

Scientists Pause To Ponder Pestilence of Pests

By Darcy Meeker

GAINESVILLE — Hundreds of scientists from all over the world gathered in Gainesville July 21-24 to talk about what sickens insects, oysters, crabs, coral, barnacles and other spineless creatures.

They talked about the effects of pesticide residues on estuary life, about microbes that could protect food crops, insect cells which could culture vaccines for human diseases, barnacle-like creatures that clog water pipes in power plants, and diseases of culinary crustacea like shrimp and lobsters, especially when attempts are made to farm them.

It was the annual meeting of the Society for Invertebrate Pathology, hosted by the University of Florida's Institute of Food and Agricultural Sciences (IFAS) at the J. Wayne Reitz Union.

"Using microbes to control insects has everybody excited right now," says Drion Boucias, one of half a dozen IFAS researchers studying insect diseases. "Home gardeners and commercial growers alike are using *Bacillus thuringiensis*, and industry researchers are developing and patenting new strains all the time."

The microbe, used to control gypsy moths and spruce bud worms in the Northeast and pests that transmit a

blinding disease in the Third World, were the subject of 14 papers given during the four days of meetings. Another variety of the bacterium shows promise for controlling mosquitoes.

Most insect diseases are very host-specific, so they control pests without harming "non-target" organisms — such as humans, dogs, birds and useful predator insects.

In addition to bacteria, fungi and viruses can also be used as biocontrols.

"It's wonderful to think that science will be able to design bacteria and fungi and viruses to control weeds, harmful insects and other pests," says Dr. K.R. Tefertiller, the UF vice president who directs IFAS.

"It means we can fight pests Nature's way, by balance — the goal being not so much to kill pests as to prevent economically significant damage. That means less dependence on chemical pesticides and less stress on the environment."

Boucias sees economic opportunities in insect pathogens.

"Some can be produced via industrial scale fermentation techniques, and major chemical firms are turning in that direction," Boucias said.

However, for the many insect pathogens that only afflict a small number of pests, Boucias envisions a "cottage" industry: agriculturists in developing nations or small businesses in the United States propagating the microbial biocontrols. ■



WAREHOUSE DISTRIBUTOR OF PARTS & ACCESSORIES FOR
GOLF, TURF & INDUSTRIAL VEHICLES



**SAVE UP TO 40% ON TOP QUALITY
REPLACEMENT PARTS TO FIT:**

**TORO • JACOBSEN • CUSHMAN • RYAN
AND MANY OTHERS.**

All parts *guaranteed*. Call today for **FREE** catalog

EMCO

P. O. BOX 2426 • 57 CANTEE STREET • JACKSONVILLE, FLORIDA 32203

FL TOLL FREE 1-800-342-0881



Palm Beach Trade Winds



TAKE IT FOR A TEST DRIVE

Suppose your car is running poorly. It's been some time since the last tune up, so you take it into the shop for service. As you drive home, you find it still idles rough. To your dismay, you find the mechanic failed to take it for a test drive. He installed new plugs, a rotor cap, and everything else required for a textbook tune up but unless he took it for a test drive, the mechanic can not be certain everything is just right. Perhaps the timing is just a degree or two off causing that rough idle. Something relatively minor was overlooked, which appears to the customer as an unsatisfactory service.

This same analogy could be used within the golf course superintendent's profession. A golfer plays the course. Everything appears textbook perfect. The cups have just been set, the greens and tees mowed, and even the coolers are freshly filled with ice and water. However, maybe

there is something wrong — something that only a test drive would notice. Presumably, it would be something rather specific and technical, much like the case where only the mechanic tuning your car would understand and be able to correct. Your problem is, the golfer realizes it's not quite right, but they do not totally understand why.

A good example might be that the golfer complains of missing putts. Just as the ball heads right toward the cup, it veers off to the side! Perhaps the employee changing cups incorrectly pulled the cup cutter up too fast thereby slightly heaving the soil around the new cup. The employee was totally unaware of such a mistake and even the golfer can not see the ever so slight hump around the pin.

