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The Gator Growls

By CLINT SMALLRIDGE, C.G.C.S **Everglades Chapter** Royal Poinciana G.C.



Replacement of golf course equipment can be one of the most difficult expenditures to be understood by Board and committee members. Being geared mainly to business and financial matters, justifying the need to replace equipment to such a group can be very effectively explained by the following article, which has proven successful to both my club and other area superintendents:

WEAR FACTOR - THE REASON WHY

Wear on equipment (mowers, tractors, payloaders, and our own personal automobiles) is best defined in terms of miles.

Most modern day auto enthusiasts know and understand that when your car reaches 100,000 miles, it is about worn out. Keeping that in mind one can readily see the parallels in the following illustration:

Most American cars are driven on the highway at approximately 60 miles per hour using high gear. The engine r.p.m. (revolutions per minute) is about 2,100. In this example, if you were to drive for three hours, you would cover 180 miles.

Using this wear factor, we can convert hours of use on a mower, or any other piece of golf course equipment, to miles. Although golf course equipment customarily operates at only five to six miles per hour, and sometimes less, our engine r.p.m. is still at 2,100 and higher on one and two cylinder engines. The slow forward speeds are achieved by using a lower gear ratio.

With this in mind, the following comparison will be made using our triplex mowers as an example. They mow greens every day, seven days per week, 365 days per year. It takes an average of three hours per day. This means that the wear factor is equal to 180 miles per day - multiplied by seven days to equal 1,260 miles per week - multiplied by 52 weeks in a year, equaling 65,520 miles - multiplied by five years, which totals 327,600 miles.

In checking with engineers to confirm my theory on wear, I learned many other interesting facts about our business. Some of these engineers will tell you that stop-and-go driving and turning increases the wear factor greatly. With this in mind, consider the back-and-forth operation of most of our golf course equipment every day.

Another interesting point to be considered is that a car going down the highway at 60 miles per hour causes a cooling wind created by the velocity. We don't have that velocity for cooling an engine when operating at only five to six miles per hour. In addition, our radiators often get clogged with grass clippings and other debris common to golf courses, resulting in temperatures running even higher which further increases the wear factor.

There are other factors that contribute to the wear and tear, such as the early morning activity in the dew and frequent running through and over chemical and fertilizer applications, all of which are corrosive elements. Preventative maintenance and level of training of the operator can contribute greatly to the success and life of a piece of equipment.



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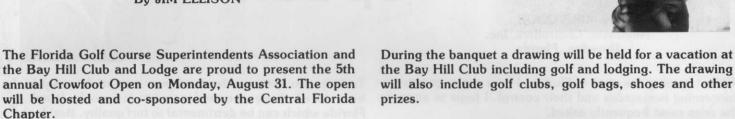
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Crowfoot Open

By JIM ELLISON



This year's event is expected to be a special one with the tournament located at Arnold Palmer's Bay Hill Club in Orlando, home of the Bay Hill Classic.

Bay Hill will be able to accommodate most of the participants at the 72-room lodge and there are many other hotels within two or three miles of the course. DisneyWorld, Sea World. Citrus World and other attractions in Orlando should encourage many participants to make the Open a three-day vacation.

The great success of the Crowfoot Open during the past few years has brought it wide recognition as one of the most exciting tournaments for people in the turf industry.

The Crowfoot Open is a one-day shotgun start tournament. Golf course superintendents and commercial industry associates who are members of qualified chapters are eligible to participate. Each chapter will receive a designated number of entry forms with a detailed format of the tournament day festivities and registration and lodging costs. All entry forms and registration fees must be submitted to chapter presidents or external vice presidents. The chapters must submit forms and fees to the Crowfoot Open Committee no later than August 1.

