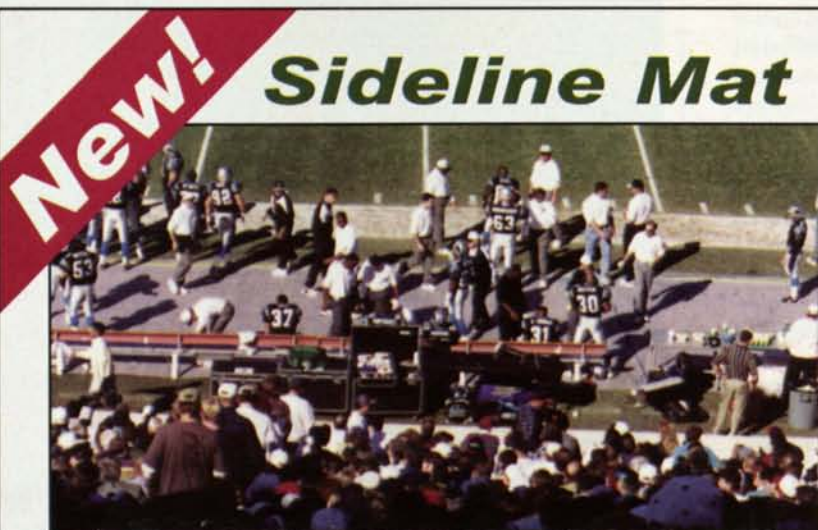
Terrain School playgrounds and parks are often filled with obstacles for maintenance equipment. Zero-turning-radius mowers work well under these conditions, allowing quick maneuvering around trees and playground struc-

tures. Stadium or sports field maintenance, on the other hand, presents the opposite terrain condition. Here, a maintenance crew might benefit more from a wide, high-production riding mower than from a walk-behind or zero-turn model. Likewise, a tractor-mounted or tow-behind aerator might be preferable to a walk-behind machine.

Location Parks and schools have neighbors. Equipment powered by a gasoline or diesel engine can annoy a nearby community and make it difficult to mow during early-morning hours, after dusk, or during school hours. One alternative is an electric-powered mower. Another is to purchase the quietest gas/diesel model you can find.

To most people, a mower is just a mower. Those in the grounds maintenance field, however, understand the differences among walk-behind, front- and mid-mounted and large-area mowers. Aerators and utility vehicles also come in all shapes and sizes with various features. Knowing the differences among brands and models is the first step in finding the best machine for the job—whatever type of equipment you need.

Lisa Olson is a representative of Textron Golf, Turf and Specialty Products. Contact your local dealer, or call (888) 922-TURF for information on a variety of Textron Golf, Turf & Specialty Products maintenance equipment.



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Hours to mow an acre x 60 minutes = minutes to mow an acre

The factor 108.9 includes the acres per hour dimensions and a 10 percent time factor for turning at the end of swaths.

The mowing speed is the miles per hour rating at the recommended mowing gear or the usual ground speed. (John Deere uses nine-tenths of the mower deck width to factor in overlapping swaths for a uniform mowing job.)

Here's an example: If the normal, safe mowing speed of a ride on mower is 3.5 mph and the mower deck width is 38 inches, then multiply 3.5 time 34.2 inches (nine-tenths of 38). The product is 119.7. Divide 108.9 by 119.7 and get the answer 0.909, or 0.9 hours. Multiply that by 60 minutes to get the answer of 54 minutes.

To mow an acre of flat, open turf with a 38 inch mower deck at 3.5 mph will take approximately 54 minutes.

Using the same formula: A 72-inch mower deck operating at 4 mph can

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mow an acre of turf in 25 minutes.

A 54-inch walk-behind mower at a 3.3-mph ground speed can mow an acre of turf in 41 minutes. A 38-inch walk-behind mower at a 3.3-mph ground speed can mow an acre of turf in 58 minutes. A 21-inch walk-behind mower at a 3-mph ground speed can mow an acre of turf in one hour and 55 minutes.