The problem could have been overcome if the employee had performed the complete job function. By stepping firmly on the cup setter tool which automatically depresses the cup to a pre-determined depth along with leveling the turfgrass at the rim of the new cup, this would virtually eliminate the heaving and perhaps the golfer's putt would truly roll into the center of the cup, producing customer satisfaction.

Sometimes a mistake with the tune up can be psychological. Perhaps it could be the golfer's inability to play the game where every tee shot is a drastic fade off to the right and only a lesson from the pro and a few buckets of range balls might cure. Yet, you are often to blame. Are those tee markers lined up correctly on the tee? Many times I have heard complaints such as, "the tee markers are set crooked and that caused me to aim towards the lake." The fact is, it's only human for the golfer to ignore his own inability. Perhaps the tee was designed oval in shape, therefore an optical illusion of aiming towards the center of the fairway lies solely upon the angle of the tee markers. As a supervisor, you might drive past that problem tee several times a day. How often do you have time to stand on every tee, every day? Probably not very often! It was beginning to seem every golfer's out of bounds banana ball was being blamed on our crew setting crooked tee markers. To help combat this complaint, the employee now places a tee square towards the center of the landing area target to confirm proper alignment. I must admit, it's amazing how an improper alignment of just one foot for either tee marker can misalign the golfer to the rough. Here again a test drive can reveal a legitimate problem. To help resolve this problem, it's even better if the employee is allowed to

(continued on page 23)

DUDA SOD

CertiTurf™
THE QUALITY GRASS

Bermuda
Floritam
Raleigh
Bitter Blue

Zellwood
Oviedo
Cocoa
Ft. Lonesome Ft. Pierce
LaBelle

Zellwood 904-383-6111	Cocoa 305-636-3966	Ft. Pierce 305-461-0962
Oviedo 305-365-2189	Ft. Lonesome 813-634-3008	La Belle 813-675-0545

A. Duda & Sons, Inc.

(continued from page 22)

play the course periodically to better appreciate the intensity of the problem.

If that complaint seemed peculiar, how about this one. Once I heard a lady complain, "the water in the coolers taste like diesel fuel." I am not exactly sure what diesel fuel tastes like, so I immediately proceeded to the seventh tee to get a drink of diesel. To my dismay, one quick sip concluded a plastic, rubbery aftertaste. An employee had inadvertently filled the water coolers from a newly installed garden hose. This water cooler was located on a part of the golf course where, as a supervisor, I seldom frequented. As a golfer, the water cooler was located at a far corner of the course after a long par five. I have now learned to test drive each water cooler every morning. Even if I'm not thirsty, I at least taste samples for a diesel aftertaste. Since then, we wash the jugs every Friday morning, and even spray and clean the push button spigot with a toothbrush once a week so those two year old water coolers appear fresh and new.

These three examples are common complaints within our industry. Sure, we know how to resolve such issues — take it for a test drive. Who else is better qualified to critique the golf course than the golf course superintendent? Yes, the golf pro can best understand playing the game and how to play the course. The men's or lady's club champion can best analyze the course from a member's point of view. But who knows the golf course best from an agronomic point of view? Because of this, it is best for the golf course superintendent to periodically take it for a test drive.

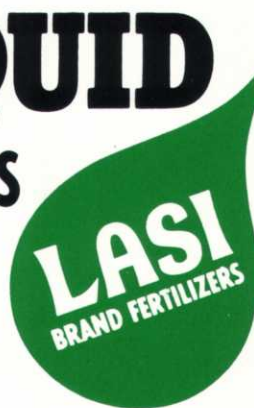
The next question is, how often should the golf course superintendent play golf? The answer will vary between clubs. Hopefully your club does not frown upon having the superintendent play on a regular basis. A superintendent will view the course from a player's point of view. Something will be noticed. It might be minor, yet on the other hand it could be major. The point is, it will be time well spent. A resort or municipal operation might consider the superintendent's tee time as a loss of revenue. A private club might consider the tee time an inconvenience to the members. But, while playing the course is a privilege, it is also a duty — a duty the superintendent should perform. And it doesn't stop with the superintendent. The maintenance staff, if allowed to play on designated days, can also benefit the club. To appreciate pin placements, the raking of bunkers, the mowing of greens, tees, fairways and rough, along with fresh drinking water, it is best approached from the playing point of view.

