IT'S ALWAYS "GREENS-UP" WITH A CUSHMAN TURF-CARE SYSTEM.

You can have simple, less expensive turf care with the right equipment. Cushman Turf has developed an easy system so you can save as much as 35% in equipment investment. And you save time with built-in job flexibility.

The 3- and 4-wheel Turf-Trucksters, 8 jobs with one basic power unit.

The rugged 18-hp Cushman Turf-Truckster Chassis (available in 3- and 4-wheel chassis models) serves all your turf needs. Use the Turf-Truckster to transport, tow or drag. Add the Power-Take-Off unit (PTO) to spray, top dress, aerate or spread. Add the hydraulic system to dump, spike or quick aerate. Raise or lower accessories quickly and easily, with the flick of a lever.

The 4-cycle air-cooled OMC engine and variable speed transmission are built to tackle turf-type situations. The rugged Turf-Truckster engine is built of die-cast aluminum for lightweight strength. The standard auxiliary transmission gives 6 forward and 2 reverse speeds. And a fast acting governor means less down shifting.

Wheel-type steering and a disc-type parking brake are standard equipment on the Turf-Truckster. Easy handling is built-in with a 17-foot turning circle on the 3-wheel model and 23-foot turning circle on the 4-wheel.

When you need professional turf-care equipment, you'll find it's always "Greens-Up" with a Cushman Turf-Truckster. And you'll be time and money ahead.
The Turf-Truckster powers the total

**SHORT DUMP BOX & FLATBED/BOX**

The short box or the flatbed/box are mounted quickly by positioning either on the chassis and inserting two pull pins. Bolt-on sides and tailgate make the flatbed into a dump box. And either box is capable of hauling up to 1,000 lb. payloads.* A manual hydraulic dumping system is available, and dumps either box with a pump-action handle at the side of the vehicle. The Turf-Trucksters can be equipped with powered hydraulic dumping. Just add the PTO and hydraulic packages and you can dump hydraulically without leaving your seat. Just push a lever.

**SPIKERS**

Attach the Cushman Quick Spiker to a Turf-Truckster equipped with PTO, hydraulic system and dump kit with just three pull pins. Spike a 57-inch swath, even over undulating greens, with the two precise spiking gangs. Nothing to tow. Nothing to load or unload. Spike 18 greens in less than 2 1/2 hours.

Attach the Cushman Trailing-Type Wheeled Spiker and you’ll get the same results as with the Quick Spiker, except the Trailing-Type Spiker is controlled by a pull rope to raise and lower while operating.

**PULL PINS**

The pull pin advantage of the 18-hp Cushman Turf-Truckster means fast on-off movement of all attachments; it’s the secret of the Cushman Turf-Care System’s versatility.

**QUICK AERATOR**

The Cushman Quick Aerator is designed to slice greens and aerate fast during the hot, dry periods when air and water penetration is critical.

Just attach the Quick Aerator to the Turf-Truckster with three pull pins. The hydraulic system and dump kit on the Turf-Truckster allow you to lift and lower the Quick Aerator on the go from your seat. So movement from green to green is simple and fast.

Three types of tines are available: slicing, coring (two sizes) and open spoon. The tines aerate every 6 inches to provide adequate slicing and soil removal.

*Rating for vehicle equipped with 9.50-8 rear tires.
Cushman Turf-Care System.

**SPRAYER**
The PTO package with extension shaft makes the 18-hp Turf- Truckster ready to spray greens the easy accurate way.

The Turf-Truckster transmission and built-in variable speed governor assure a uniform ground speed, even over varying terrain. And an accurate metered spray means proper application and less chemical waste.

The complete optional spray package includes: 100-gallon capacity tank, high-flow nylon strainer, jet agitator for mixing, high-pressure handgun (which sprays up to 40 feet), rear sprayer boom, centrifugal pumping system for boom or handgun spraying.

