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New, important improvements truly make the Greensaire II the world's most efficient aerator.

The Greensaire II is completely redesigned. Sturdier, to withstand the constant punishment of aerating. Simplified, but mechanically improved construction lessens or eliminates many of the wear and part replacement characteristics of its predecessor. Performs better, longer, with less maintenance.

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- Functional axle location
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- Coring improvements
- Better lubrication
- Easy tine changing
- Simplified chassis

Write today for detailed information.

Complies with OSHA safety requirements.

The controls on the new Greensaire II have been relocated to offer the operator the easiest possible operating positions and maximum safety. Minimum of stretching or bending.

When it's time to replace worn out tines it can be quickly and easily done without the need of special tools. Only an Allen wrench is necessary to remove tines from the clamp-style holders.
Why all the noise about gasoline golf car noise?

All gasoline golf cars make some noise when they’re running. Most gasoline golf cars are absolutely quiet when they’re not running...when the driver takes his foot off the pedal. So they’re silent when they need to be silent...when you’re about to make a shot.

The fact is, it usually takes an expensive and delicate piece of testing equipment to tell which of two gas cars is noisier on the fairway. So, maybe there are some other things to consider when you’re thinking of going gasoline.

Like maintenance costs and warranties. Every Cushman comes with a full-year warranty on all parts and labor. Ask any other manufacturer for that kind of protection. We know a Cushman is reliable. That’s why we put our warranty where their mouth is.

And if your course is hilly you’ll appreciate an exclusive Cushman feature:

A standard, no-additional-cost, automatic seat brake with a rod linkage that doesn’t require frequent and difficult adjustment. You’ll also like the higher resale values you can usually expect with Cushman golf cars.

Your players will appreciate Cushman 4-wheel stability and the driving comfort of shock absorbers, front and rear, the extra leg and foot room and easy-in, easy-out convenience.

There are so many reasons to go Cushman, better look at the full picture if you’re thinking of going gasoline. You’ll find that a lot of the noise about noise is to make you overlook Cushman advantages.

We’d like to send you a free, detailed comparative analysis of all major golf car brands. Write to Cushman, Outboard Marine Corporation, 1428 Cushman Drive, Lincoln, Nebraska 68501.
Automatic irrigation of golf courses is not a new idea. But automatic control with almost unlimited flexibility located in one central place, plus on the spot field control, is only a recent idea which revolutionized golf course superintendent operations.

TORO has been innovating such ideas in turf care for over 50 years. And now it introduces the latest and newest concept in central controllers: the super Vari-Time 4000 Programmer.

No other master programmer offers the flexibility, versatility and efficiency afforded by the Vari-Time 4000. Watering of an entire golf course—all the tees, greens, fairways—can be done automatically from one single source.

Up to six Vari-Time Central controls, each commanding up to 40 field Satellite controllers, can be housed in the master cabinet. Or, any possible combination of up to six Central and Syringe controls is available to satisfy any watering requirement.

The system is flexible to allow for in-the-field hot weather syringe of one or more greens when other areas may not need a syringe, or when player traffic is heavy, curtailing central syringe control.

The TORO Vari-Time 4000 is designed to function automatically; however, all Centrals have Manual Start, Cancel, and On-Off switches for instant manual control in any emergency.

The 14-day, 24-hour watering cycle can be set to operate in 15 minute increments and the Syringe cycle can be timed infinitely from 0 to 5 minutes. And whatever the weather or usage conditions on the course, immediate action can be taken to start or stop a cycle just by working the right controls on the Vari-Time 4000. Or the system can whir along automatically without any attention, operating either electric or hydraulic Valve-In-Head sprinklers.

Maximum flexibility in automatic watering, with minimum attention. That’s the light-years ahead TORO Vari-Time 4000 super programmer. The ultimate in innovative technology from the company that is consistently the leader in the golf course turf irrigation market: TORO...The Innovators. Phone John Skidgel at (714) 688-9221 for more details.

The Toro Company
Irrigation Division
P.O. Box 489
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A LITTLE WILDERNESS
When I visited the Princeton Turf Farms I also had the privilege of visiting the lovely country home of the Parker Shirlings. The scope of the rolling manicured lawn (Merton and Pennfine ryegrass) was impressive. But one feature captured both my fancy and imagination.

Near the entrance was a completely unmanicured area—a natural wilderness untouched by mower, sickle or shears. It wasn’t large, but it stood out as a miniature masterpiece. I cannot name the various plants in this ecological paradise, but each plant in its season contributed to the over-all sense of beauty and naturalness. There were black-eyed susans, goldenrod, butterfly weed, bee balm, artichokes—you name it and probably it was there. Was this another of Parker’s innovations? Not so. It was Ms. Shirling’s love of wild things that prompted her to preempt this spot for her bit of wilderness. Parker just went along, and he loves it.

I am sure that nearly every golf course, cemetery or park has a quiet secluded corner that could be devoted to a miniature wilderness acre. It won’t be Yosemite or a Grand Canyon or a Bryce Canyon, but it could be the source of inspiration for members and students who love nature. Let’s not kill every weed in sight or mow every acre. Rather, let’s give nature a chance to express herself. Let’s go gather seeds from the wild flowers along the highway and scatter them in a wilderness acre. They will grow.

In this wilderness acre, we might expect to find nests of various kinds of birds; burrows of harmless friendly animals. On our farms near State College, Md., we allowed our fence rows to develop much as do the hedge rows (doomed, I’m afraid) in England. The wealth of wildlife living in these undisturbed sanctuaries is remarkable. There is abundant plant life, too. In season there is pokeweed, dock, wild black raspberries, blackberries, strawberries, elderberries, wild cherries, sumac and others.

I’ve merely made an outline of an idea. Remember my suggestion (January issue, p. 17) on capitalizing on a perennial wet area by planting bog plants? There also are Xerophytes (plants that tolerate drought). And don’t forget the wild grasses that used to clothe our prairies (blue stem, Indian grass and cordingrass).

This writer invites discussions and comments on this “wild” idea. Anybody with it?

Q—Our golf course superintendent is considering an offer to become a country club manager. His training certainly qualifies him for that position, but we are reluctant to let him go because he has kept the course in such wonderful condition. We do not want to stand in his way, but is this the route to go? (Vermont)

A—I think a move from golf course superintendent to country club manager is a definite plus for both professions. The manager position then will have someone who understands the golf course and how the club operates. The new superintendent can be sure of sympathetic understanding where the golf course is concerned. The superintendent’s profession should be proud that “one of their boys” made it. The thinking used to be that the superintendent was in a dead end profession. Don’t you be-

continued on page 10

HOW TO AVOID A HOLE IN ONE!

Once the greens are ready and the season has started, those stored up golf cars become money machines that depend on continuous day-in, day-out use to make them pay. Down-time is not only undesirable—it’s forbidden! So start the season right with a set of new Carlisle tires on every unit... Carlisle tires—especially designed for golf car use (chose for original equipment by most manufacturers) so you can depend on them... avoid that “hole-in-one” with quality, long-wearing Carlisle tires.
Managers' Operating Expenditures

- 1968: $798.5 million
- 1969: $818.6 million
- 1970: $1.15 billion
- 1971: $1.22 billion
- 1972: $2.10 billion
- Budget 1973: $2.31 billion

Gross Pro Shop Sales

- 1968: $198.0 million
- 1969: $246.4 million
- 1970: $201.8 million
- 1971: $218.7 million
- 1972: $272.8 million

Pro Income from Golf Lessons

- 1968: $16 million
- 1969: $13.2 million
- 1970: $14.2 million
- 1971: $12.4 million
- 1972: $13.5 million

Gross Revenue* from Golf Car Rentals

- 1968: $126.2 million
- 1969: $143.0 million
- 1970: $187.9 million
- 1971: $256.5 million
- 1972: $426.7 million

*Before any division of revenue

Important: It must be pointed out that what appears to be an inordinate increase in operating expenditures is due to the inclusion of payroll costs in the 1972 and budget 1973 figures. In previous years managers had been asked to exclude payroll costs from their responses. However, payroll costs in many cases can account for more than half of total operating expenditures.
Five years have gone by since GOLFDOM first took on the task of surveying and reporting the financial state of the golf industry. These were five critical years that would determine whether the industry, following an unprecedented golf boom, could settle into the role of "big business" with a more healthy and rational growth pattern. Over the course of the years, the industry has been hit by an economic slump, two seasons of bad weather, tax burdens from every level of government and soaring costs—all of this while trying to achieve stability. As the graphs below will attest, clubs and courses met their obstacles well and weathered economic setbacks better than many other industries. Superintendents have held their expenditures for turf materials almost at the 1970 level. Professionals have brought their shop sales up to a new record level.

Managers have kept food sales up through an economic period when "dining out" has been viewed as a luxury. If about half of total operating expenditures are payroll costs, as most authoritative surveys indicate, then managers also have done a good job in this area in 1972.

Of all revenue sources over the past five years, golf cars have shown the most amazing growth and have become firmly established as a major factor in the industry's financial picture. This year, GOLFDOM also examines an older revenue source that has gained new importance—tennis.

As predicted in our fourth annual report, 1972 presented a more encouraging view of the industry, and 1973 promises to be even better. The problems of the past five years have not gone away. It's simply that the industry is coming to grips with them.

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** Excludes of superintendents' salaries

** Hotel/Resort and public facilities have been excluded because the disparity among their food and liquor facilities makes figures unreliable.
GRAU from page 7

lieve it. A superintendent occupying the country club manager’s chair consolidates the two most important functions at the club. You had better let him go.

Q—This, the year of Agnes on the eastern seaboard, told us that there are a few things about tri-cal-cium arsenate that we did not know. Some superintendents lost all their Poa quickly when they wanted it to go out gradually. And some lost their jobs. All the explanations in the book did not help the superintendent, the green chairman or irate golfers. Have we gone too far too fast on these chemicals without a firm knowledge of how to stop an action with a reaction? We suffered, too. (Virginia)

A—I must confess to two things: 1) I helped start the arsenic parade in 1931 at Arlington Farms (anyone remember?), and 2) I do not have the full technical and chemical knowledge to interpret exactly what has happened. To spout jargon about P-levels, temperatures, moisture levels, soil texture, grass species, nitrogen levels and so forth would do little good. Obviously, we’ve gotten ahead of ourselves. Let’s slow down on the chemicals. Study up on our lime and fertilizer and introduce grasses so sturdy that, by themselves, they can whip Poa. And, watch the water.

Q—At the Turfgrass Field Days at Penn State, we heard and saw evidence that the new elite perennial ryegrasses (Pennfine, Manhattan) represent one of the biggest breakthroughs in turfgrass breeding history. Oddly enough, the parents of most of these remarkable grasses came from golf course fairways, where they had survived in spite of everything. Some of the most knowledgeable superintendents thought that they were bluegrasses. Now comes the question. With this public buildup, we rushed to our favorite turf seed dealer only to learn that strikers and protesters on the West Coast had tied up trucking, and we couldn’t get these grass seeds in time for our fall seeding programs. Is there a credibility gap somewhere? (New Jersey)

A—Obviously, I don’t have a final or even a satisfactory answer to your question. From harvest through processing, testing, then shipping, there is not enough time to meet the demands of the central area or crabgrass belt. For over-seeding in the South, there is no real problem. When strikes and protesters intervene there is little we can do. The problem will be solved when there is enough carryover to meet the demands on the spot.

Q—At our Mid-Atlantic GCSA meeting recently, you said that Penncross was superior in its adaptability because of its genetic variability. I have putting greens of C-1 and C-19 that are equal to my Penncross, but do not credit C-1 and C-19 with the same quality? (Virginia)

A—Three vegetative parents, grown in alternative rows, are allowed to topcross freely; then the entire field is harvested to produce “Certified Blue Tag Penncross.” Then uncounted numbers of natural sexual crosses among the three different vegetative parents produces the genetic variability, which is a vital characteristic of Penncross. When this seed is planted there is a great similarity among the seedlings, but there are differences also. The weaker types succumb to disease and competition; the stronger ones dominate. In Georgia it will be the heat- and disease-tolerant types that will develop into mature turf. In Wisconsin and Pennsylvania the cold, hard types will survive.

C-1 (Arlington) and C-19 (Congressional) vegetative creeping bent are mono-cultures. They must be managed very carefully because they have no ability to adapt as Penncross can. The reason that your C-1 and C-19 greens are as perfect as your Penncross is because you are an excellent manager and you know how to treat bent greens to bring out the best qualities in any grass.

As in bluegrass blends, we are moving away from mono-cultures. Apomorphic Merion bluegrass is a good example of a mono-culture that by itself is susceptible to stripe smut, rust and Fusarium; blended with Fylking and Pennstar, these weaknesses are masked.