These calculations give you a starting point for determining the match between staff levels, area to be mowed and mower options. For more precise calculations, use a stopwatch to measure performance on each field. Use at least three repetitions during similar mowing conditions. You may find the combination of turf density and cross-field mowing patterns adds a five or ten percent time factor for your game fields as compared to your practice fields or to other turf areas you maintain. You'll also want to factor in the additional mowing time needed for wet conditions or for additional passes to "burn in" a mowing pattern.

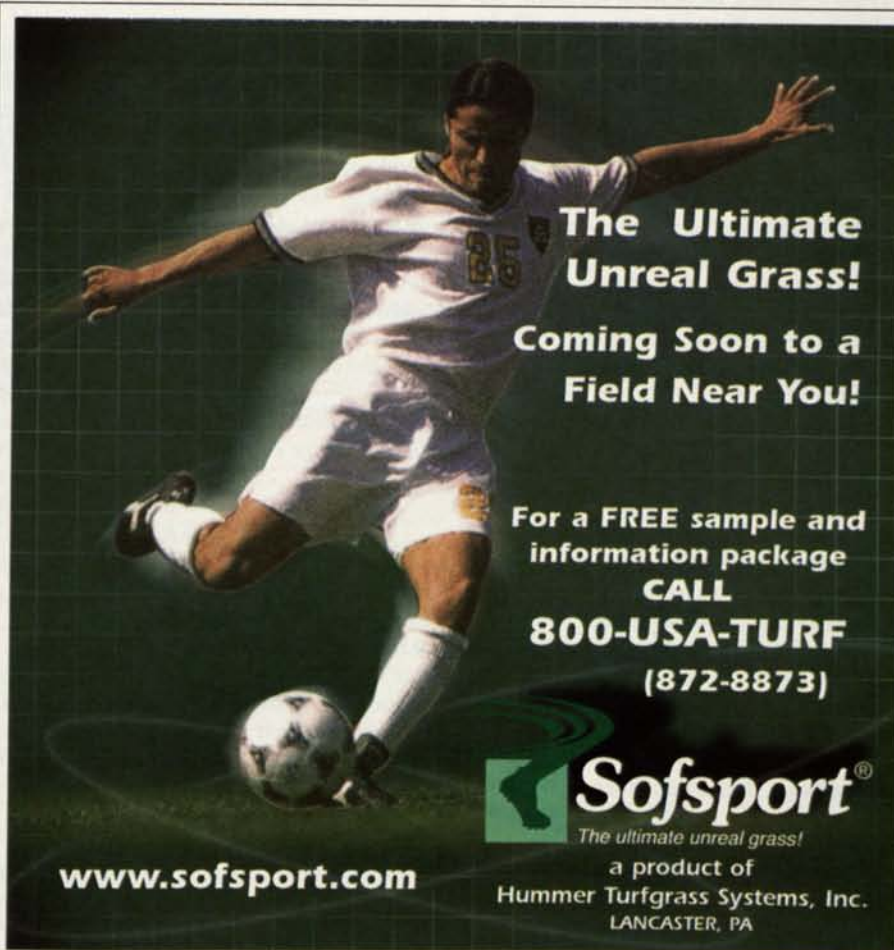
This analysis may show the addition of small walk behind mower or a larger ride on mower to your line up could quickly pay off in terms of increased crew productivity.

Quality of Cut

Obviously on sports turf, where every blade of grass contributes to the safety of the athlete and field playability, quality of cut is the most important mowing factor.

Athletic turf is subjected to an extreme degree of stress so mowers must be as easy on the turf as possible. Since cutting units must deliver a clean cut, without tearing the tip of the grass blade, serviceability is a major concern. Height of cut adjustments must be easy to make and must remain precise throughout the day. Mowers must be able to execute the frequent turns without scuffing or damaging the turf. The machines must have the durability of an athlete, able to perform at top levels day after day, week after week.

Bill Klutho is the public relations manager for the John Deere Worldwide Commercial & Consumer Equipment Division headquartered in Raleigh, N.C.



