

Controlling Insects and Nematodes - Products and Programs

By Joel Jackson, CGCS

We have to pick Hands-On topics a year in advance so we can publish and broadcast our media kits and editorial plans to our advertisers. They like to target specific products and services to meet your needs relative to the management theme of the issue. So it was at least a year ago we came up with this insect-control topic.

It had been several years since we discussed this aspect of turf management, and the EPA has been running roughshod over the organophosphate family of insecticides for a couple of years, thanks to the Food Quality Protection Act. We thought it might be time to check on how insect control was going in the new millennium. Several trends were evident from the interviews I did at the Harrell's Turf Academy in Pine Mountain, Ga. I had a captive audience of superintendents and suppliers. Here's what they had to say:

General Trends

Insect damage on turf is not a major concern in today's management programs. This is primarily due to the advances in product technology and more thorough monitoring of threshold levels.

Routine spraying of insecticides is rare and applications for worm control are more of a last resort than an automatic preventive.

The products of choice for worm control tend to be the old standbys, with Orthene and its acephate clones leading the way. The pyrethroids are used sparingly if at all. Most are waiting for more peer feedback on successes.

Thanks to Chipco Choice, mole crickets are not the turf devastator they once were. While you still have to pay attention to infestation pressure, most people are more concerned with when, where and how often to apply the product to stretch the budget dollars.

Grub damage is problematic and some cover their bases by alternating Merit with Chipco Choice. Known areas are treated with Merit, but most did not feel they had any significant grub problems.

Nematodes remain a constant threat to weaken turf especially during stressful conditions. Many saw good results from Curfew applications during the recent drought. As NemaCur fades away, we await Dr. Crow's results of testing on alternative products.

Specific comments on products, programs and pests

Susan Leisure, Dow AgroSciences: "One of our new products for worm control that works both on turf and ornamentals is Conserve, an environmentally friendly product. The active ingredient is spinosid and is naturally occurring. The product works by contact and ingestion and has a 14-day residual. Some superintendents are using it in rotation with their regular products. Mach 2 is a pyrethroid product that works to control grubs and surface feeders."

Joe Conoly, Bayer Environmental Crop Sciences: "Sevin sales are up for worm control, and of course many folks use the Merit program and time their applications to control grubs as well as the hatch of mole cricket nymphs." I asked Joe about the use of Chipco Choice in relation to its cost and course budgets. Conoly said, "Acreages are up for the year. We are finding medium and lower budget courses can't afford not to use Choice to get a handle on their mole-cricket problems and stay competitive. Top Choice gives courses the opportunity to custom apply to only specific areas of concern so they can manage their budget dollars accordingly."

Dick Naccarato, Naples Beach Club: "Costs of materials are a concern for us. I use Top Choice to treat the perennial trouble spots. The crickets always seem to come back to the same spots each year due to soil type, moisture, whatever. I prefer the bagged material so I don't have to take a chance on turf damage by the slit injection equipment. I have also tried Talstar sparged on fertilizer. The products are getting better and more effective and so the insect pressure and damage are less. We have learned to manage the pest and the pesticide much better to avoid a lot of repeat applications."

Jim Schilling, Bonita Bay East: "Frankly, I just don't have a really big insect problem. One reason may be the rock layer just a few inches down. It's not a bug-friendly environment. We did slit inject Choice over the entire course and where we either missed or didn't treat, we got hammered. I followed up on those areas with a bait called Snare and applied some Top Choice. I had mixed results with 20 acres of Curfew treatment. Again the rock so close to the surface may have been a problem. Our worm problems are small. We monitor the damage and selectively treat as needed. Usually we grow out of the problem before we need to spray. When we do spray we tend to use Orthene."

Ken Arsenault, Golf Club of Jacksonville: "I've seen more worm problems this year than ever. Maybe it was the wet summer; they sure came out after every rain and usually on the same spots on the same greens. We tend to monitor damage first to see if it is widespread and causing a real problem. When they were as active as they were this year, we generally had to spray all greens if the damage was exceeding our threshold tolerances. We rely on acephate to control any worm outbreaks. I'd like to see more product evaluations on the new products. Right now I rely on what I know works. I learn from my peers and my mentors. The grapevine and word of mouth tell me what's working."

