Does your golf course look more like the Black Forest?

If it does, then you need the powerful Turf Vac for vacuuming both fairways and pavement. Both exclusive models vacuum up wet or dry clippings, leaves, trash—even cans and broken glass—in paths as wide as 5’ or 10’. And both machines are low maintenance and have no brushes to clean or wear out. In addition, each one has an adjustable scoop with a rubber apron to eliminate turf damage.

And for vacuuming up dirt cores left behind on your greens in the aerification process, you need the Turf Vac Coremaster. It also vacuums up leaves and debris quickly and completely. It features a powerful 16 horsepower engine and its hopper holds a total of 1 1/2 cubic yards of dirt cores. It is low maintenance with an adjustable scoop and a rubber skirt on the bottom to prevent scuffing.

So if your fairways and greens can’t see the forest for the trees, you need the Turf Vac and the Coremaster. Because clean and green looks a lot better than black.
**CONTROLLING MOLE CRICKETS**

Mole crickets are the number one turf pest problem in Florida. They can actually kill the turf if not controlled in time.

Research at the University of Florida, Institute of Food and Agricultural Sciences (IFAS) shows mole crickets prefer to run through bare areas rather than through grass. The grass most often damaged is bahia, but they can damage or kill any of our grasses.

The most noticeable signs of mole cricket activity are fresh runs and piles of soil in the turf areas. Walking across infested areas, the turf may feel soft and spongy.

Since mole crickets are not native to the United States, controlling them is very difficult. There are no natural parasites and few effective predators to help reduce the population (75 armadillos or 125 skunks per acre may offer potential control, but most people do not like their damage or smell).

We have to use pesticides as our most effective weapon against this pest. Proper timing of the pesticide applications can make control easier and more effective.

To properly time our pesticide applications for control of mole crickets, we need to understand the life cycle of the pest. There is only one generation of mole crickets per year in north Florida and there can be two generations in central and southern Florida. They spend their whole life in the soil except for night time feeding on the surface and in the spring when mating and dispersal flights occur.

Mating and dispersal flights are occurring or will soon be occurring (depending on the area of the state). During these night time flights, these insects are attracted to lights. Lighted turf areas (even those lighted by street lights) are more likely to have mole cricket problems than those in dark areas.

Male mole crickets die after mating with a female. Most female mole crickets lay their eggs in late April and May in our area and then die. Some of the females will live and lay their eggs in late summer or early fall, but they are the exception, not the rule.

The eggs begin hatching in approximately two weeks to produce the next generation of this pest. We can reduce their damage by killing most of the young insects as they hatch.

The most effective control program for mole crickets is to apply Oftanol during May or early June. Oftanol may be commercially applied as a liquid or 5 percent granular material or as a 1.5 percent granular by homeowners.

Regardless of who applies the Oftanol, it should be watered into the soil immediately after applying it with approximately one-half inch of water.

Research by IFAS entomologists indicated a May application of Oftanol gave season long control of this pest under ideal conditions. Heavy rainfall will leach the material down into the soil and shorten the residual control offered.

If you are unable to apply Oftanol in May or early June, plan to use an alternative control program. There is only a six to eight week period when Oftanol gives us satisfactory control of this pest.

Alternative control programs include using baits during the summer and fall or contact materials almost any time during the year.

Mole cricket baits are most effective when the insects are small and therefore should be applied during July, August, and September. Baits may offer some control at other times of the year, but the most effective control is during this time. For best control, apply baits late in the afternoon when no rain is expected and no water should be applied.

The mole crickets come to the soil surface and feed on the material at night. Watering the bait into the soil reduces its effectiveness.

Once mole crickets have reached adult size in late summer or early fall, contact materials are the most effective control available. Mocap and Sarolex are the most effective contact materials currently on the market. These materials must be applied to home grounds by a commercial company. Both materials should be watered into soil with approximately one-half inch of water to give effective control.

Dr. Don Short, Extension Entomologist, has received many contacts concerning the use of Orthene for mole cricket control. He says the reports indicate it may be effective for short term control if applied at 3 to 5 pounds of active ingredient per acre. It should be applied to soil that is moist from rainfall or irrigation late in the afternoon. Orthene has a very short residual and should be used in combination with Oftanol in your control program.

With any of our contact materials (Oftanol, Mocap, Sarolex, or Orthene), we can increase the effectiveness of the pesticide if the soil is moist before application of the pesticide. The pesticides will penetrate into the soil better if it is moist and it is easier to water in after the application.

