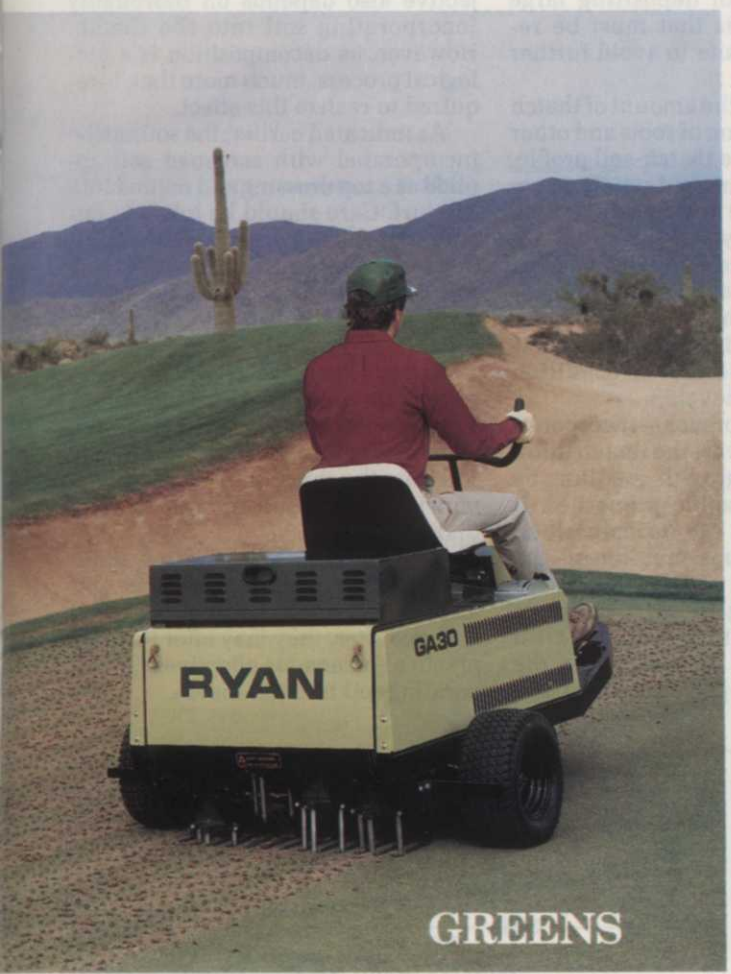
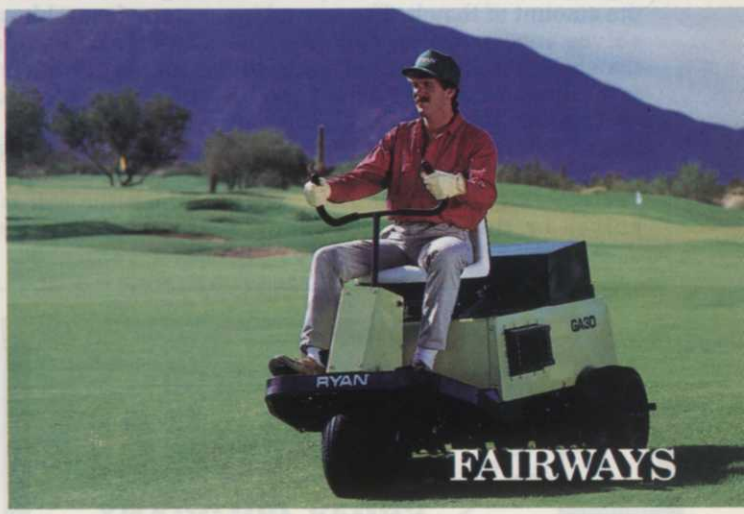
Introducing the first full-course aerator.





Ryan's new GA™ 30 aerates on the greens and in between.

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Spacing 2.50 in. x ( ) in.	Production sq. ft. per hr.	Yield holes/sq. ft.
1.00	5,625	57.6
2.00	11,250	28.8
3.00	16,875	19.2
4.00	22,500	14.4
5.00	28,125	11.5

The GA 30 aerator also helps you get on and off the course more quickly. Its 18 hp engine produces a six mph transport speed that's two-three times faster than other aerators. So why waste time walking when you can ride to work?

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Ryan's crank drive penetrates straight in at a depth of up to 3-3/4 inches. The tine-ram, ground-driven, reversing gear box pulls cores straight out to better protect your turf from damage – no matter what the spacing.

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mobile in thatch than in silt loam soil. Thus, the herbicides were allowed to contact the turfgrass roots and rhizomes in the thatch, but were held above these plant organs where they occurred in the soil in a thatch-free turf.

This work established two dimensions of potential turfgrass injury from pre-emergence herbicides: the inherent susceptibility of turfgrasses to injury from herbicides that contact their roots and rhizomes, and the accessibility of these plant organs to surface-applied herbicides due to the nature of the media containing these organs.

Control of thatch

There are two fundamental approaches to controlling thatch in turf. The first involves physically removing organic debris to directly reduce the amount of thatch. The second involves incorporating soil into the thatch either through recycling the soil contained in the turf-soil profile or through topically applying soil from a different location.

The first approach usually uses a vertical mowing machine, with knives or tines mounted along a rapidly rotating, horizontal shaft. The machine, when set to the proper depth of penetration, removes portions of the thatch. Where a substantial thatch layer exists, this procedure usually results in depositing large amounts of debris that must be removed from the site to avoid further turf damage.

Depending on the amount of thatch and the distribution of roots and other plant organs in the thatch-soil profile, this procedure can moderately to severely injure the turf. Thus, a long period of recovery and some replanting may be needed following vertical mowing to re-establish the turfgrass community. Furthermore, if the original cause of thatch development is not corrected, the thatch condition will probably re-develop.

The second approach—incorporating soil—can convert the thatch into a more favorable growth medium by modifying its edaphic properties. It can also promote the decomposition of organic residues making up the thatch.

Accomplishing the first objective depends on the thoroughness with which the soil is dispersed into the thatch layer. Depending upon the thatch layer's thickness and bulk density, some vertical mowing may be needed to reduce and/or open up the thatch layer and thus help the soil incorporation process. The second objective also depends on thoroughly incorporating soil into the thatch. However, as decomposition is a biological process, much more time is required to realize this effect.

As indicated earlier, the soil can be incorporated with screened soil applied as a top dressing and matted into the turf. Care should be taken to ensure that the top dressing soil is similar in texture to the soil underlying the turf, and that subsequent top dressings use the same or very similar soils.

A less expensive alternative is to recycle the soil from the thatchy turf. This is done by core cultivation and subsequent re-incorporation of the soil from the cores, or by deep vertical mowing to pull soil up and into the thatch layer.

Obviously, these cultivation methods will not produce results as uniform as top-dressing does; however, for large sites, they may offer the only practical means for effectively incorporating soil into the thatch. **LM**

LANDSCAPE MANAGER OF THE YEAR

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1987 Landscape Manager of the year
Michael Hugg

Entry forms are now being accepted by the Professional Grounds Management Society and Landscape Management magazine for their second annual "Landscape Manager of the Year" award.

Purpose of the award is to recognize superior job performance among landscape managers, to challenge those involved in the industry to achieve higher standards of excellence, and to bring national recognition to deserving managers.

Any person directly responsible for the professional maintenance of one or more landscapes is eligible to enter. Applicants will be judged according to job performance, honors and awards, procedures and philosophies, and contributions to the green industry. Applicants will be asked, at the time of entry, to submit four 5 x 7 black-and-white glossy photos and 10 color 35mm slides of current work areas with a short narrative on each.

(clip and mail)

Applicant's name **Title**

Applicant's company

Official entry form should be sent to:

Name **Title**

Company

Address **City/State** **Zip Code**

Mail to: PGMS, Landscape Manager of the Year, 1201 Galloway Ave., Suite 1E, Cockeysville, MD 21030

CORPORATE STRUCTURE: C corp vs. S corp

by Rudd McGary and Ed Wandtke

Many of you will be shocked by the impact on your personal taxation this year.

With the changes in the Tax Reform Act of 1986 and the allowance of businesses and individuals to change from the traditional corporate structure "C corp" to the alternate corporate structure "S corp," many closely-held companies changed to S corporations. That way, they could take advantage of the more favorable tax rates.

But many of those people didn't know some of the alternate consequences of that action. This knowledge will come in the form of increased taxes for 1987 and possibly even higher taxable income in 1988. Was this change in corporate structure the right move for your company?

