To insure the health of next year's turf, Fall fertilization with Par Ex® is your best policy. Fall is your root feeding season. The only time of year when the foundation of your turf can be expanded and strengthened with less competition from leaves for available carbohydrates.

IBDU: the only slow-release nitrogen source that doesn't rely on bacterial action or temperature. It is activated only through moisture (hydrolysis) to slowly release nitrogen all through the Fall and early Winter. Right up to the time the ground freezes, extending the greening of your turf much later than conventional slow-release fertilizers can. While it works to build a strong and healthy root and rhizome system in preparation for next year's Summer stresses.

Yes. You can buy a cheaper fertilizer this Fall. But don't expect it to perform when your turf cools down below 55° and microbial activity stops. Then, only Par Ex can really get to the root of the matter. And anything that doesn't is no bargain.

So call your Par Ex representative today and find out exactly how affordable Par Ex is. We guarantee you'll rest a lot more comfortably all year round.
For reliability, ruggedness, and all-around high performance, Toro's heavy-duty 640 sprinkler beats all challengers hands down. No wonder it's been the leading choice for U.S. athletic fields for over a decade.

**Most vandalproof player.**

Compare these stats: The 640 body is twice as heavy as many other brands, making it more resistant to vandals as well as to surges and water hammer. Critical gears are high-impact brass.

The nozzle is locked on with a set screw and completely encased in stainless steel. And the whole head can be mounted ¼" below grade, safe from prying tools.

Critical bull gear and final drive gears are made of high strength brass and stainless steel.

The best defense against liabilities.

The 640's low-mount, pop-up operation and small exposed surface area also means less chance of accidents. And maintenance is streamlined, too, because you don't have to trim around the heads.

Toro 640. The leader in our lineup. For durability, quiet, smooth, consistent operation, and a five year warranty —call for it on your next project.

For more information, contact your local Toro dealer, or Toro directly at 5825 Jasmine St., Riverside, CA 92504. (714) 688-9221.

A rugged stainless steel case protects the nozzle and drive assembly.

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MAINEVENTS

14 TEAMWORK PAYS OFF FOR PALA MESA

When the management team of Pala Mesa Resort in Fallbrook, CA won the John Deere Golf Team Championship last fall, sportsTURF decided to see if there was a connection between the way the team played the game and the way it carries out business. Little did we realize that we would run into a former Olympic hockey player, an owner that greatly encourages teamwork, and a management team that has restored a classic golf course in under five years. By working together, the Pala Mesa staff has achieved spectacular results.

22 TURF VEHICLES: TIME MANAGEMENT TOOL FOR THE TURF MANAGER

The rising cost of golf course and sports complex construction and maintenance is forcing the turf manager to manage his time more effectively. If he is to meet the demand for recreational facilities at a reasonable cost, he must employ all time-saving techniques available to him. The modern utility turf vehicle is a tool that can save a considerable amount of time on the job and contribute to the efficiency of your work force. It is not a luxury for a pampered turf manager anymore.

28 FALL RENOVATION

Research has shown that fall is the best time for establishing and renovating cool-season turfgrasses. These grasses enter the fall driven by nature to repair damage they sustained during the growing season and to replenish their reserves before the onset of winter. Even though growing conditions are at their best, sports turf requires more attention in the fall than any other time of the year. Timing maintenance practices to work with nature is critical. Sound cultural practices and recent advancements are increasing the effectiveness of fall maintenance practices.

LINE-UP

8 THE FRONT OFFICE
8 EVENTS
12 THE EXTRA POINT
34 CHALKBOARD
39 ROOKIES
42 SCOREBOARD

COVER: The golf course at Pala Mesa Resort in Fallbrook, CA, restored to classical condition by a team effort.
CHIPCO® SEVIN® brand SL carbaryl insecticide consistently demonstrates effective control of the most damaging species of white grubs. Plus control of 29 other destructive turf pests—including sod webworms, chinch bugs and bluegrass billbugs. It even provides dependable control of more than 86 insects known to attack trees, shrubs and ornamentals.

And CHIPCO® SEVIN® brand SL carbaryl insecticide gives you all this control at a cost of only about one dollar per 1,000 sq. ft. But the advantages don't stop there. CHIPCO® SEVIN® brand SL carbaryl insecticide is ideal for control of nuisance pests such as ants, fleas, ticks and mosquitoes that thrive around the perimeters of your course. And it's easy to apply. There's no need for special protective clothing, no odor, and play can be resumed as soon as the spray has dried. CHIPCO® SEVIN® brand SL carbaryl insecticide is low in toxicity to fish, and other formulations of SEVIN® brand are used for control of pests on household pets, poultry and some game birds. When you add it all up, is there really any other choice in grub control?

Chipco® Sevin® SL
Brand Carbaryl Insecticide

As with any crop protection chemical, always read and follow instructions on the label. CHIPCO is a registered trademark of Rhone-Poulenc. © 1989 Rhone-Poulenc Ag Company. CHIPCO SEVIN is a registered trademark of Rhone-Poulenc for carbaryl insecticide.

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The Ultimate Turf Team

GreenCare has combined high-tech engineering and simple design to produce the strongest, most versatile and efficient aerator on the market today. Vertical aeration combined with variable pattern, variable depth and a variety of tine types and sizes provide today’s Turf Specialists with the tool they need to tailor aeration to their requirements.

Core Collection System
- Simply attaches to rear of CoreMaster.
- Auto-reset on next aeration pass.
- Removes cores as you aerate and automatically dumps cores at the end of each run.
- One man can do the work of four.
- No other expensive machines or operators required.
- On golf greens, play can continue during aeration.

The Ultimate Topdresser
GreenCare engineering leads the way in Turf Equipment Innovation again:
- All hydraulic drive.
- Tubular steel and zinc annealed sheet metal construction.
- Roller drum eliminates conveyor belt problems.
- Internal rotating baffle prevents “material surge” at the start of each run.
- Independent control of brush speed, drum rotation and gate opening provide precise rate of application.
- Flared top for easy filling with front-end loader.
Fine Lawn Research proves . . .

not all Kentucky Bluegrasses are created equal.

Experienced sod growers and professional turf managers know there are measureable differences between turf varieties . . . differences in overall turf quality, color, summer density, shade performance and more. As the ratings shown here prove, Chateau Kentucky Bluegrass has consistently outperformed some of the most popular bluegrass varieties.

So, for truly premier turf year after year, choose Chateau Kentucky Bluegrass. Strength of breeding always shows.

- A truly elite bluegrass—one of the best available.
- Beautiful emerald green color.
- Outstanding shade performance.
- Withstands summer stress better than most bluegrasses.
- Superior performance in trials throughout the U.S. and Canada.
- Very wear-tolerant—excellent for athletic fields.
- Semi-dwarf growth habit for lower mowing and attractive appearance.
- Excellent resistance to leaf spot, stripe smut and powdery mildew.

Another quality product from...

For additional information, see your distributor or dealer, or write to Fine Lawn Research, Inc. P.O. Box 290, Madison, GA 30650

Circle 112 on Postage Free Card
One thing that has bothered me throughout my years in the Green Industry is the charge that those who make and apply pesticides overlook their impact on the environment.

It irks me when newspaper and television reporters make blanket accusations about pesticides and those who apply them. Do they know more than the researchers who have spent years and millions of dollars determining the proper way to apply each pesticide to minimize risk? Have they ever read a pesticide label? Do they have any idea of the environmental and economic benefit of these products? It seems in many cases the answer is no.

Perhaps what bothers me the most about these charges is a complete lack of regard for the applicator. I'm not talking about machines...I'm talking about people who have the responsibility of deciding whether the risk of using a particular pesticide is worth the benefit. I don't believe golf course superintendents and sports turf managers take this responsibility lightly.

The applicator's responsibility will grow in the 1990s. We have already seen the implementation of posting regulations by a number of states. This is bound to increase the number of questions you will be asked in the coming decade, so you should be prepared.

The Golf Course Superintendents Association of America has been working with the Environmental Protection Agency during the past two years to supply superintendents with answers to many of these questions. Their findings provide scientific evidence that pesticides used on golf courses are not a threat to the safety of groundwater, golfers, or applicators when used by trained professionals according to label directions.

First of all, there is a huge difference between golf courses and agriculture when it comes to the fate of pesticides. Dense turf and its thatch create a natural barrier for pesticides. This prevents pesticides from entering water supplies and eliminates environmental damage resulting from erosion and stormwater runoff.

Dr. Thomas Watschke, turf specialist at Pennsylvania State University, has calculated that an average golf course of 150 acres absorbs 12 million gallons of water during a three-inch rainfall. In his research, Watschke discovered that thick, carefully maintained turfgrass has 15 times less runoff than a lower quality turf. As a result, almost all of the pesticides applied to turf remain in place after peak rainfall.

Dr. Harry Niemczyk from Ohio State University has found in pesticide fate studies that thatch intercepts up to 99 percent of pesticide residues in turf and accelerates the decomposition of many chemicals. Furthermore, Dr. Stuart Cohen, a pesticide residue specialist and former EPA team leader, reports that the pesticides labelled for use on golf courses are relatively low in toxicity, persistence, and mobility. He adds, "The use of pesticides on golf courses poses less of a threat to the nation's groundwater than does the agricultural use of pesticides."

The bottom line is, compared to farming or even residential land use, golf courses actually reduce total pollution loads to the environment. We will need to point this out repeatedly in the coming decade as each misinformed journalist, activist, or legislator captures the attention of the public.

To do this effectively, you must have the facts. If you have a question about pesticide use, ask your distributor or the manufacturer. Prepare yourself now for the questions that will come tomorrow.