**TOP DRESSER**
The chassis-mounted top dresser, driven by the PTO of the Turf-Truckster, eliminates the need for self-powered units and time-consuming walking.

The moving bed and rotating brush operate at a controlled speed to break up top-dressing materials and direct them downward in a 31½-inch swath. The engine/ground speed governor keeps your spreading rate constant.

**SPREADER/SEEDER**
The Cushman Cyclone Spreader/Seeder can be rear mounted on either the 3- or 4-wheel 18-hp Cushman Turf-Truckster, and it's controlled by the Cushman PTO extension unit. Depending on the material, this spreader can broadcast over an area up to 40 feet wide.

In addition, the Cyclone Spreader/Seeder mounts on either the short box or flatbed/box and the driver controls all operation from his seat.

**GREENSAVER (DRUM AERATOR)**
The Cushman Greensave™ is the efficient low-cost way to aerate greens and tees, fast and deep. Attach the Greensaver to your Turf-Truckster (equipped with a hydraulic system and dump kit) with 3 quick-release pull pins.

Add weight trays and sand to the Greensaver attachment and you're ready to aerate up to 10 times faster than walk-type units.

The Greensaver collects the cores while you aerate and you can move quickly from green to green by lifting the Greensaver hydraulically.

Get a free demonstration of the complete Cushman Turf-Care System from your Cushman dealer. Or write direct for complete information.
THE NEW TURF-TRUCKSTER RUNABOUT IS BUILT FOR ECONOMY AND VERSATILITY IN 1978.

The new Radial Frame makes this Cushman Runabout the most useful vehicle on your grounds. Welded tubular steel surrounds the vehicle, and a new suspension system adds greatly to operator comfort. In addition to strength and durability, the new design increases serviceability, giving you day-after-day, worry-free use of your Runabout.

Your choice of two power plants is available: the proven 18-hp OMC die-cast aluminum engine or the 12-hp air-cooled four-cycle engine. Both are stingy on fuel. And bolt-on sides with a tailgate come as standard equipment on either Runabout.

A Cushman Runabout can stretch your manpower while saving precious time all around your turf areas. Runabouts are used for general golf course and grounds transportation, hauling tools, fertilizer or equipment, and moving maintenance personnel.

So see the dependable new Cushman Runabouts at your nearest Cushman-Turf Dealer. They're ready to go to work for you.

CUSHMAN TURF-CARE EQUIPMENT

A Division of Outboard Marine Corporation
3301 Cushman Drive, P.O. Box 82409
Lincoln, NB 68501
Makers of Johnson®, Evinrude® and Ryan®
write a letter containing their comments by December 10 to the Environmental Protection Agency, Office of Pesticide Programs, Federal Register Section (WH-569), 401 M St. S.W., Washington, D.C. 20460.

DBCP test results to be known soon

Results of tests to determine the fertility of about 170 persons who have applied pesticides that contain dibromochloropropane, known as DBCP, should be completed in mid-December, according to an Environmental Protection Agency spokesman. The manufacture and sale of products containing DBCP were halted by the federal government when male workers at plants were found to be sterile or have low sperm counts. Fumazone and Nemagon, two pesticides containing DBCP, were used to help kill nematodes by course superintendents in the southeastern United States until the ban. Some golf course workers have been included in the EPA tests.

Frank Davido, an official in the EPA's Office of Pesticide Programs, said researchers are attempting to determine the mobility, appearance, and number of sperm in persons who have been tested. The persons have been given complete physical examinations and blood samples have been taken to test for three hormones that could affect their sperm. Researchers are also compiling a medical history about their exposure to other possibly dangerous chemicals and diseases they have contracted that could affect fertility.

Preliminary data was released at a meeting in Cincinnati on October 20, but Davido said he would not discuss the group's findings. He said, however, that low sperm counts may not affect a person's fertility.