The festivities will begin with a bass fishing tournament on the beautiful Bay Hill lakes from 5:30 to 7 a.m. A winner's trophy and other prizes will be awarded. Tournament registration and a full course breakfast buffet will be held from 8 to 9:30 a.m. The shotgun start will be at 10 a.m. and refreshments will be served on the course for the duration of the tournament. A luncheon of cold sandwiches will be available at the turn.

Immediately following the tournament at approximately 3 p.m., there will be a cocktail party for all players and guests in the Bay Hill Classic Room. The awards banquet will be in the main dining room from 4 to 6 p.m. There will be a gourmet buffet followed by the announcement of the tournament results and awards presentation.

Much of the Crowfoot's success can be attributed to Suntree's membership. Last year 25 men and women volunteered to assist the Crowfoot Committee, Suntree's executive staff and association volunteers in scoring, marshaling, registration and other activities.

As the 1981 tournament nears, the Crowfoot Committee is quite proud of the accomplishments of the past few years. Last year, in addition to hosting an enjoyable event, the tournament submitted \$500.00 to G.C.S.A.A. to help the national association support professionalism, \$500.00 to F.T.G.A. for continued support and \$500.00 to Lake City Community College to be used for two \$250.00 scholarships to worthy students.

The first Crowfoot Open was held at Poinciana Golf and Racquet Club in 1977 and the second at Suntree Country Club in 1978. The Everglades Chapter won the first and second opens by one stroke over the host Central Florida Chapter. In 1979 the Central Florida Chapter defeated Everglades and five other chapters to capture the title.

The West Coast Chapter won the title for the first time in 1980. Low Gross team honors went to North Florida Chapter and individual honors to Fred Klauk.

Early registration is important because of an expected capacity field. We'll see you in Orlando.



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Nematode Control Update



By MIKE COOK
Nematode Controllers, Inc.
Brandon, Florida

While traveling the state of Florida, I hear many questions concerning nematodes and their control. I hope to answer the ones most frequently asked.

What do nematodes look like? Most are cylindrical and slender in shape. Semitransparent and very small (.5 to 3mm in length), they can normally be seen only under a microscope which is also used to classify and identify the species.

The nematode has a stylet on one end which is used to penetrate the plant. Those that completely enter the tissue of the plant to feed are classified as endoparasitic; those which feed exteriorly through the root tissue are ectoparasitic.

How do you know you have nematodes? The superintendent can begin watching for visible symptoms in turf quality such as wilting, thinning, chlorotic spots which look like a nutrient deficiency, no lateral root growth, very sparse feeder roots and shallow root system.

Once you notice some of these problem areas or symptoms, a soil sample should be taken for a nematode analysis. When taking samples, make sure they are kept cool. They need not be refrigerated but keep them cool enough to insure the survival of your count. The samples can be kept in a styrofoam container if they are not sent in for immediate analysis. If samples are allowed to sit in the trunk of a car or truck, the hot sun will kill over half the count and the reading will not be true.

When pulling samples take between 10 and 14 plugs from a fairway at that many different locations. Mark off a one square foot area and return to the exact spot to make the test valid. Do not take bare area plugs. Take plugs from the turf adjacent to the bare area. Put all the plugs taken from the same fairway in one bag. Once the bag has at least 12 plugs in it, shake it up to blend the soil together. Be sure to label the outside of each bag with the fairway number using a marking pen.

The samples can be sent to the University of Florida in Gainesville, U of F extension station in Ft. Lauderdale, or to a private laboratory such as Applied Agricultural Research Co. in Lakeland. Private labs usually return analysis results within a week depending on their work load.

To help you better understand your nematode analysis, I have listed those nematodes most commonly found in Florida which can be detrimental to turf quality. Beside the type of nematode is the count level (per 100 cc of soil) at which treatment is recommended.