The benefits

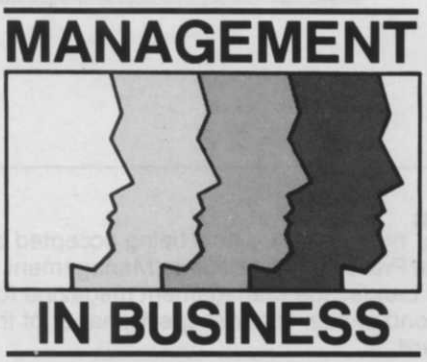
First, let's look at some of the benefits initially heard by you that led to your changing the form of the corporate structure from a C corporation to an S corporation:

1. Ability to have all income taxed at the lower personal income tax rates for individuals because of now operating under an S corp structure.

2. Avoiding the possible double tax on income passed to you in years after it was earned by the C corp.

3. Protecting your company and your personal assets from any attachment by possible creditors.

Wandtke and McGary are senior consultants with All-Green Management Associates in Columbus, Ohio. Dr. McGary focuses on marketing and managenent issues. Wandtke focuses on operations and financial questions.



4. Ability to establish more favorable retirement benefits for you as the owner of the S corp.

5. Avoid double taxation in the event you decide to sell the company.

The negatives

What are some of the potential negative aspects of switching to an S corp?

1. An S corporation cannot be acquired by a C corporation in the event of a sale of the company.

2. Pension or retirement plans that are discriminatory will be an unallowable deduction for the C corporation.

3. Transfer of the company to another set of owners will be more cumbersome in the event the current owner desires to maintain an equity position in the company when it is owned by the new operators.

4. All new S corporations will need to adopt a calendar year reporting period.

5. All new S corporations will report their financial results on the accrual accounting system.

6. Any C corporation that converted to an S corporation in 1987 because of the tax law change is prohibited from returning to the C corporation structure for five years.

7. If retention of equity in the company is required to grow the company, electing the C corp structure is more tax wise advantageous.

At first glance, the new tax law changes switching to an S corporation look favorable. But, upon closer use of the new corporate structure you may find that you will not really achieve the objectives you had in mind when you made the change.

Get answers

Get the answers to the following questions before you make your decision to switch the form of the corporation.

1. What tax rate are you personally in now and what would be your corporate rate if you were in a C corp structure?

2. Do you or other stockholders individually have an alternative minimum tax issue?

3. Do you have any inactive stockholders?

4. Would you pay dividends if the company had extra earnings?

5. Do you plan on raising capital through the issuance of shares of stock?

When should you avoid electing or switching to an S corp status?

1. If the business has losses and inactive stockholders.

2. NOL (net operating losses) cannot be transferred to or used by an S corp.

3. Fringe benefits are limited for stockholders who own more than two percent of the outstanding share of a company.

4. If the company plans on buying another company or forming a subsidiary of its own.

5. Convertible debt or preferred stock cannot be sued if a company is an S corp.

Summary

In the future, consult with your certified public account and lawyer when there are new tax changes. Lower taxes may be the desire of everyone, but if that limits the future options of the corporation, it may not be worth it.

Meet with your advisors before you undertake any change in the corporate structure of your business. Discuss your future objectives for the company and how you anticipate handling the ownership of the business.

All that sparkles is not gold; likewise, an S corporate form may not be the right form for your corporation. **LM**

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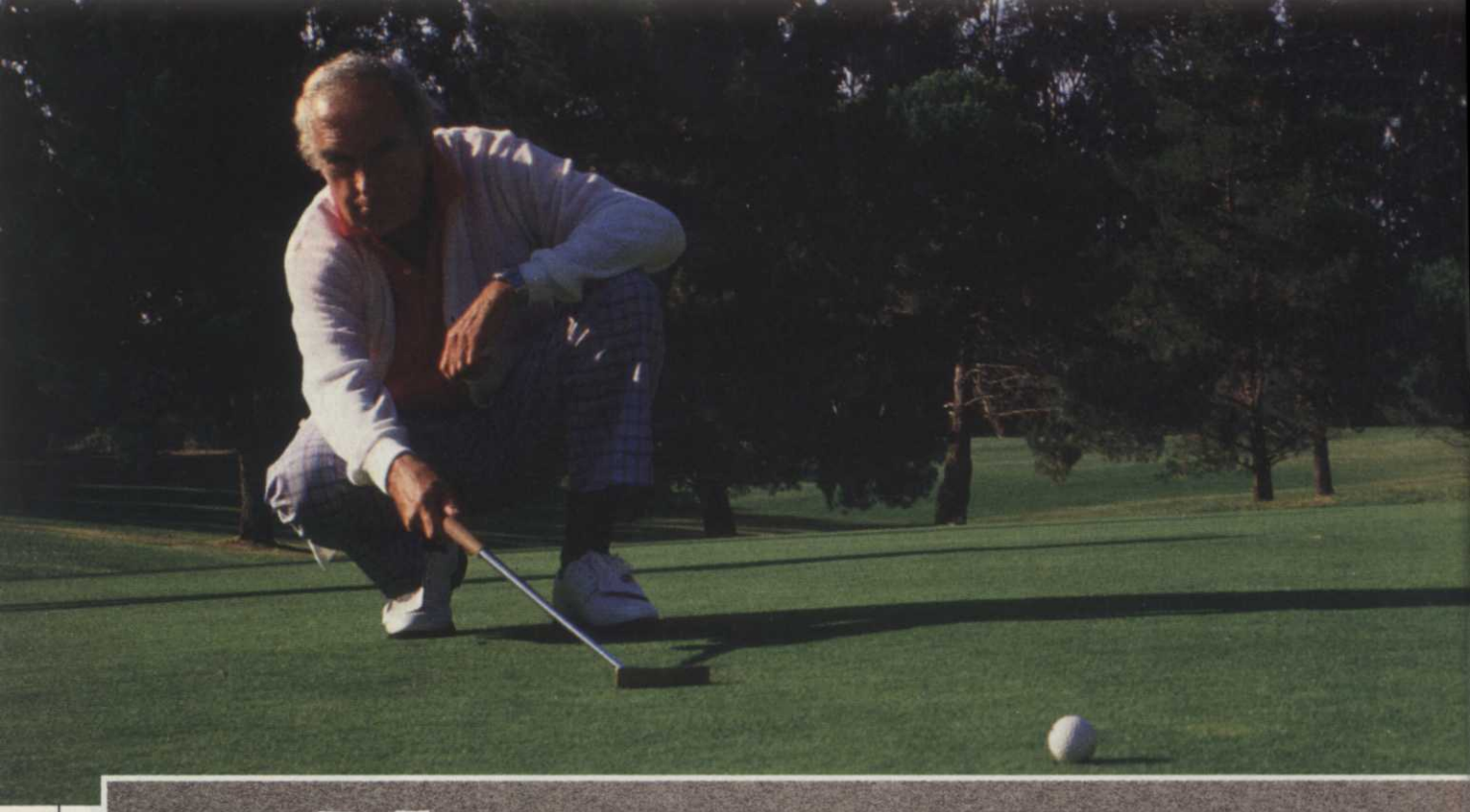

HOW TO PREVENT DOLLAR SPOT & BROWN PATCH FROM RUINING YOU ON INSPECTION DAY.

PREVENT DOLLAR SPOT, BROWN PATCH AND OTHER DISEASES EARLY, BEFORE THEY BECOME A PROBLEM.

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How to prevent dollar spot

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How to prevent brown patch and other diseases

Apply Banner at the 2-4* oz. rate (May or June through September) for 10-21 day brown patch control. And at 1-2 ozs., Banner provides excellent systemic control of anthracnose, powdery mildew, rust, red thread and stripe smut. Or, use Banner at the higher 2-4* oz. rate to achieve broader-spectrum control of leaf spot and melting out for 14-21 days. And the 4* oz. rate for summer patch and spring dead spot at 30-day intervals.

Tank mix Banner to control already-present brown patch

As with all turf fungicides, Banner's scheduling is critical. But when schedules are interrupted and brown patch is present, use Banner at a 2 oz. rate in a tank mix with contact fungicides like Daconil 2787® or Chipco® 26019. The contact fungicides will control existing diseases and Banner will prevent future infections.

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A differential slip wear machine is used on a trial of turf reinforcement materials. The areas free from mud are reinforced by a molded plastic mat and a needle-punched polypropylene geotextile.