Remember, with any pesticide, read the entire label before applying the material and follow all label directions.

IFAS researchers are looking at several parasites that have been collected in South America where mole crickets are native. These include some nematodes and fungus diseases which attack mole crickets. We all should realize that our pesticides are just helping us buy some time until we can find effective, economical biological control of this pest.

*from Florida Turf Digest, June 1986*
We, the People of DeBRA...

We Keep Our Promises. Unlike some companies which have just recently entered the turf and industrial equipment field, DeBRA keeps its promises. When DeBRA promises to deliver equipment to you on a promised date at a promised time, we deliver.

Because we know you rely on the equipment you ordered to be there when you expect it. And DeBRA delivers.

We Give Service. DeBRA services what it sells. We have over $1 million in parts inventory at all times. Which means we have the part you need, when you need it, thus eliminating downtime which can cost you money. And our repair service is done right the first time. Including service on-the-job when you need it.

We Produce. When you have a question, the people at DeBRA have the answers. Each and every piece of equipment we sell. So you’ll get answers on-the-spot from people who know.

We’ve Been Around. People like you, all across Florida, have been relying on DeBRA’s dependability for over 26 years. That’s why DeBRA is the most trusted and relied upon name for turf and industrial equipment you’ll find anywhere.

When you need equipment, and you’re looking for the company that keeps its promises, you need DeBRA. And our sister company, Turf & Industrial Equipment, Inc., lives by the same rules as DeBRA as it services its customers in northern Florida. Because We, the People of DeBRA, deliver.

The People Who Care.
AN EXPERT SPEAKS:
A Talk With A
Horticulture Extension Agent

By: Cheryl Jones

Thomas Teets, a Horticulture Extension Agent with the Palm Beach County Extension Office of the University of Florida graciously gave up some time during his busy, busy day to talk about some of the problems faced by area golf course superintendents, and what is being done to try to solve them.

Q. What are the worst problems facing area golf courses?

A. Pine Tree Decline is probably the most serious problem we have on golf courses right now. It's caused by a couple of different things. One is now construction areas. What happens is heavy equipment runs over the roots of the pine trees. It compacts the soil badly. Pine trees have a very weak root system. If you do any compacting to the roots, you damage them badly, and the pine trees will either decline slowly, or the Pine Bark Beetles will attack and it will die quite rapidly. We'll get back to Pine Bark Beetles.

Q. Does a golf course encourage shallow rooting?

A. Excessive watering definitely causes shallow rooting because there's no real need for the tree to have really deep roots, because they have all that water constantly being put-on. High fertilization, particularly high nitrogen fertilizer, also is detrimental to the root system. It's a hard situation when the grass needs one thing and the tree needs something totally different.

Q. Is there any way around it?

A. What we're recommending is if you have a tree that's just starting to yellow, and it hasn't progressed too far, to apply sulphur around it every two or three months and stop watering the area. Concentrate the water on the fairways, tees, and greens, and in the rough where the pine trees are — just don't water it. Let the pine needles fall off and decompose on their own. Some golf courses have even gotten to the point where they just kill off those areas. They spray Round-Up to kill the grass and let the area go back to a natural state. The best thing you can do for a pine tree is NOTHING — don't water it don't fertilize it — maybe apply a little sulphur to it.

Q. Driving out towards Indiantown, we saw pine trees yellowing nowhere near golf courses and T.L.C. Why?

A. In those situations it's probably Pine Bark Beetles. The only thing you can really use if you catch a tree that's just about to get it is Lindane; it MIGHT help. You have to be very careful to spray up and down the entire tree and all the branches. It's a hit-and-miss proposition, and very expensive. But if it's a tree you've got to save — a backdrop to a green, for instance — you've almost got to do that.

Q. How long has this problem been around?

A. It's been going on for at least five or six years. But some golf courses are just getting old enough to notice it because it's a slow process. It usually shows up around the edges of the fairways first and progresses outward.

Q. What's another problem golf courses are faced with?

A. Lethal yellowing is a problem that we've had for years. The majority of palms that have been really
NOW YOU'VE GOT TWO CONVENIENT WAYS TO APPLY THE NUMBER 1 NAME IN TURF HERBICIDES.

With Chipco® Ronstar® G and new Chipco Ronstar WP, problem weeds never see the light of day.

Golf course superintendents have made Chipco® Ronstar® herbicide the product of choice for pre-emergence weed control. And rightly so.