Nematodes common to Florida:

1.	Root-Knot41	6. Stubby Root 41
2.	Sting 10	7. Cyst 41
3.	Lesion 41	8. Stunt 81
4.	Lance41	9. Ring300
5.	Spiral 81	10. Sheath 151

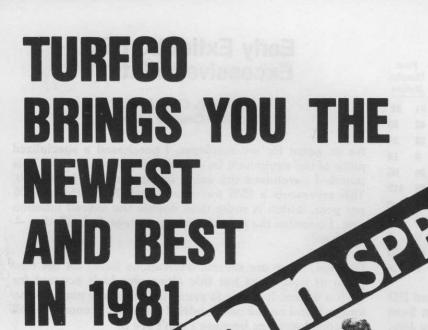
What chemicals are available today for treatment of nematodes? At the present time the most reliable means of control is by proper application of a nematicidal chemical. EDP (Ethylene Dibromide) is a liquid nematicide injected into the soil. Nemacur, Dasanit and Mocap are granular nematicides.

Unfortunately, there is NO chemical on the market today which will completely eradicate the nemotade and still be used safely on established turf. Therefore, we have to control nematodes to a point at which we can live with them. EDB treatment seems the best way to control them economically.

The EPA has put a temporary restraining order on DBCP (Dibromochloropropane) which states in so many words there will be no use or resale of DBCP in the continental United States for a period long enough for more studies to be made on the chemical. Personally, I feel the outlook for release of DBCP back on the market for restricted use is very bleak. Once the EPA pulls a product as fast as they pulled DBCP, it is very doubtful it will ever return. Enough said about a product over which we have little, if any, governing power. The job now is to find a product which will take the place of DBCP.

All my experiments during the past two years lead me to believe EDB and DD are the best products available for controling nematodes economically. I can illustrate this with the figures below. They are based on samples from two different courses.

(Continued on Page 18)

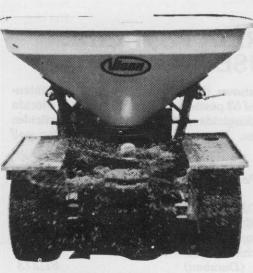


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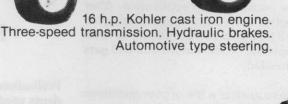
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NEMATODE (Continued from Page 16)

	A	After		Two Months Before		Three Months Before		Four Months Before	
	#1	#2	#1	#2	#1	#2	#1	#2	
Root-Knot	80	62	66	0	24	0	42	20	
Sting	110	38	36	54	42	22	28	24	
Lesion	66	54	82	40	44	24	0	14	
Lance	72	238	12	88	66	144	24	96	
Spiral	40	356	64	144	52	88	24	112	
Stubby Root	0	24	0	0	8	0	28	0	
Cyst	0	6	0	0	0	0	0	0	
Stunt	0	0	0	24	0	0	0	0	
Ring	180	1082	48	288	88	450	64	492	
Sheath	92	72	88	0	24	12	0	28	

You can see that the overall treatment with EDB and DD has helped reduce the overall nematode population from the time the courses were treated in April through late July. In some cases you will note a few species which were not present in the previous months but are now. In other cases, there is a reduction in count, but it goes back up the next months. In still others, we have reduced the count considerably but not down to the desired level.

These two courses had never been treated before with any nematicide. Following the treatment the turf quality improved 100 per cent leading me to believe the treatment really helped by reducing nematode count. These courses may need another treatment to further reduce the count to accepted levels.

Proper soil moisture is a key ingredient in the application process. The soil must be moist prior to application. After the material has been applied use your irrigation system to apply between 1/4 and 1/2 inch of water per day for at least the first five days. This seals the product in the soil and gets the material where it is needed.

I hope this article will help to answer a few of your questions about nematodes and their control. Research is being done every day and it is hard to keep up with all the advancements. Therefore, I recommend you keep in touch with your county agricultural agents, Dr. Dunn at the University of Florida and the extension services throughout the state.