ATHLETIC FIELD DRAINAGE

The Sports Turf Research Institute in Bingley, England is far ahead of the United States in research on field construction, drainage and wear tolerance. During the last decade, researchers at STRI studied what makes a good field.

by Stephen W. Baker, Ph.D., The Sports Turf Research Institute

Britain has a problem. Many of the principal sports—notably soccer, rugby football and field hockey—are played through the winter months with the summer as off-season. Rainfall for the period of November through March, the heart of the playing season, averages about 2.2 inches per month in London and four inches per month in wetter areas in the north and west.

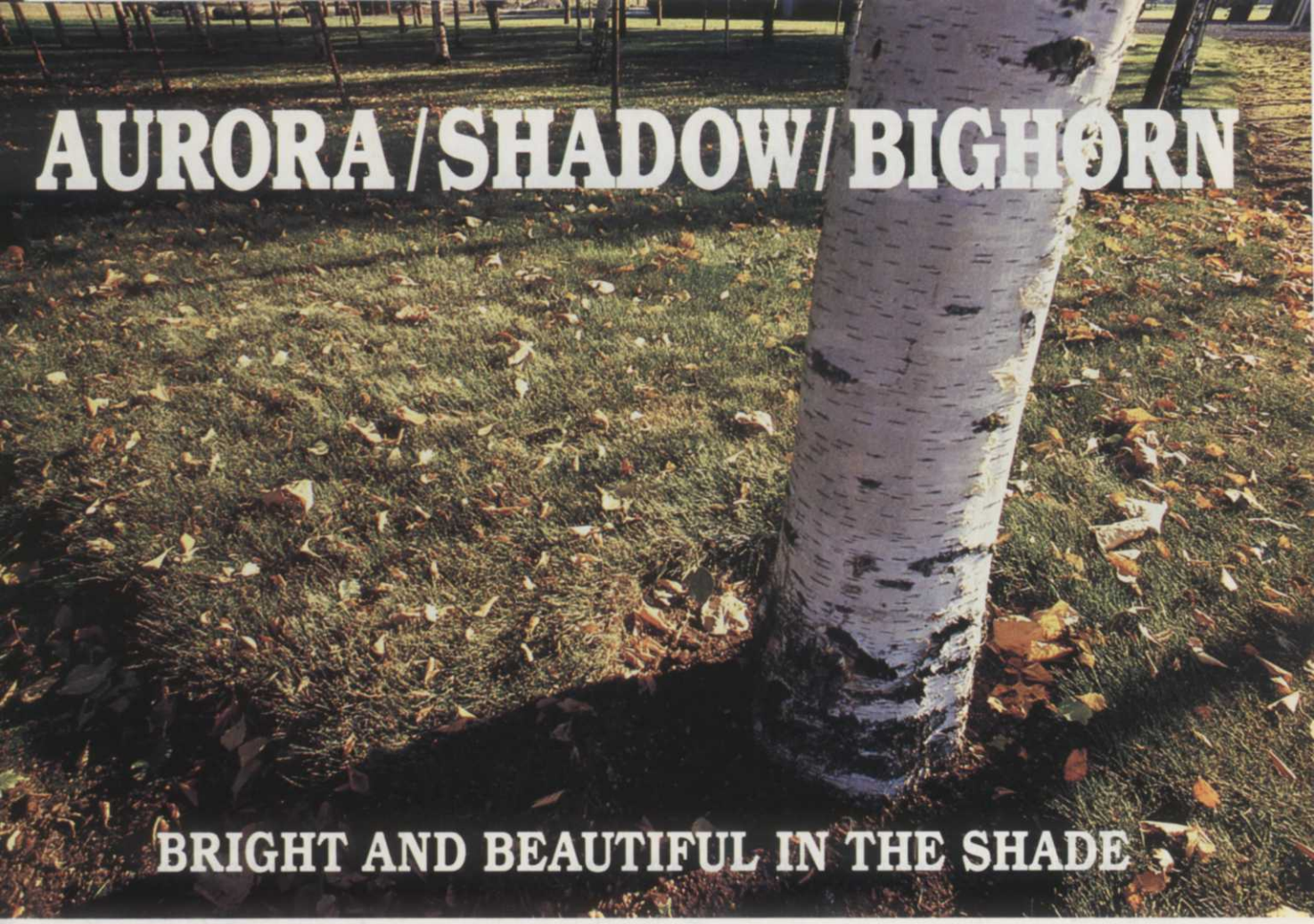
With evapotranspiration rates of less than 0.4 inches per month at this time of year, there is a considerable surplus of water. This problem was reflected in a survey of sports field drainage published by the Sports Turf Research Institute in 1983. Of pitches (fields) owned and maintained by local town and city councils, 44 percent had a drainage problem. Twenty percent of the pitches had regular match cancellations between November and February.