I am probably as particular as anyone about their car. I park way out in the corner of the parking lot to prevent door dings and I would not let just anyone drive it around town. However when it goes in for service, I prefer the mechanic to take it for a thorough test drive around town. Test the brakes and the air. Take it out on the highway, but don't abuse the test.

This would also apply when taking the golf course for a test drive. Play the golf course as thoroughly and as often as necessary to determine its optimal condition, but don't race the engine past the red line. ■

LIQUID AG SYSTEMS INC.

Pompano Beach
(305) 971-0022



Ft. Myers
(813) 332-5565

For over **14** years we have been at the cutting edge of nutritional technology and TOTAL CONCEPT SERVICE, providing:

- ★ Highest quality, prescription mixed CLEAR LIQUID FERTILIZERS.
- ★ Dependable flow sensing, metering and injection systems.
- ★ Proven nutritional programs.

1-800-432-2249

GROWING CONDITIONS

On Florida's East Coast Tough On Plants

By Edith Hollander

GAINESVILLE — Stronger winds and saltier water mean fewer plants grow along Florida's Atlantic coast than along the Gulf coast.

"You can grow a lot of plants on the west coast that you can't grow on the east coast," says Sylvester Rose, an ornamental horticulturist with the Institute of Food and Agricultural Sciences (IFAS). "The salt water and strong winds are not as bad along the west coast, so the plants are less vulnerable," he said.

"You drive along the eastern coast and you find it's almost like a desert. You see the same plant over and over," Rose said. "I was interested in getting a variety of plants that could grow here."

Rose began testing plants in 1967. He uses Patrick Air Force Base and other coastal areas to test plants, trees and flowers native to Florida as well as some from around the country. Over 250 plants have been tested so far in this continuing effort to increase the number of

plants available for beachfront planting. Using different locations, Rose tries to determine the amount of exposure each plant can stand.

Salt water, salt spray and the high winds damage trees and plants, causing the leaves to look burned and the plants to defoliate if they are not salt tolerant, Rose said. Plants are observed for two years before he makes any recommendations.

Some of the plants and trees that can live along the east coast beaches are: Spanish bayonet (a yucca plant), Indian Hawthorne, Morea (an iris), the sea grape and the native palmetto.

Rose is presently testing perennials and annuals. "Certain ones, like the rose family, are quite salt tolerant," Rose said. "The cabbage family is also salt tolerant and cold hardy." So far, the blanket flower, dusty Miller, lisianthus, stock, flowering kale, calendula and strobilanthes have done well along the beach. ■

Ransomes Owners Alert

**WE'VE
GOT A
BETTER
ROLLER**

- Designed for serviceability — uses common size bearings and seals
- Fits ALL Ransomes 30 in. cutting units
- Costs LESS than O.E.M. rollers

**DOUGLAS
PRODUCTS**

1810 Hypoluxo Rd. Suite D-9 Lantana, FL 33462

RE-LUBE END CAP WITH REPLACEABLE STAINLESS STEEL WEAR SLEEVE

TWO OUTER SEALS: ONE TO KEEP DIRT OUT, ONE TO KEEP GREASE IN

TAPERED ROLLER BEARINGS

INNER SEAL

DIAL TOLL FREE
FOR ORDERS OR INFORMATION
1-800-541-2255
WAIT FOR TONE, THEN DIAL
368-4527

Tel: 305/582-6180



NOW, THE FIRST NAME
IN FUNGICIDES IS
THE LAST WORD
IN CONVENIENCE.

INTRODUCING
NEW CHIPCO®
26019 FLO.

FUNGICIDE

The easy way to stop major
turf diseases for up to
four full weeks.

Thousands of golf course superintendents have discovered one important fact. You just can't beat Chipco 26019 fungicide for controlling turf diseases.

And now you can get all the advantages of Chipco 26019 wettable powder in a convenient flowable formulation. New Chipco 26019 FLO.

Like the wettable powder, new Chipco 26019 FLO offers unsurpassed protection against major turf diseases, including Helminthosporium Leaf Spot and Melting Out, Dollar Spot, Brown Patch, Fusarium Blight, Red Thread, Fusarium Patch, plus Gray and Pink Snow Molds.