As far as mole crickets go, we are into our third year since our last Chipco Choice application, and we think we have been lucky to get that much good control out of the product. Next year we treat again. We have used Merit for some problem areas not covered by the Choice."

Bill Alford, Golden Eagle C.C.: "I don't have a lot of insect problems. If worms pose a problem I'll chase them with Orthene, Sevin and Talstar. The mole crickets we have don't like the heavy clay soils, which we do have a lot of. Where they are active on fairways and tee tops, we have applied Chipco Choice. We treated two years in a row and the third year we just monitored for hot spots and treated as needed with Top Choice. In the roughs where the slit injection isn't practical (tree roots, slopes etc) we have used the new slow release, coated Orthene product called Precise."

Alan Puckett, The Club at Eaglebrooke: "My biggest insect problem when I got here was that mole crickets were out of control. We used Chipco Choice to get them under control and the course cleaned up well. We treated the fairways the last two years and next year we will skip them and do the roughs. We'll use Top Choice on the slopes. I want to learn more about the new coated Orthene product, Precise, and see how it might fit into our program."

"Worms aren't a big problem. If we see the signs that they are active, we monitor them closely and, if looks like we need to spray, we hold off until the end of the week so we don't have any fire drills over the weekend when the course is busiest. We use a combination of Orthene and Dursban usually. I have tried some DeltaGard, but I really haven't messed around with the new products that much. One thing we do when we spray is to make sure we start and stop the spraying into the collar since the worms will inhabit the tall grass around the green."

"Nematodes are my next concern. I have used NemaCur on three of our fairways for chronically weak areas that don't outgrow the damage. Next year I think I'm going to have to treat the greens. The pressure is building and they aren't reacting as well to cultural practices. I am going to use some Neotec, which Steve Ciardullo has been successful with over at Mountain Lake. We've got to find something that works on 'todes with NemaCur phasing out."

Frost in Florida?

YOU BET! AND YOU'D BETTER BE ABLE TO EXPLAIN FROST DAMAGE TO YOUR GOLFERS.

Editor's Note: It's that time of year. Here is some general information on the potential for turf damage when the course is having a frosty morning and comments by fellow superintendents on how they handle the necessary delays at their courses. This information can be accessed at www.gcsaa.org.

How can a footprint be a killer?

When it's a footprint made on a putting surface that's covered with frost. It's hard to believe that simply walking across a golf green covered with frost can cause so much damage, but the proof will be there in a few days as the turfgrass dies and leaves a trail of brown footprints. That's why most courses will delay starting times until the frost has melted. And it's also why golfers who appreciate a quality putting surface will be patient during frost delays.

Why does frost cause problems?

Greens are fragile. The putting sur-

face, or green, is an extremely fragile environment that must be managed carefully and professionally. Remember that every green is a collection of millions of individual grass plants, each of which is a delicate living thing. Obviously, Mother Nature never meant for these plants to be maintained at 3/16 or even 1/8 of an inch for prolonged periods. This stress makes greens constantly vulnerable to attacks from insects, disease, heat, drought, cold - and frost.

Frost is essentially frozen dew. It can form when the temperature (or wind chill) is near or below the freezing point. The ice crystals that form on the outside of the plant can also harden or even freeze the cell structure of the plant. When frosted, the normally resilient plant cells become brittle and are easily crushed. When the cell membranes are damaged, the plant loses its ability to function normally. It's not much different from cracking an egg. Once the shell is broken, you can't put it back together.

The proof is in the prints

Although you won't see any immediate damage if you walk on frosted turf, the proof will emerge within 48 to 72 hours as the leaves die and turn brown. And, since just one foursome can leave several hundred footprints on each green, the damage can be very extensive.

Thanks for understanding

The damage isn't just unsightly - putting quality will also be reduced until repairs are made. Those repairs are expensive and, in some cases, the green may have to be kept out of play for days or weeks until the new turfgrass is established. A short delay while the frost melts can preserve the quality of the greens, prevent needless repairs and may even save you a few strokes the next time you play.