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Early Extinction By Excessive Inflation

By JAMES P. CALLAGHAN Rio Mar Country Club

As an agent for my employer, I purchased a specialized piece of turf equipment for \$5,200 in September, 1978. This month I purchased the same updated model for \$8,500. This represents a 63% increase in just 28 months or 27% per year, which is more than double the overall inflation rate. I question the accelerated rise in cost. Is it inflation — or what?

Granted, there are several innovations found on the new piece of equipment but this alone shouldn't account for such a drastic increase in price. In fact, some parts are no longer found on the new model. I ask what accounts for all the added expense because I can't see it!

However, I do see an ominous consequence on the horizon if some of the specialized turf equipment introduced during the last decade continues to increase in price at such an alarming rate. Coupled with high energy and maintenance costs, this equipment that has become commonplace on the golf course may soon be priced out of the market. Its remains will be found among those of the dinosaur.

In the future, sound economics will be scrutinized in every dimension. Manufacturers take heed — for soon it may be cheaper to cut our greens with an updated circa 1930 greensmower!

FLORIDA PESTICIDE USE SURVEY

Preliminary data shows that the golf course superintendents used a total of 63 pesticides on golf courses in Florida which includes 20 fungicides, 24 herbicides, 15 insecticides and 4 nematocides. The top 5 pesticides used for golf courses were:

Rank	Pesticide	Pounds ai
1	DBCP	274,773
2	MSMA	256,990
3	toxaphene	255,956
4	chlorpyrifos	
	(Dursban)	81,273
5	trichlorfon (Dylox)	71,253

It seems to me that compared to the intricate workings of a golf course, a moon rocket is a simple toy.

David J. Gradman Palm Beach Country Club

MAN DESTROYS FLEAS, HOUSE

The next time Paul Molz needs to get rid of a flea and tick problem in his yard he's going to use a water-based spray that doesn't burn — not gasoline.

The 31-year-old North Miami man accomplished his purpose when he sprayed his lawn with gasoline. What Moltz didn't figure on was the pilot light in his water heater.

Half of his one-story house was burned in the resulting blaze, and Molz was hospitalized in fair condition with second-degree burns on his legs.

Molz's Irish setter, Sinbad, was having problems with fleas and ticks, which frequently are a problem with South Florida pet owners because of the year-round warm climate.

Molz figured spraying the lawn with gasoline would eradicate the pests.

Dade County firefighters said the gasoline fumes were ignited by the pilot light of the water heater on the porch of his house.

The fire spread quickly through the house and it took six fire units 16 minutes to douse the flames. Firefighters estimated damage to the house at \$25,000. ■

(Reprinted from the Palm Beach Post Times and Associated Press.)

The Golfing Superintendents

During the recent Palm Beach county amateur sectional qualifying rounds, six area superintendents distinguished themselves not only as turfgrass managers but also as competitors. Over 400 players try to qualify for the event, one of the largest local tournaments in the nation.

Three different Palm Beach county courses were used. At Wellington Country Club Kevin Downing of Atlantis Golf Club tied for fourth place with 76. Also qualifying was Glen Klauk of Delray Dunes with 83. At the President Country Club north course, Mark Henderson of Mayacoo Lakes Country Club and Bill Whitaker of Seminole Golf Club shot 71 and 72 respectively. These great scores enabled Henderston to tie for third place and Whitaker for seventh. At the Indian Spring Country Club Fred Klauk of Pine Tree Golf Club took the low qualifying honors with a two over par 74. Pete Brooks of the Palm Beach Golf Club was also able to qualify with 82.

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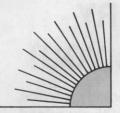
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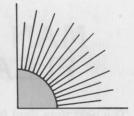
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South Florida Sunshine



By BRAD KOCHER Inverrary Country Club

To properly equip a new 18-hole golf course, one can easily spend upwards of \$200,000. Some of this equipment will need to be supplemented within a two-year period and much of it phased to back up or second line equipment within four to five years. Certain items if properly maintained (tractors, trucks, utility vehicles & sprayers), will remain front line equipment for five to 10 years, but most other turf equipment will need to be replaced or supplemented within that four to five years. During this time the equipment begins to need minor repairs that become an expense after the first year warranty is completed. As the equipment grows increasingly older, minor repairs become major repairs, more parts must be purchased, mechanics' labor is increased, operator furstration is increased, and efficiency is lost.