Chipco 26019 FLO also delivers the same long-lasting residual control. In fact, both Chipco 26019 formulations protect your turf for up to 28 days.

With Chipco 26019, you also get the added benefits of convenience, no phytotoxicity, pesticide compatibility, low toxicity and no corrosiveness.

Wettable Powder or new FLO, it's easy to see why Chipco 26019 is the Number 1 name in turf disease control.

Rhone-Poulenc Inc., CHIPCO
Department, P.O. Box 125,
Monmouth Junction, NJ 08852.



CHIPCO®
26019

FUNGICIDE

Please read label carefully and use only as directed. CHIPCO® is a registered trademark of Rhone-Poulenc Inc.



Suncoast Sails

By Jim Svabek, Superintendent
Bradenton Country Club

To Play Or Not To Play . . . Should Not Even Be A Question

I remember when I first stepped on a golf course. I was looking for a summer job. I had never even seen a golf course before and did not understand the game. Well, to my Father's joy, I got the job and I've been on a golf course ever since.

For awhile, the game never intrigued me at all, but the more I became involved in the maintenance of the course, the more I began to wonder why we did certain things; why did we verti-cut those beautiful greens and turn them brown on purpose and why did we cover them with dirt, so the members could complain after we had them looking so good, and so on and so on. As an employee, though, I still did not want to give up my free time to play on the course where I spent most of my day working.

After a couple of years, I had to make a decision on what I wanted to do as a career, should I stay on the golf course or look for something else. My boss, also, had an idea and at that point he asked me to be his assistant. That's when I decided to stay.

Eventually, I started to play golf. I don't really remember

why. I do remember that every time I hit the ball down the middle, it would end up in the right rough in the trees. After a few lessons from the Pro, I would hit the ball down the middle and it would end up in the left rough. I feel that my golf game has been the same for the last 20 years.

In those years, not many superintendents played golf, but what a revelation it was for me to see why we had to do all of that work to keep the course in such good condition. I don't think anyone could appreciate all that hard work without ever playing the game. There is a certain pleasure in looking out over a golf course that is in great condition and well manicured . . . but there is something missing, if you can not play it. I believe that you can not fully appreciate a course unless you play it. It is like growing the "perfect" apple and then not being able to eat it. You can not enjoy the fruit of your labor.

The obvious reason to play is, of course, to see your course the same way those who pay to play it see it. I know I see areas that I would not normally see in my daily tour of the course. It is much easier to tell the condition of my course by playing it. I experience, first hand, what everyone else sees.

I do not think that a superintendent today can be complete in his work, unless he plays the game. It is vital that he sees his course the way those who are looking for enjoyment see it. It is not how you play the game that counts, it is that you play it that's important. ■



Florida Silica Sand Co., INC.