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STMA in Action

All Eyes on Florida

Florida Chapter # 1 met on Oct. 17, 2000, at the University of Miami in Coral Gables, Fla. Host for the event was Kevin Hardy, Sports Turf Manager-Athletics for the University.

Events kicked off at 8 a.m. with registration. Attendees enjoyed the coffee and donuts sponsored by Pro's Choice as they exchanged greetings and caught up on their networking. Parking passes for the day were co-sponsored by Hernandez Trucking and STMA.

Events kicked off at 8:30 a.m. with a tour of the University of Miami Hect Center led by Hardy. This was followed by a presentation by Steve Trusty, STMA executive director, on "Professionalism for Sports Turf Managers." Next on the program was Tim Moore, ballfield coordinator for the Maryland National Capital Parks & Planning Commission and STMA secretary. Moore spoke on "Baseball Infields—Build Them for Optimum Playability and Easy Maintenance." Then Hardy teamed up with consultant John Rowland for a presentation titled, "Fertility Requirements at the University of Miami on GN1 Bermudagrass."

Attendees moved to the field for a demonstration conducted by Hardy on Infield Grooming and Mound and Batters Box Repair.

The meeting adjourned at 1:30 p.m., following more networking over the lunch which was also sponsored by Pro's Choice.

Chapter News

Midwest: The Midwest Chapter awarded the annual Field & Facility Award to Hoffman Estates High School and Bob Glascott, groundskeeper. The Chapter's two scholarships for the STMA 12th Annual Conference in Tampa, January, 2001, were awarded to: Scott Phippen, Supervisor of Streets and Parks for the Village of Lincolnshire, and Randy Stoneberg, Assistant Foreman Grounds for Northwestern University. The Chapter's scholarship to the Illinois/Indiana Turf Shortcourse was awarded to Tony Diaz of the Waukegan Park District. For information on the Midwest Chapter or pending activities, call: The Chapter Hotline (847) 622-3517.

KAFMO: The chapter will participate in the



Northeastern Pennsylvania Turf Conference and Trade Show on Jan. 25, 2001, in Wilkes-Barre; the Western Pennsylvania Turf School and Trade Show, Feb. 27 to March 1, 2001, in Monroeville, and the Northwest Pennsylvania Athletic Field Turf & Ornamentals Conference on March 20 in Meadville. The 5th Annual KAFMO Athletic Field Conference will be held from 8 a.m. to 4 p.m. on Feb. 9, 2001, at the Holiday Inn in Grantville, Pa. The program includes: "Sports Field Design, Installation and Maintenance," and "Managing Multipurpose Facilities," both presented by Boyd Montgomery, CSFM, of the Sylvania (Ohio) Recreation Department; "How We Do Things," by Mike Dickert of Manor Township; "Turf Growth Throughout the Year," by Doug Linde of Delaware Valley College; and "Is Your Field Safe?" by Jeff Fowler of Penn State University Extension. The KAFMO Annual Awards Program presentations also will take place during this event. For information on the KAFMO/STMA Chapter or upcoming events, contact: Dan Douglas, Reading Phillies Baseball Club, at (610) 375-8469, extension 212 or via the chapter e-mail address: kafmo@aol.com.

Iowa: The chapter will participate in the Iowa Turfgrass Conference and Trade Show to be held from Jan. 29 to 31, 2001, at the Polk County Convention Complex in Des Moines, Iowa. The Sports Turf Workshop and the Low Budget Sports Field Workshop both run from 8 a.m. to 4 p.m. on Jan. 29. The Jan. 30 General Session features Keynote Speaker Dan Gable, The University of Iowa's all-time winningest wrestling coach. The afternoon sports turf section runs from 1:30 to 3 p.m. The ISTMA Annual Membership Meeting and Election will be held from 3 to 4

continued on page 40

p.m. on January 30. The sports turf section on Jan. 31 runs from 8 to 11:30 a.m. A professional development concurrent session is offered from 1:30 to 3:30 p.m. featuring Dr. Mark Redmond of Iowa State University addressing, "Team Building: making it work for you!" For information on the Iowa Chapter or upcoming activities, contact: Lori Westrum at The Turf Office at (515) 232-8222 (phone) or (515) 232-8228 (fax) or e-mail: Lori@iowaturfgrass.org.