Super Tips - Avoiding a frosty reception

Frost delays may be among the most contentious issues a superintendent will encounter during late winter and early spring. Temporarily closing the course until frost subsides can prevent unnecessary damage to turf, but it can also anger golfers eager to tee it up and club professionals anx-

THE HAVERLAND COMPANIES

HAVERLAND BLACKROCK CORPORATION

The innovators in Golf Course Construction We can rebuild & recontour your greens and have them back in play immediately

INSTALLATION:



TEES, GREENS, FAIRWAYS & ATHLETIC FACILITIES

CONSTRUCTION SERVICES:

USGA GREENS CONSTRUCTION
LASER GRADING, EARTHWORK,
BERMUDA SOD INSTALLATION,
SHAPING, DRAINAGE, CLAY WORK,
BUNKERWORK, ETC.

HAVERLAND TURF FARMS INC

TIFDWARF, TIFWAY, & "BABY"
BERMUDA

SSCA CERTIFIED BERMUDA

GRASS GROWERS

Come visit our Farm in Indiantown
Florida

THE HOME OF

BIG ROLL
Slab Sod & Sprigs **SOD**

9819 STATE ROAD 7 * BOYNTON BEACH FL * 33437

(561) 369-7994 FAX (561) 364-1118

KEYWORD @ BLACKROCKCORP.COM

E-MAIL: BLACKROCKCORP@AOL.COM

ious to give their cash registers an early-season workout. Finding the best way to communicate the benefits of these frost delays to both golfers and other golf course personnel was the topic of some recent postings on the discussion forum in the members-only portion of this site.

We are lucky enough to have a pro who understands that golfers cannot get on the course until we give them the go-ahead. We use radios to contact the pro with the information he needs. I have also seen signs describing the dangers of playing on frost posted in the pro shop and near the practice green or first tee. . . Enforcement of the frost policy is the superintendent's job, and educating and communicating with golfers and the pro shop staff is an important part of our job.

*Robert Wright
Assistant Superintendent
Tokatee GC, Blue River, Ore.
6-year GCSAA member*

Each year I post a message in the club newsletter about frost and how it impacts the turf and the golfer. This notice is also posted in the locker rooms. I have a personal meeting with the pro shop and switchboard staff to explain the policy, the rationale and the procedures for making the calls. Either I or my assistants go to the point position, which may be the first tee or the pro shop to answer questions from each and every golfer. This eliminates miscommunication and gives us a chance to interface with the golfers.

*Bruce R. Williams, CGCS
Los Angeles CC, Los Angeles
22-year GCSAA member*

One thing that I have tried is to build communication between the superintendents and the golf pros. I had the opportunity to be an instructor at a golf school, teaching golf-course management. I have seen a tremendous change in the level of respect due to this educating.

*Thomas Trammell, CGCS
Hawks Nest GC, Vero Beach, Fla.
11-year GCSAA member*

Wake Up Your Turf



with **GreenEdge**[®]

Liquid GreenEdge[®] provides a complete nutrient package with an added kick of micronutrients, seaweed extract and humic acids.

Give your turf a fresh start with GreenEdge[®] organic blend!



GreenEdge[®]

GreenTechnologies, Inc.

Call toll free 877-GREEN30 for product and distributor information or visit us at www.green-edge.com.

**Agronomically Superior Environmentally Sound
Technologically Advanced**

Tifton Physical Soil Testing Laboratory, Inc.

Accredited by the American Association for Laboratory Accreditation (A2LA)

Specializing in:

- Testing All Materials for USGA Golf Green Construction.
- Developing Putting Green Rootzone Mixtures that meet USGA Specifications.
- Recommending Topdressing and Bunker (Trap) Sands that meet USGA Specifications.
- Developing Sportsturf Rootzone Mixes with Optimum Physical Properties for Athletic Fields.

1412 Murray Avenue
Tifton, Georgia 31794



www.tiftonsoillab.com

T. Powell Gaines
(229) 382-7292



Scenes of winter in New England? How about late winter early-early spring in Orlando. Granted these photos of Disney's Osprey Ridge GC were taken in March 1992, but frosts are a reality to be dealt with every year. Photo by Joel Jackson

GCSAA Web note

Visit the "For Your Golfers" section for information you can post on your bulletin board on frost delays.