Special
**GOLF COURSE
MIXES**

Sterilization Available

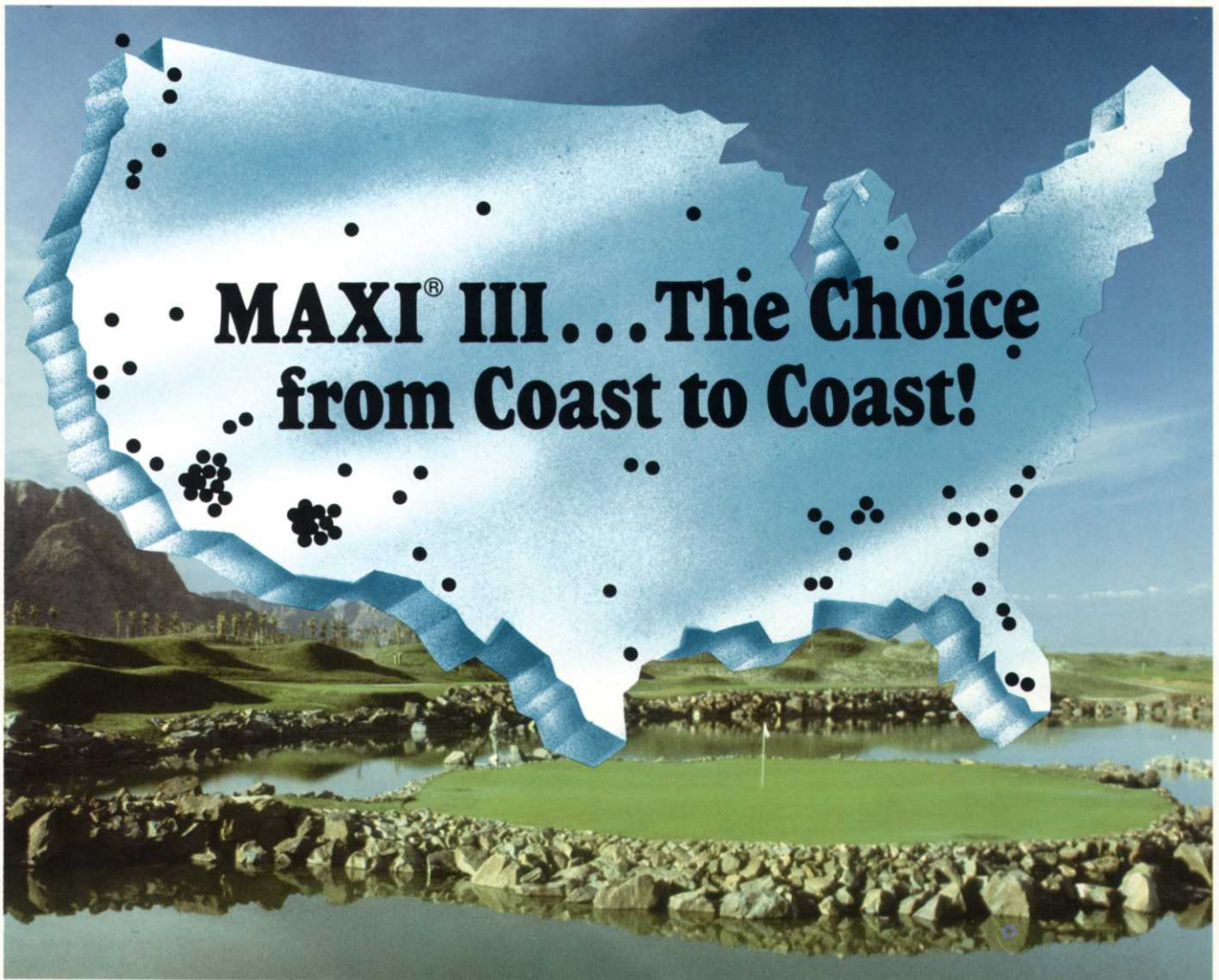
Complete Line of
**NURSERY AND
LANDSCAPE**

Materials

Dade County
949-3521

Broward County
923-8323

Since
1948



MAXI® III... The Choice from Coast to Coast!

Stadium Course, PGA West

Golf's Premier Irrigation Control System

Repeatedly the choice of the world's leading architects and superintendents, MAXI® III from Rain Bird is recognized as golf course irrigation's most exciting and versatile computerized control system.

Sophisticated. Reliable. Powerful. MAXI® III offers state-of-the-art irrigation technology. An IBM computer, too. Not to mention the ability to handle a wide range of important functions. Lighting—security—and a host of other necessary operations.

Legends in the making—the great golf courses of tomorrow are being built today. And MAXI® III is there!

Controllers. Rotors. 50 years of golf course irrigation experience.

Rain Bird — the choice from coast to coast



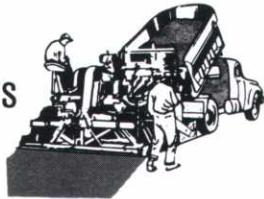
RAIN BIRD

BLACKROCK PAVING CORP.

a Haverland Company

Golf Course Paving Specialists!

NEW CART PATHS
PATCHING - OVERLAYS
CLUBHOUSE PARKING LOTS
SEALED & STRIPPED



NEW! 3 Step Asphalt Surface
Treatment to Enhance the Appearance &
Prolong the Life of Your Pavement

305-736-4081
Boynton Beach, Florida

get out of the water

Weeds grow all the time, even when
you don't have time for them.

We specialize in acuquatics. We have
the people, the equipment, the
know-how and the time to do it
right.

When we manage your water and
shoreline areas, you spend your
time on more important things. You
know that your lakes are in the best
possible hands.

*Serving golf courses and green spaces
throughout Florida.*

FLORIDA AQUATIC

Professional Lake Management
1637 N.W. 38th Avenue
Ft. Lauderdale, FL 33311
FLORIDA TOLL FREE (800) 432-1349



COMMON WEED IS A NATURAL HERBICIDE:

Could Control Weeds In In Citrus Groves, IFAS Scientist Says

By Julie Graddy

LAKE ALFRED — Lantana, a common weed found in Florida citrus groves, contains phenol-like compounds that kill other weeds, says the scientist at the Institute of Food and Agricultural Sciences (IFAS) who recently was the first to report its natural herbicide characteristics.

The discovery may offer a "Cheaper, and more ecologically sound approach to future weed control in groves," says Dr. Megh Singh, a weed scientist at the IFAS Citrus Research and Education Center in Lake Alfred. Lantana is one of several weeds that Singh is researching for its natural weed-killing abilities.

The yearly cost of weed control on hundreds of thousands of Florida acres is significant, Singh says. A grower will typically spend about \$100 a year per acre on weed control, he adds.

"Using allelochemicals from lantana and other plants could save as much as 40 percent over synthetic herbicide products," Singh says. Further research needs to be done, he adds.

Since the weed-killing compounds in lantana are easily biodegradable, they offer a more "ecologically sound" approach to weed control in groves, says Singh. Natural compounds, such as those in lantana, are also in high demand from agricultural chemists who seek them as a base for commercially produced herbicides, he adds.

Singh began researching lantana's chemical properties three years ago after noticing that ground close to lantana was nearly clean of other types of weeds.

"We surmised that lantana, through its natural growing habits, was releasing some type of compound that limits the germination and growth of other weeds," Singh says. He found that the weed-killing compounds naturally present in lantana are phenols, which are similar to synthetic-based chemicals in some herbicides.

The weed-killing compounds are released even if lantana is simply disked in. They are only potent for 4 to 6 weeks, while synthetic chemicals last up to 4-6 months, Singh says. ■

THE GRASS GAME.



It Shouldn't Be Like Rolling Dice.

We at Woodbury Chemical Company take no chances with your grass. We have the technical know-how to ensure green, healthy turf year round. We can provide horticultural programs and all the products you'll need: pesticides, fertilizers, adjuvants, seed, and more.

Why gamble? A call to Woodbury eliminates guesswork. After all, in the grass game you can't afford to play guessing games. Let Woodbury Chemical Company make you a winner.

Princeton, Florida

(305) 258-0421
Fla. Wats 800-432-3411

Boynton Beach, Florida

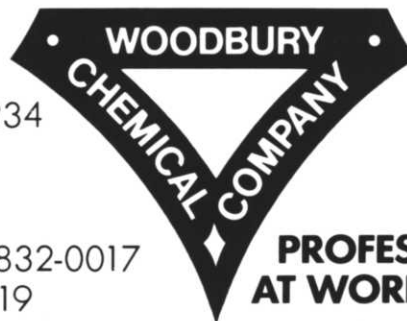
(305) 734-4441
Delray: (305) 449-4900
Deerfield: (305) 421-2393

Mt. Dora, Florida

(904) 383-2146
Fla. Wats 800-342-9234

Tampa, Florida

(813) 247-3621
Pinellas County: (813) 832-0017
Fla. Wats 800-282-2719



**PROFESSIONALS
AT WORK FOR YOU**



Lesco Releases New Irrigation Catalog

A new irrigation Products Catalog is now available from LESCO, Inc., Rocky River, Ohio.

The catalog features many new and improved items for golf course, horticulture and residential use. Included in the 40-page book is information on impact, rotary pop-up and residential sprinklers; electric, manual and quick coupling valves; controllers; backflow prevention devices; drainage equipment; pumps; pipe, wire and hose and accessories.

A new MC Plus Series Automatic Controller featured in the LESCO Irrigation Catalog is available with 8, 12, 18 or 24-station capacity. The solid-state, fully programmable microcomputer can run four independent programs concurrently.