"What we presented there were sperm count numbers. The most important thing about fertility is not the number, but the sperm mobility." One problem confronting the researchers is the number of persons who do not want to be tested since they must present a sperm sample, Davido said. He said any person who fears he may be sterile or adversely affected by DBCP should contact the Office of Pesticide Programs in Washington, D.C. They may call Davido at 202/755-2778 or 202/426-2535.

Planned PGA site shown by Eccelstone

The master plan for the proposed new Professional Golfers' Association complex in North Palm Beach, Fla., won't be ready until mid-December, but developer E. Llywd Eccelstone is busy selling his residential-recreation idea. He recently plopped a tent down on the 2,300-acre site and invited about 60 persons from all levels of government to discuss his plans, then took many of them for a helicopter ride to better visualize the land. The proposal needs approval from county, state, and U.S. Army Corps of Engineers officials before any construction can begin, and Eccelstone seems to be attempting to work with them to make the plan succeed. "He had about everybody in the world at that meeting," said the corps of engineers' Mike Slayton.

Eccelstone has also flown to California with land planner Edward Durell Stone Jr. to look at four or five similar golf course-real estate developments, said Eccelstone's public relations agent, Fred Fetterly. And he plans to meet with the Florida Wildlife Federation at their annual meeting December 3 to work out a solution with members who say the project will destroy alligators, other wildlife, and their natural wetlands habitat.

The use of the PGA's 625 acres may also be revised, Fetterly said. Plans to build the headquarters, hall of fame, university and educational center, national golf club, library, and museum are still intact. But although the agreement with the PGA called for three golf courses, architects George and Tom Fazio of West Palm Beach are discussing the possibility of an additional 18 or 27 holes, Fetterly said.

Once the master plan is unveiled, the corps will review its effect on the wetlands. Slayton said Eccelstone gave no idea during the recent meeting where he wanted to place the PGA's buildings or other facilities. The location is the key factor to the corps' decision whether or not to issue a permit allowing construction, he said.

Tractors to be built using metric system

The use of metric weights and measures to build, operate and maintain tractors could start by next summer. Employees at Ford Motor Co.'s tractor and equipment plant in Romeo, Mich., are taking classes four times a week to learn the metric system.

The company has imported some components from overseas countries which have used metric measurements for a number of years. But Dick Dewey, a Ford public relations specialist, says the company is stepping up its metric education since Americans will soon have to convert to the system.

"We will begin utilizing metric tools and fabrication methods early
next year. We're going to color-key all of our tools that way," he said.

Golf course superintendents need not worry yet, however. The company will not introduce the metric measures into its golf course tractors until December, 1980, another spokesman said.

WINE

Wine consumption rising, liquor drops

The consumption of wine, especially white wine, has increased over the past 1 1/2 years, and is expected to continue, say wine industry spokesmen and the editor of a wine and liquor newsletter.

Wine sales jumped 2.3 percent from 1975 to 1976. C. Frederick Schroeder, vice president and director of public affairs for the Taylor Wine Co., Hammondsport, N.Y., said that his firm's wine sales increased more than 5 percent and white wine more than 9 percent over the same period. The eye-popping figure is a 79.9 percent increase in the sale of Taylor's Chablis.

A recent survey of alcoholic beverages served during lunch at four restaurants in New York, Houston, Los Angeles, and Washington, D.C., found persons ordering wine as much as 11:1 compared to martinis, Forbes magazine reported.

While wine drinking has increased, liquor consumption has dropped. About 437 million gallons of liquor were consumed in the United States last year, but this was a 2.1 percent decrease from 1975. And while wine drinking has increased another 3.5 percent during the first six months of 1977, liquor sales have dropped again, about 1.8 percent.

Furthermore, wine companies are buoyed by the prediction of Marvin R. Shanken, editor and publisher of Impact, a newsletter for wine and liquor executives. He says wine consumption will top liquor by 1980. About 376 gallons of wine were consumed last year, the highest annual total ever in America.

Taylor Co.'s Schroeder analyzed the figures and Shanken's prediction: "More people are enjoying alcoholic beverages in a more temperate way. The three-martini lunch is catching up with somebody."

GOVERNMENT

Bill wants limits on unions' power

The National Restaurant Association is supporting a proposed federal bill that would limit the power of unions over individual workers, especially whether or not to choose a bargaining agent.

The Employees Bill of Rights Act, if approved, would guarantee secret ballot elections before bargaining and eliminate union fines if members exercise rights granted by the National Labor Relations Board, says the NRA.

The bill is scheduled for hearings before the Senate Committee on Human Resources in January and February, said NRA assistant public relations director Kathy Kimmerle.

Spiroplaus, the education chairman for the Illinois section, instructed apprentice and club pros about golf club repairs, golf rules, teaching techniques, and relationships with club members at spring and fall seminars.

Movie says golfers should film swing

Club pros who want to film their members' or customers' golf swing may want to order a new, 28-minute movie called "Watch It!"

The film, available at no cost from the Eastman Kodak Co., shows how players can improve their game and suggests that they film a practice session with other players.

Course managers without pros may also want to order the film. Golfers can film each other's stance, grip, and swing from several angles.

Persons interested can order it by writing Audio-Visual Library Distribution, Eastman Kodak Co., 343 State St., Rochester, N.Y. 14650.

REGIONAL SHOWS

Michigan PGA show draws 43 exhibitors

The Michigan Section of the Professional Golfers' Association held its second annual Merchandise Show at Long's Convention Center in Lansing October 16-17. The 43 exhibitors of golf equipment, softgoods, signs, and golf cars were several more than the show drew in its maiden venture last year, and show coordinator Jim Applegate of Ypsilanti's Washtenaw Country Club said that others had to be turned away because there just wasn't space for them.

The Michigan Section PGA held its annual business meeting and president's dinner in conjunction with the show. The affair will be held at the same place again next year, according to Applegate.
Dick Gianferante has been appointed eastern regional sales manager for the west coast for Ram Golf Corp. He and his field sales force will continue to cover California, Washington, Nevada, Montana, Wyoming, Colorado, Utah, Arizona, and New Mexico.

Andy Bean, a rising star on the PGA Tour, has signed as touring pro for Grenlefe Golf and Racquet Club near Cypress Gardens, Fla.

Mike Harrigan, new head professional at Thorngate CC, Deerfield, has been named the Illinois PGA player of the year for his "outstanding performances through the 1977 Illinois PGA golf season." He was formerly assistant professional at Medinah.

Edward Pette is the new head golf professional at East Potomac GC, Washington, D.C.

Robert C. Brophy is now midwestern district sales manager for OMC-Lincoln's Cushman and Ryan turf care product lines. His territory includes Arkansas, Colorado, Kansas, Missouri, Nebraska, and Oklahoma.

Larry G. Vetter has been appointed manager, Professional Turf Products Division, Northrup King Co. His 15 years' experience in the turfgrass field includes 4 years as assistant golf superintendent at Park Land CC, Muscatine, Iowa, and 11 years as superintendent for Minnikahda Club, Minneapolis.

Richard H. Hurley has been named director of research and development for Lofts Pedigreed Seed.

John Regler, who designed, built, and produced the original Hustler riding mower nearly 15 years ago, has returned to Excel Industries, Inc., as product services manager.

Gary Foote has joined Jacobsen Manufacturing Co. as field sales representative for the Turf Products Division. He will serve the southeast region from his base in Fort Lauderdale, Fla.

Jim Commissio has joined Lakeshore Equipment & Supply Co. as a sales representative in Buffalo, Rochester, and Syracuse, N.Y. At one time, he was assistant golf pro at Locust Hill CC, and in 1960 he was formerly assistant pro at Lincoln Park GC in Oklahoma City and currently president of the South Central PGA Assist-
The biggest breakthrough in the greening of America began in 1970. That's when turfgrass specialists at Pennsylvania State University completed development of a remarkable fine-leaved perennial ryegrass with all the advantages of ryegrass. And none of the drawbacks. They called it Pennfine.

Now, just six years later, the success of their undertaking is evident. On golf courses and athletic fields. In parks and cemeteries. And on public grounds across the country.

**Proven in tests.** Among the nine perennial ryegrasses tested over a five-year period at University Park, Pennsylvania, Pennfine ranked finest in texture. Most resistant to disease. First in density and decumbency (low growth).

The University Park test results were only the beginning. Over 5,000 test kits with seed samples were distributed over the entire country in answer to requests from turf professionals wanting to test Pennfine. The results confirmed the University Park findings.

Most importantly, Pennfine established a new standard of mowability. Some other perennial ryegrasses, cut with the same mower, left ragged, fibrous tops that quickly turned brown. Pennfine's softer fibers cut smooth and clean.

**Proven from coast to coast, from North to South.** Pennfine's durable beauty has been demonstrated at prestigious sites all over America. From the lawns at an historic national landmark to the greens at a nationally-renowned golf course.

Besides possessing the ability to stand up under heavy traffic, Pennfine germinates rapidly. That makes it ideal for winter overseeding in the South. And, its non-competitiveness allows a smooth spring transition to bermudagrass.

**Proven quality control under the Plant Variety Protection Act.** You can be sure that all Pennfine Perennial Ryegrass meets the same high standards, because Pennfine is covered by the Plant Variety Protection Act.

That means every pound of Pennfine is certified. You are assured, by law, that it's produced exactly as intended by the original variety breeder.

**Prove it to yourself.** To learn more about how Pennfine is changing the face of America—and how it can work for you—write: Pennfine, P.O. Box 923, Minneapolis, MN 55440.
FORECAST FOR '78

GOLF BUSINESS Advisory Board members represent a cross-section of the industry. And like their peers, they've been thinking about what the new year has in store for the golf business as a whole and for them in particular. Here's how they view the big issues and problems—as well as the probable effects.

Tom J. Rogers, CGCS, Superintendent of Golf
Patty Jewett and Valley Hi Golf Courses
Park & Recreation Dept.
City of Colorado Springs, Colo.

It looks as if shortages, conservation, and governmental regulations will dictate our programs and planning more in 1978 than they did in 1977. Shortages of water, power, gasoline, and equipment that holds together will cause us to experiment until we discover other means which will enable us to conserve our natural resources, our golf courses, and our jobs.

Restricted-use pesticides, pesticide certification, and the EPA will bring about changes in our industry during the coming year that will make the changes that OSHA made seem minute. I hope we're all ready for this one—even the golf professional and manager—because this is going to affect us all.

The good thing that will come from all of this is stronger organizations and better relations among the manager, superintendent, and golf professional, because we are all in the service business, working toward one goal: better facilities.

Golf in Colorado should be superb next year, especially with the USGA "Open" being played at Cherry Hills CC in Denver, and many new courses opening in the resort areas of the Rocky Mountains—bring many golfing families to visit our state.

In Colorado Springs, the municipal courses (Patty Jewett and Valley Hi) will continue to increase rounds, revenues, services, and improvements.

Bob Benning, Golf Professional
Congressional Country Club
Bethesda, Md.

The new minimum wage of $2.65 an hour will certainly affect any golf professional's payroll. Eventually it is passed on to the member or customer in higher prices or higher club storage rates. Hopefully, there won't be too much lag before these increases are passed on, because there will be an obvious drop in profits during the interval. As businessmen, though, we must realize that the minimum wage has increased from $2.00 to $2.30, and now it's going to $2.65—that's a 25 percent increase we've been faced with in 4 or 5 years.

On the brighter side, I'm encouraged by the reversal by the Appellate Court of the New Orleans Golf City case. It probably won't make any difference immediately against the big stores' loss-leader tactics and the resulting discounts that golf professionals are forced into, but it is nice to know that some courts support