The alarming picture of poor drainage indicated by the survey does not, however, reflect a lack of suitable technology to create hard-wearing, well-drained sports turf in Britain. Indeed, since the 1960s, there has been a revolution in the construction methods used for winter games pitches. This is reflected in high quality natural grass sports surfaces at many of the professional soccer grounds in Britain.

Research techniques

In the last 10 years, the Sports Turf Research Insititute has had a major program of research on the drainage of winter game pitches. This includes work on fundamental drainage theory and on the management of free-draining, sand-dominated, rootzone media.

Continued on page 70



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When seeded in a monostand, our fescues will help give a course the 'Scottish links' look around tees and in roughs, and blue-grey Bighorn adds another color dimension to course design.

Low growing Aurora, Shadow and even shorter growing Bighorn require less mowing, making them ideal for roadsides and other low maintenance areas.

All-in-all, when your turf area is in the shade, where water, nutrients and maintenance are costly, it'll pay you to look into Aurora, Shadow and Bighorn . . . the good look in fine fescues.

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A trial at the Sports Turf Research Institute shows the cost-effectiveness of different construction methods. The same intensity of simulated wear is applied to all plots, but those with pipe drainage are a sea of mud, while the slit-drained and sand rootzones retain a good grass cover.

The research work consists of two main philosophies. First, any trials should receive a realistic wear treatment. It is meaningless to conduct drainage research for sports turf without considering the interaction with the wear and compaction caused by play.

Mike Canaway of the STRI has developed a differential slip wear machine which is widely used in our experimental work.

For soccer, this can be fitted with studded rotors: the vertical forces are applied by virture of the machine's weight (348-480 lbs. depending on the amount of ballast) while horizontal forces occur because the front and rear rotors are coupled by pulleys of unequal size. The front rotors move faster than the overall forward speed of the machine and rear rotors slower, and this causes a tearing action on the turf.

The second important aspect of research is that the data collection should be meaningful to the sport in question, and in particular that player's needs should be considered. Factors such as ground cover and infiltration rates are monitored in most trials, but there is an increasing emphasis on surface playing quality.

For soccer, for example, tests include ball rebound and ball roll characteristics; the traction or grip properties of the surface; and the hardness for running/falling. These results can be interpreted in relation to recently-developed performance standards.

Drainage techniques

Research has been conducted on both slit drainage techniques and the effects of different rootzone materials. Slit drainage is primarily a method to by-pass the de-structured and compacted surface layers of a sports field.

If vertical slits of highly permeable

A differential wear machine is fitted with studded rotors to simulate football-type wear.

sand and gravel materials are installed on close centers, typically less than two feet to about 3.2 feet and connect into an underlying pipe drainage system, rain water can pass rapidly from the surface to the drains. There are, of course, optimum flow lengths, spacings, widths and depths of the slit drains. This has been studied in relation to design rainfall events.

Research on rootzone composition has considered both the effect of sand type and the proportion of sand that should be used. Uniform medium-fine sands of 0.25-0.5 mm (.01-.02 inches) diameter are preferred for winter games. That size satisfies the compromise of high permeability and good aeration against the problem of droughtiness and instability when wear removes much of the grass cover.

For many professional soccer clubs, sand-soil mixes are generally used because of the limited period available for grass establishment (the close season is only three months). Recommended specifications, however, require at least 90 percent sand in the final rootzone mix. When it takes longer for grass to establish, pure sand constructions are used more often.

Two main types are: 1) the suspended water table construction of 10-12 inches of rootzone sand over two inches of a coarse blinding sand and four to six gravel carpet; and 2) a sand carpet construction where the native soil is intensively drained with pipe drains at, almost 23 foot centers and gravel slits at 3.2- to 6.5-foot centers.

A layer of four to six inches of medium-fine sand is then added before the pitch is sown, usually with perennial ryegrass. This provides a free-draining surface layer, yet the grass roots can still penetrate into the soil beneath, which acts as a reserve for moisture and nutrients.

The use of sand-dominated rootzones has many management implications. In consequence, the STRI