To protect controller units, LESCO offers new and improved heavy gauge steel control-guard enclosures with locking doors to prevent vandalism and fluorescent lighting for easy nighttime programming.

Also featured in the LESCO Irrigation Catalog are improved impact drive rotary pop-up sprinklers, a new series of pop-up sprinklers for residential applications, new electric valves and drainage equipment supplies.

To receive a copy of the catalog, write: Irrigation Catalog, LESCO, Inc., P.O. Box 16915, Rocky River, Ohio 44116. ■

SELLING

By: Russell J. Bateman

Every day, we are required to sell an idea, project or ourself. Dale Carnegie's book, Five Great Rules of Selling, is excellent reference material. His method is easily grasped, but must be practiced.

The following simplified examples describe the five rules: 1) ATTENTION: "Gentlemen, we have played on an inferior #4 green for the past 20 years." 2) INTEREST: "This fall, we examined the soil profile and discovered a layer of slag 14" below the soil surface." 3) CONVICTION: "The slag was tested by the University of Maryland and was determined to be extremely acid and also contained enough salt to be detrimental to bentgrass roots." 4) DESIRE: "The fourth green has always been a eyesore to the club. We all want good greens to putt on; shouldn't we solve the problem and make the course one to be proud of?" 5) CLOSE: "This is what we must do to accomplish that goal. Let me explain..."

Try to talk in terms of real interest to your members on items such as safety, better playing conditions, faster play, less expensive in the long run, etc. Talk of ideas rather than the project itself. Use charts, slides and drawings to get your message across clearly and concisely. List all solutions with the pros and cons while guiding the reasoning process to your conclusion. Remain neutral about the issue and make certain that the cause, not the symptom, is addressed. DO NOT make exaggerated claims of great improvements resulting from the project. Remember the story of the veterinarian who acted as though every animal brought to him had a very good chance of dying; then if the animal lived, the vet was a hero, and if the animal died, he had predicted that.

CREDIT: Mid-Atlantic GCSA Newsletter

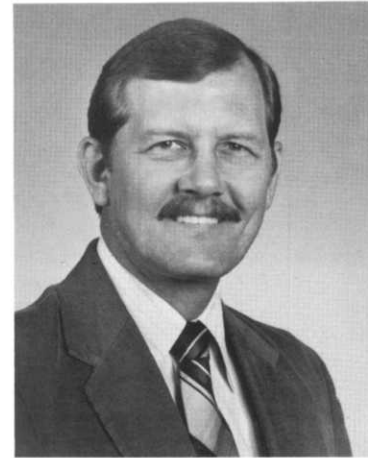
Jacobsen Names New Field Service Specialist

RACINE, WI — Fred Gieschen has been promoted to the position of Field Service Specialist for Jacobsen Division of Textron Inc., according to John Oldenburg, Manager, Customer Relations.

In this new position, Gieschen will act as a service liaison between the company, its Turf Distributors and Commercial Products Dealers, and customers.

"Strong aftermarket service support is essential," said Oldenburg. "Our full time field service professionals provide faster and stronger solutions to field problems."

For the past two years, Gieschen served as Warranty Analyst for Jacobsen. Prior to that, he was International Field Service Representative for J.I. Case Company. ■



THE "CORONARY AND ULCER CLUB" LISTS THE FOLLOWING RULES FOR MEMBERSHIP

- 1) Your job comes first. Forget everything else.
- 2) Saturdays, Sundays and holidays are fine times to be working in the office. There'll be nobody else there to bother you.
- 3) Always have your briefcase with you when not at your desk. This provides an opportunity to review all the troubles and worries of the day.
- 4) Never say "no" to a request. Always say "yes".
- 5) Accept all invitations to meetings, banquets, committees, etc.
- 6) All forms of recreation are a waste of time.
- 7) Never delegate responsibility to others; carry the entire load yourself.
- 8) If your work calls for traveling, work all day and travel at night to keep that appointment you made for eight the next morning.
- 9) No matter how many jobs you already are doing, remember you can always take on one more.

Reprinted from BITS AND PIECES