Arizona: The Arizona Chapter is planning February workshops with Little League and High School coaches. The Chapter's Spring Kick Off Meeting will be held on Friday, April 20, in the Phoenix area. More details on these events will be announced soon. For information on the chapter or other upcoming events, contact: Bill Murphy, City of Scottsdale Park, Recreation and Facilities Manager, at e-mail: bmurphy@ci.scottsdale.az.us or phone:(480) 312-7954.

Colorado: For information on the Colorado Chapter or upcoming activities, log on to the Chapter's Web site: www.cstma.org or call the CSTMA Chapter Hotline: (303) 346-8954.

Florida #1: For information on the Florida Chapter or pending activities, contact: John Mascaro at (954) 341-3115.

Southern California: For information on the Southern California Chapter or pending activities, contact: Ron Kirkpatrick at (858) 438-1755.

Gateway: For information on upcoming events or on the chapter, contact: Mark Jennings at (314) 983-5345 or Jim Anthony, Saint Louis University, St. Louis, Mo., at: (314) 977-2956.

Indiana: For information on the Indiana Chapter or pending activities, contact: Terry Updike, B & B Fertilizer, at (219) 356-8424.

Mid-Atlantic: For information on the MAFMO Chapter or pending activities, contact the Hotline: (410) 290-5652.

Michigan: For information on the chapter or other pending events, contact: Rick Jurries, West Ottawa Public Schools, at (616) 738-6974 or click on your computer to www.mistma.org to visit the chapter's NEW Web site.

Minnesota: For information on the Minnesota Chapter or other upcoming events, contact: Ron Werner at (507) 634-1176.

Northern California: For information on the Nor-Cal Chapter or pending events, contact Janet Gift at (530) 758-4200.

Ohio: For information on the OSTMA Chapter or upcoming events, contact: Joe Zelinko at (800) 897-9714 or Boyd Montgomery at (419) 885-1982 extension 50, or click on your computer to www.glstma.org to visit the chapter's Web site.



Get Serious With STMA

Application for Membership



The Sports Turf Managers Association (STMA) is an organization of professionals representing all segments of the sports turf industry. Our members work to combine the science of growing turfgrasses and the art of maintaining both natural and artificial athletic field materials to produce safe and aesthetically pleasing playing surfaces.

STMA provides members with a variety of benefits, including: educational opportunities; support for sports turf research; facilities tours; a national awards program; certification program; job hotline; website: www.sportsturfmanager.com; access to the STMA National Conference & Exhibition; complimentary subscriptions to Sports Turf Manager and sportsTURF Magazine; and MUCH more!

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(must be in US dollars)	
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For more information, contact STMA Headquarters at
 phone: 800/323-3875, 712/366-2669, fax: 712/366-9119 or e-mail: SportsTMgr@aol.com

"Promoting Better and Safer Sports Turf Areas"

Chapter News

continued from page 38

North Texas: For information on the North Texas Chapter or pending activities, contact: Rene Asprion, Diamond Pro, at (800) 228-2987 or Dr. James McAfee, Texas A & M University, at (972) 952-9220, or log onto www.ntstma.org to check out the Web site.

South Texas: For information on the chapter or upcoming events, contact: Tom McAfee, Nelson Wolff Municipal Stadium, San Antonio, at (210) 207-3754.

Tennessee Valley: For information on the TVSTMA Chapter or upcoming events, contact: Bill Marbet, Southern Athletic Fields, Inc. at (931) 380-0023 or (800) 837-8062.

Wisconsin: For more information on the Wisconsin Chapter or pending events, contact: Rich Riggs, R. H. Rettler & Associates, Inc. at (715) 341-2633.

Mid-South: For information on the Mid-South Chapter or upcoming events, contact: Robert Bodi at TURF419@aol.com or Jim Calhoun at (901) 755-1305.



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