I make sure that I or someone from my staff is around the clubhouse to keep an eye on the golfers and to address any questions that may be asked about the delay. I also make it a point to inform the pro shop staff as to why we have a delay and also point out the damage that can be

done. Golfers are always going to be impatient. The best thing to do is to be there to teach them why certain situations happen. I have found the more golfers know about maintenance, the more they appreciate the conditions they are given and the more tolerant they are when conditions aren't that great.

*Steve Cronin, superintendent
Pinecrest GC, Holliston, Mass.
5-year GCSAA member*

Using water-soluble material to create a dry environment for pvc cement
Forget the Bread

By Dale Walters, CGCS

Every once in awhile we all have an epiphany. A light bulb moment. A slap on the forehead - why didn't I think of this idea sooner? An idea that we feel might be original, brilliant, astounding, revolutionizing and ultimately really useful to our industry and to others.

I recently had such a thought. In July I had a 3-inch pipe line that was leaking at a tee fitting. After valving off the area, I cut the pipe and waited for the line to drain, and I waited, pulled some weeds, waited, wrote a To-Do list, waited, then I used a sump pump to remove the draining water flow. The drainage flow continued into a second day. I wanted to use pipe cleaner and pvc cement for the replacement fittings. But with the continuous flow I had to wait until it ceased to make a dry repair.

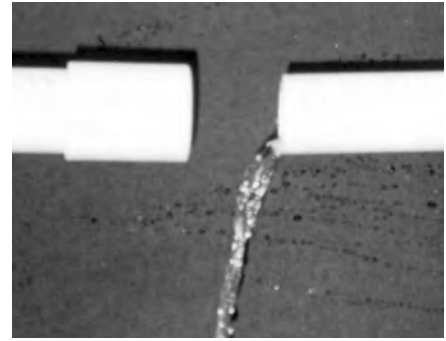
In the past, I have used bread to block the

flow but there were nearby sprinklers and I have seen them clog up from the bread. Then the heavens parted and an idea fell out of the sky. After all, I had plenty of time to think while waiting for the flow to stop. So, it was at this time that I came up with the idea of using water-soluble material to stop the flow and give me time to make a dry situation for the pvc cement.

For several years, I have been using acephate (Orthene) in a water-soluble bag. I thought about the timing it takes for the bag to break down and if I could use a similar material it would be enough time to make the repair. Using a water-soluble material would mean I would not need to be concerned about the pipe lines being clogged after the system is pressurized.

I located a distributor of water-soluble materials that are being used primarily in the medical field. After a visit with the distributor, I was given several types of product to play with. I ran several experiments in the shop to figure out which product would work best in the field.

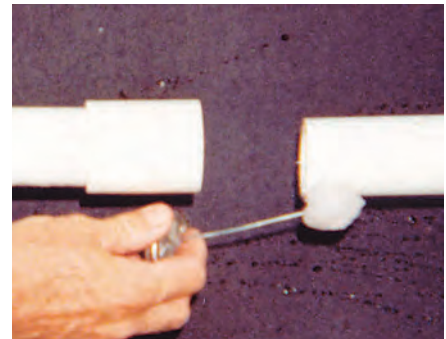
Fortunately (and unfortunately) I had several irrigation leaks shortly after receiving the material. I had one 8-inch, one 6-inch, one 4-inch, one 3-inch,



Slowly draining irrigation lines can hold up repairs to leaks at critical times.



Insert water-soluble material into pipe to block flow. The material will dissolve completely and not plug up sprinklers.



Have all fittings and materials ready-to-go. The temporary plug will provide adequate time to make a pvc cement repair.

and two 2-inch pipe leaks. Instant field testing! In each case I was successful in using the water-soluble material to stop the drainage flow which allowed me the opportunity to make the repair before the flow stopped.

The bruises on my forehead from my "Why Didn't I Think Of This Sooner" experience faded, and in September, I applied for and received a provisional patent for the use of water-soluble material to stop a flow in a pipe line. Presently, I am seeking how to market the material so that others can benefit from the time-saving method of making pvc repairs.

Editor's note: Dale submitted his innovation for irrigation repairs while he was still a superintendent at the Royal Palm C.C. in Naples. This isn't a plug for a Lesco product, but it might be some day. For current contact information, see the inside cover. Good luck, