If your pumping station has left you high and dry, call AquaTurf.

AquaTurf irrigation and pumping systems are custom designed to keep golf courses green, from the sun-baked fairways of the South and Southwest to tees and greens from Maine to Washington.

AquaTurf's unique "brain" tells you exactly what your system is doing at all times. You set the program. It waters your course, exactly the way you want it watered.

To find out more about how AquaTurf can solve your irrigation problem, call or write today.

AQUATURF'S POSEIDON 4000
FOUR-PUMP STATION
Backup dependability coupled with maximum flexibility and operational savings.

AQUATURF makes it rain while the sun shines.

Please send complete information about AquaTurf's pumping system with a brain.

Please have someone call to discuss our golf course irrigation problem.

Your name: ___________________________ Position: ___________________________

Name of country club or golf course: ___________________________

Address: ___________________________ Phone: ___________________________

City: ___________________________ State: ___________________________ Zip: ___________________________

AquaTurf
11363 San Jose Boulevard
Jacksonville, Florida 32217
904/268-6707
Close by when you need the finest names in turf equipment, and the parts and service to back up every sale.

Distributors for:
- Toro Mowers & Turf Equipment
- Cushman Turf Care System
- Ryan Turf Care Equipment
- Roper Tractors
- HMC String Trimmers
- Power Trim Edgers
- Lely Spreaders
- Mott Mowers
- Standard Golf Supplies
- Toro Turf Irrigation
- Florida Turf Sprayers
- Broyhill Sprayers
- Royer Shredders

SERVING THE TURF INDUSTRY FOR OVER 45 YEARS
Agronomy Quiz

Match the following:

2. Xylem  7. Phloem
3. Grass  8. Overseed
5. Sheath  10. Internode

A. The principal food conduction elements of vascular plants.
B. The flattened portion of the leaf located above the sheath.
C. To seed onto an existing turf with temporary cool season grass.
D. Total loss of moisture through the process of evaporation.
E. Any plant of the family gamineae.
F. A pesticide used for controlling weeds.
G. A combination of two or more cultivars of a single turfgrass species.
H. Portion of the stem between two successive nodes.
I. The principal water conducting element in vascular plants.
J. The tubular basal portion of the leaf that encloses the stem.

SOUTH FLORIDA SUNSHINE (Continued from Page 20)

NOTES:
Try this new alternative to using pin position indicators (whiffle balls on flagpoles). Use red, white and yellow colored flags. Red is used in the front third of the green, while in the middle and yellow in the back. The cupcutter takes one extra flag and pole with him in the morning and takes the old flag and pole to each successive green. It's not as much of a problem as you would think, avoids having whiffle balls that slip on the pole, and is very appealing to the golfers. It also greatly reduces theft. For some reason, vandals do not particularly care for numberless flags. Without exaggeration, we have reduced our flag theft by 80% over the past year!

ANSWERS TO AGRONOMY QUIZ

A  E  D  B  C  H  I  G  J  F
Everglades Hosts
Poa Annua Classic

Bill Whitaker won the 7th annual Poa Annua Classic in a three-way playoff over Fred Klauk and Karl Jacobs. The team event was won by the Palm Beach chapter.

As always, Everglades Chapter hosted a splendid tournament, played this year at Mirror Lakes Golf Course, Lehigh Acres. Rick Cook was host superintendent and Mel Elby, host professional.

Whitaker, a former national lefthand champion, is superintendent of the world famous Seminole Golf Club, Juno Beach. His par 72 was tied by Jacobs of Westview Country Club, Miami, and Klauk from Pine Tree Golf Club, Boynton Beach. Jacobs was eliminated on the first playoff hole. Whitaker defeated Klauk, the defending Crowfoot Open champion, on the next hole. Joe Ondo of Winter Pines Golf Club, Orlando, was one shot off the pace with his 73. He was the long drive winner.

The chapter event conducted on the Calloway Scoring System was won by Palm Beach over Central Florida by matching scorecards. Mark Henderson, Mayacoo Lakes Golf Club, paced the winners with a net 71. The Palm Beachers had six players with a net 72.