Just one application of Chipco Ronstar provides season-long control of 25 tough broadleaf and grassy weeds. Without the root pruning or leaching you get with other turf herbicides.

Plus, Chipco Ronstar still ranks as the Number 1 way to control stubborn crabgrass and goosegrass. Test results prove it.

Goosegrass control: 100-150 days after application.

<table>
<thead>
<tr>
<th>Herbicide</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balan*</td>
<td>61%</td>
</tr>
<tr>
<td>Betasan*</td>
<td>37%</td>
</tr>
<tr>
<td>Dacthal*</td>
<td>45%</td>
</tr>
</tbody>
</table>

Summary of 9 years of testing conducted by University Experiment Station and Rhone-Poulenc personnel.

And now, Chipco offers you the choice of easy-to-spread Chipco Ronstar G granules or easy-to-spray Chipco Ronstar WP wettable powder.

So start the season with Chipco Ronstar G or new Chipco Ronstar WP—the best way to keep weeds out of sight and out of mind.

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

CHIPCO® and RONSTAR® are registered trademarks of Rhone-Poulenc Inc.

*Balan is a registered trademark of Elanco.

*Betasan is a registered trademark of Stauffer Chemical Co.

*Dacthal is a registered trademark of SDS Biotech.
susceptible to it have been wiped out. There's still some around that haven't gotten it yet. The most susceptible were the Jamaican Tall Coconuts, and they're pretty well wiped out. What we recommend now is if golf courses do put coconut trees in, to use the Malayan Dwarfs, preferably the green variety. A new hybrid called Maypan is a cross between a Malayan Dwarf and a Panama Tall. It's a good tree — a more robust tree with good hybrid vigor. It's a little higher in stature than the Malayan Dwarf.

Another tree that's susceptible to lethal yellowing, and is still being planted is the Christmas Palm. It's fairly subtle when it dies — not a bright yellow like the Jamaican Tall; it just loses lower fronds until all you've got left is one spear sticking up. What we recommend that people replace these with is a Solitaire Palm. It grows a little bit taller, but is basically the same stature.

Q. Can you give me any background on lethal yellowing?

A. Worms were extraordinarily bad this past year. . . . Loopers, Army Worms, Web Worms . . . any kind of caterpillar was bad this year. The reason they were so bad was it was warm and wet for such a long period of time, creating perfect conditions for them to reproduce. If golf courses sprayed, it rained and the spray got washed off. It was almost a losing proposition to try to control them. About the best thing to spray for them is BACILLUS THURINGIENCIS, contained in DIPEL and THURICIDE. It's a biological insecticide just for worms. Birds are about the only natural predator worms have, and this year they just couldn't come close to controlling them.

Q. How accessible is the Extension Agent to the golf course superintendent?

A. Very accessible — all they have to do is call the office. Our service is free. Aside from the 150 or so golf courses in Palm Beach County, we also field questions from homeowners. I also do the Master Gardener Training, a 50 hour horticultural course equivalent to a college horticulture class. The Parks Department falls within my responsibilities, from trees to ballfields, inspections and advice. There's one other urban horticulturist in the Extension Office (at the time of this interview) with a third hired to start working soon (by publication). The Palm Beach County office is open from 8:30 AM until 5:00 PM, five days a week, for any one in need of our services.
We work at ground level... so you can play on top!

The fact is, Central Florida Turf is working hard to provide you with superior workmanship in construction of new golf facilities, irrigation with all turf installations or renovation of existing golf courses ... and all at a competitive price!

Registered dealer for: Warren's® TerraCover Polyester Geotextile Ground Blanket: an alternative to annual resodding.

Jeff Harstine
President/Vice President

Rodney Davis
Secretary/Treasurer

Dennis Crews
Sales Manager

Central Florida Turf, Inc.
Specialists in Bermuda Grass
47 Lake Damon Dr., Avon Park, FL 33825
Telephone: (813) 452-2215
The installation of the MAXI® III System at Meadowbrook Golf Club in Gainesville, Fla. marks the shipment of the 100th unit of Rain Bird's state-of-the-art golf irrigation control system. The Meadowbrook system, which recently was put into operation, controls irrigation of the course's 86 acres.

"We wanted to use the minimum amount of water on the course, and the only way we could accomplish this was to use a MAXI System," explains Chuck Garrett of Florida Irrigation Supply, the Rain Bird Golf Distributor that supplied the irrigation equipment for the job. "Water use is becoming a critical issue in Florida so we wanted to use the absolute minimum amount of it, yet still maintain the course in beautiful, tournament-quality condition."

In addition to the MAXI, which runs 22 satellites on the golf course, the system has 400 pressure regulated Rain Bird rotors to keep the layout green and lush all year long. Steve Smyers, the course's golf architect, has designed a very challenging, championship caliber golf course. Superintendent Bob Baidy oversees maintenance of the course.

Meadowbrook Golf Club, which encompasses 155 acres, eventually will comprise a club house with pro shop and approximately 500 condominium units in addition to the golf course. The MAXI System also will be used to irrigate the condominium and common areas. Charles Hippleheuser of Irrigation Construction Management designed the golf course irrigation system. Moore Golf, one of the nation's top golf course builders, served as the project's contractor.

The sophisticated MAXI system permits scheduling of stations on a satellite stand-by module to operate in any sequence, at any time. "The MAXI was selected for the job because it offers optimum flexibility in programming watering schedules," Smyers explains. "We also had to take into consideration water and power usage as well as labor. I knew the MAXI was the right control system for the job."

The MAXI III uses an IBM Personal Computer to program and execute watering schedules. Additionally, the system can be used to operate a number of other necessary functions such as lighting and security. The control system, which is easy to program and operate, can reduce water and power consumption by up to 40 percent.

Other MAXI features include: no-delay repeats, controller or system water budgeting, variable repeats, telecommunications and sensor capabilities and moisture level indication. The system also can be programmed for special functions such as cooling, syringing and fertilization.
FROM TEE TO GREEN

ACCESSORIES FROM STANDARD GOLF INCLUDE:

- BALL RACKS
- BALL WASHERS
- BENCHES (WOOD & METAL)
- CLUB WASHER
- CHAIN
- DRAG BRUSH
- FAIRWAY MARKERS
- FLAGS
- HAZARD MARKERS
- HOLE CUTTERS
- Kooler Aid Water Container
- LITTER CADDIES
- FLAG STICKS
- PRACTICE GREEN MARKERS
- RAKES
- SIGNS
- SPIKE KLEENERS
- TEE MARKERS
- TEE TOWELS
- TEE CONSOLES
- TURF REPAIRERS
- AND MORE

Contact your Standard Distributor.
THE STANDARD OF EXCELLENCE

STANDARD GOLF Pro-Line®

Standard Golf Company
Cedar Falls, Iowa 50613
(319) 266-2638
GAINESVILLE — A recent increase in the spread of rabies in Florida wildlife poses a threat to public health, and efforts to control the disease in wildlife have been marginally effective at best, according to a scientist at the Institute of Food and Agricultural Sciences (IFAS) College of Veterinary Medicine.

Michael Burridge, chairman of the IFAS department of infectious diseases reports that laboratory-confirmed cases of rabies in Florida wildlife increased by over 150 percent during the last decade.

"Over 85 percent of all laboratory-confirmed cases of rabies in the state are seen in wild animals," says Burridge. "With Florida's rapid land development, more and more people and pets are placed in the midst of potentially rabid wild animals. In almost every case where a pet is infected with rabies, the source of virus was a wild animal. In the U.S., rabies virus is rarely spread between domestic animals," he says.

Attempts to control rabies in wildlife have centered on reduction of their populations by shooting, poisoning or trapping, and have met with marginal success. Research, notably in France and Canada, is exploring the potential of immunizing free-ranging wildlife, as an alternative to population reduction.

Although there have been no reported human cases of rabies in Florida since 1948, the virus is still considered a threat to public health. Each year in the U.S. 20,000 to 30,000 persons are treated for exposure to rabies, according to Morbidity and Mortality Weekly Report. Burridge says that exposure typically results from animal bites, although handling sick wild or domestic animals can also result in exposure.

The risk of an exposed person developing rabies depends on many factors, such as infected animal's species or the location and severity of the bite. For example, rabid foxes have a higher concentration of the virus in their saliva than dogs, skunks grasp hold of their victim more tenaciously than dogs and a head bite is potentially more dangerous than a bite on a leg or arm.

In Florida, raccoons have contributed to this growing threat to animal and public health more than other species. "Raccoons in particular have adapted well to the state’s increasingly urban environment," he says. "77 percent of all rabies cases in Florida in 1985 were seen in raccoons.

"Available data suggests that about 20 percent of the state's raccoon population has been infected with rabies," — Burridge says, "Yet, raccoons are not as susceptible to rabies infection as some other species, such as cattle and foxes."