At some point in time, it becomes economically unfeasible to continue to repair existing equipment and new equipment must be purchased. As Golf Course Superintendents, we are also equipment managers and must be able to determine and advise management when this point occurs.

If we are to be able to properly determine when to repair or replace equipment, we need to keep accurate records. An accountant can accurately judge when an item is an expense, or how to depreciate a capital improvement item. By the same token, we should be able to reflect to management that a particular piece of equipment is costing so many dollars to repair on an annual basis. We are not talking about preventative maintenance, but rather about parts and labor for repairs. Therefore, it becomes somewhat of an accounting determination after a piece of equipment reaches a certain level of repair maintenance. For example, a greensmower at the end of three years may need \$800 worth of parts and labor during the next year to keep in A-1 condition and possibly \$950 the subsequent year. It may be in excellent condition and may have a life of six to seven years. However, from an accounting standpoint, it may be better to replace it after four or five years. One thing to consider is that \$800 or \$950 in a given year for repairs will be mostly eliminated when a new piece of machinery is purchased. Any parts problems in the first year are covered by warranty, and except for some troubleshooting by the mechanic for minor repair problems the end of the year expense is minimal. Accurate parts and labor expense on each item of equipment must be kept and this information will assist in presenting justification for new equipment purchases. If a piece of equipment is costing you \$1,000 a year in labor and material, this figure is nearly eliminated with the purchase of new equipment.

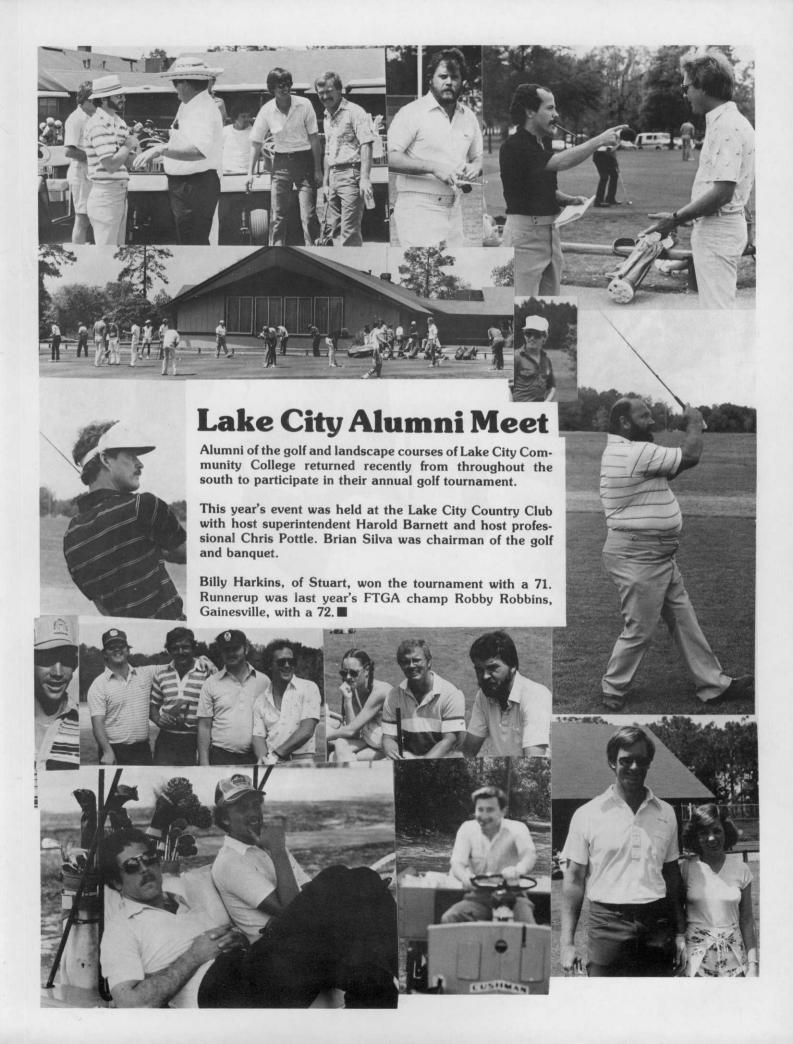
One area that can be easily overlooked is labor for repairs

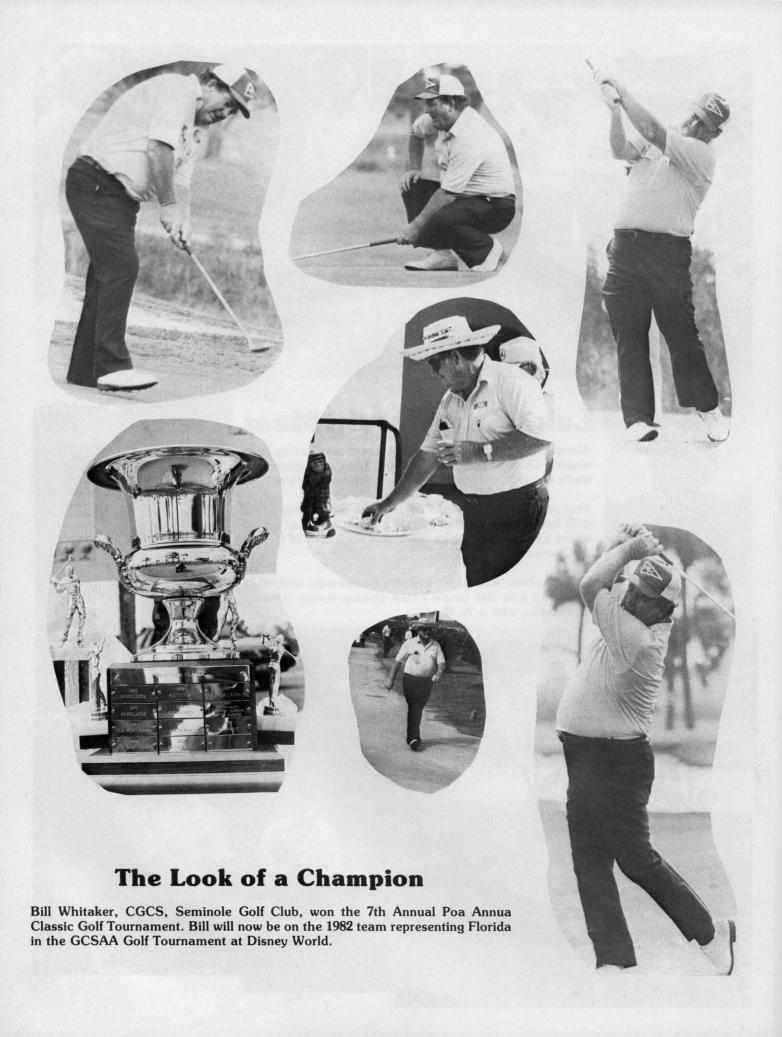
to equipment. Labor cannot strictly be figured on the time it takes to replace a part. We must consider the time a mechanic takes to troubleshoot on the course, time to tow or haul the equipment to the maintenance area, diagnosis of the problem, finding the proper repair part, ordering a new part and ultimately replacement and testing. If all this time is figured at \$7 to \$10 per hour, it is easy to see how equipment repair cost adds up quickly.

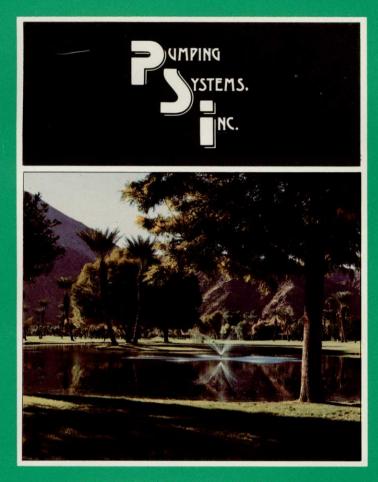
Parts prices are another area that deserves a great deal of attention in figuring costs on a year to year basis. Turf equipment parts are increasing at an alarming rate of 12 to 15% annually. Some parts have increased 25 to 30% annually! This has caused many superintendents to shop for comparable replacement parts. There are several companies that manufacture replacement parts for turf equipment and most are looked upon quite favorably by superintendents as another alternative to an already limited market. It does not make much sense to spend a great deal more for bearings, oil filter seals, engine parts, hoses, etc. when these items are available from specialty companies. In addition, there are a few companies who manufacture or supply many of the gears, reels, bedknives, rollers, etc. at greatly reduced prices.

Parts availability and service is another question put to many local superintendents and, for the most part, there has been a general feeling of satisfaction and a marked improvement in these areas over the past few years in the South Florida area. The area turf distributors have been very cooperative in expediting parts deliveries.

Equipment prices, on the other hand, have been a sore spot with most superintendents. Prices have risen annually at 15 to 20% for most turf equipment and 20 to 25% annually for the past two years for some other equipment. This becomes rather difficult for clubs to handle financially when salaries, greens fees, cart rentals and dues at golf courses have not gone up by the same margin. Most superintendents feel trapped when increases like this occur because competition in many areas of the turf industry is minimal. There are limited choices for turf equipment. Distribution is done in regions that require golf courses to buy from certain distributors. Supply and demand in most of the turf industry sort of goes like this, "You've got it and I have to have it." I do not know where competition and "fairness," as one superintendent put it, enter into the picture, but I hope the turf equipment manufacturers can get their act togther and help us maintain a level of price increase that is tolerable and realistic. If we cannot present conditions to our golfers that they expect for a reasonable cost, then the entire industry will lose ground instead of gain.

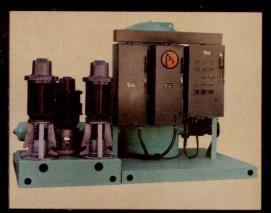






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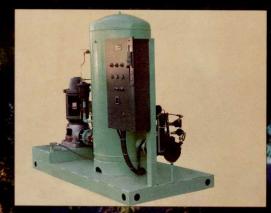




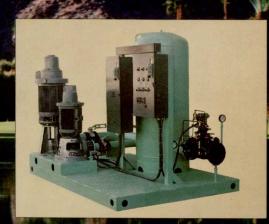
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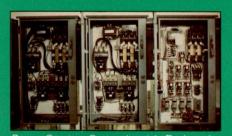


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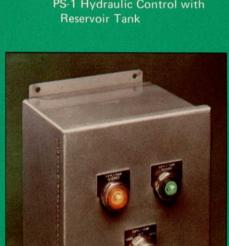
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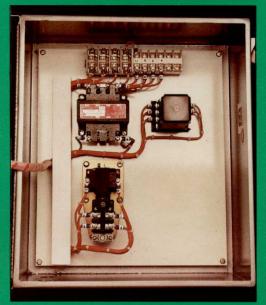


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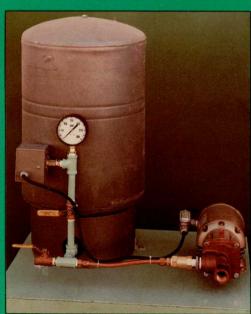
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