Doc Anderson and his staff again supplied the excellent food. No trip to the Poa Annua Classic is ever complete without the famous Bar-B-Q!!!
Standard’s Duo-Rake reduces rake replacement cost... and it floats!

After more than 3 years in use, the Standard Pro-Line Duo-Rake is proving to be the toughest, most versatile sand bunker rake ever produced. Rake heads are of a high impact plastic that’s flexible in either hot or cold temperatures. Many superintendents are finding that when they use the Standard Duo-Rake, members use them more often. That means smoother traps for all! The Duo-Rake is designed with both teeth for raking the sand, and a blade for smoothing the teeth marks. And yes, the Duo-Rake floats! Talk to your Standard Pro-Line distributor... or contact us.

We’ll show you how Standard Duo-Rakes withstand the sands of time!
18 WAYS OF MIS-USING EQUIPMENT

Remember this is what takes place when you mis-use equipment.

1. Run equipment at excessive speeds.
   Result - poor cutting appearance.

2. Run equipment with loose bolts and nuts.
   Result - (a) bolts will become elongated due to vibration.
   (b) bolts and nuts when lost usually end up between the reel and the bed knife.

3. Run equipment improperly adjusted, such as: (a) belts and chains, (b) clutches, (c) reel and bed knife.
   Result - (a) Wear our prematurely and cause undue wear to pulleys, sprockets and bearings (b) wear clutch plates and linings, (c) will not cut properly and will wear bed knife and reel prematurely.

4. Operate with accumulation of grass clippings and dirt in air cooling fins on engine.
   Result - will cut off flow of air causing engines to run excessively warm. May cause fires.

5. Operate equipment not properly lubricated.
   Result - bearings, shafts, sprockets and all wearable parts will not stand up. This will cause poor performance of any equipment.

6. Operate engine with little or no oil in crankcase.
   Result - connecting rod will seize in cylinder.

7. Operate engine with air - cleaner empty.
   Result - will affect carburetion giving poor engine performance and shorten life of engine due to dirt entering engine.

8. Using improper equipment for the job. Example - using a light duty piece of equipment where a heavy duty should be used.
   Result - poor finished job and equipment will not stand the gaff. Example would be - sending a boy to do a man's job.

9. Using improper fuel in engines such as white gas, etc.
   Result - manufacturer's recommend standard gasoline, and substitutes will cause poor engine performance, also wear engine prematurely.

10. Operating equipment with faulty parts.
    Result - one worn or missing part will possibly wear five others causing expensive maintenance costs.

11. Using heavy detergent oil in engines or number 10 weight oil.
    Result - manufacturer's recommend non-detergent oils and number 10 is too light due to the high r.p.m. under which engines operate.

12. Operate any rotary mowing equipment with cutter bar out of balance.
    Result - will cause undue vibration and wear bushings, bearings and could crack housings.

13. Use reel type mowers where there is any stones, or debris.
    Result - tear up reels giving poor cutting appearance.

14. Over-grease or use wrong lubricant.
    Result - excessive grease or wrong lubricant will fall on turf harming grass. Dirt will hang to unit.

15. Use air pressure grease guns when lubricating.
    Result - pressure build up will cause fittings to pop out.

16. Drain engine oil when cold.
    Result - Sediment in oil is not in suspension and will settle to the bottom of the sump. If drained when warm, 90% of the sediment will flow out.

17. Spray water on cylinder head and cylinder when cleaning equipment that is hot.
    Result - will cause warpage and may crack head or block.

18. Mis-use of equipment such as:
    (a) hitting obstructions, (b) jumping curbing, (c) transporting walking greensmowers on roller.
The drought is gone, but hopefully not forgotten, and the hurricane season is officially here. Many superintendents have never been in a bad hurricane. Many of us have moved here from the north and have never experienced the fury of these killer storms slamming ashore with their tidal surges, torrential rains, winds over 200 mph, and tornadoes.

Hurricane David, which hit the East Coast in September 1979, was barely more than a tropical storm after it passed over the mountains in Cuba. However, I can remember back in the early 60's to Hurricanes Donna and Cleo. Donna lasted two days. She came through the Florida Straights and hit Key West. She then turned north and the eye went up Florida's Gulf Coast. She wiped out almost everything in her path. She was so big that damage on Florida's East Coast was in the millions of dollars. Sand from Ft. Lauderdale's beach covered AIA, and large fish, trees, and other debris were strewn everywhere. Hurricane Cleo, the next year, was even worse. It's eye went up the East Coast.

These two hurricanes were not even the worst ones to hit Florida. I wasn't around for the others, but those two left an impression on me that I'll never forget.

In the summer of 1978, when I was preparing to take my vacation, I left with my assistant a Hurricane Preparation Check List. He did not need it that year, but the next year he did. When Hurricane David hit in September 1979 I was in Virginia proposing to my wife. I could not get back in time, but my assistant and the crew knew exactly what to do. Maybe this list will give you a few ideas to help reduce the damage.

A. PUMP HOUSE:
   1. Secure removable roof.
   2. Crack windows to relieve pressure.
   3. Remove any loose objects inside and out.
   4. Fertigation tank — Fill with water and secure lid.
   5. Secure Fertigation Pump.
   7. Secure the door.

B. GOLF COURSE:
   1. Remove shingles from Tee Information Posts.
   3. Remove everything from Practice Greens and Driving Range.
   4. Heavily secure all new trees.
   5. Lock and secure down Irrigation Controllers and check groundings.
   6. Remove all signs and cypress fence rails.
   7. Secure or remove all Road Signs.

C. FLOOD PUMPS
   Check with Engineering.

D. HALFWAY HOUSES:
   1. Crack windows.
   2. Remove all loose objects.
   3. Turn off water.
   4. Turn off circuit breaker.
   5. Lock and secure door.
   6. Bring in all water coolers.

E. MAINTENANCE COMPOUND
   1. Secure wood fence.
   2. Chemical Room — Remove small or wettable chemicals.
   3. Sand bag a couple rows inside Fertilizer Room door.
   4. All small equipment, pipe, etc. inside.
   5. All loose objects inside or secured.
   6. Sand bag a couple of rows inside all doors.
   7. Master Breaker off.
   8. Secure doors and gates.
You just can't buy a better greens mower.

It's been proven time and again, day after day, acre after acre. You just can't buy a better cutting greens mower. For a very convincing demonstration, call your Jacobsen Distributor.

DeBRA ENTERPRISES
Hollywood (305)987-1400 Ft. Myers (813)332-4663
Tampa (813)621-3077 Miami (305)621-4148

TRESCA INDUSTRIES
Jacksonville (904)268-6741 Longwood (305)834-5554

Jacobsen: You just can't buy any better.
The Palmer Overseeding Method

Arnold Palmer and Jim Ellison, Bay Hill's Superintendent, are very careful when choosing an overseeding mixture. Some of the world's top golfers have played at Bay Hill in Orlando, and they've come to expect certain standards.

To help maintain the Bay Hill image, Palmer and Ellison use Marvelgreen. And so do some other prestigious courses:

- Pinehurst, NC
- Harbour Town, Hilton Head, SC
- The Princess Hotel, Bermuda
- Rio Pinar, FL
- Country Club of Birmingham, AL
- Olive Branch Country Club, MS
- Pass Christian Isles Golf Club, MS
- New Orleans Country Club, LA
- Champions Golf Club, TX
- Quail Valley Golf Club, TX

Marvelgreen is available in four different blends: Marvelgreen Supreme, Marvelgreen 3+1, Marvelgreen + Sabre, and Marvelgreen Shady.

Palmer is very proud of Bay Hill. And rightly so. You can have as much pride in your course.

Follow the Palmer Overseeding Method... use Marvelgreen.

Marvelgreen is a product of Lofts Pedigreed Seed, Inc. sold through Sunbelt Seeds, Inc. and distributedby the following:

- Tieco, Inc.
  AL, FL, KY, TN
- Watson Distributing Co.
  All stores, TX
- Anderson Chemical & Turf Supply
  Westminster, CA
- Richmond Power & Equipment
  Richmond, VA
- Woodbury Chemical Co.
  All stores, FL
- Lofts/Maryland
  Landover, MD
- Valley Seeds, Inc.
  Phoenix, AZ

Sunbelt Seeds, Inc.
2055 Tucker Industrial Road
Tucker, GA 30084
(404) 491-1311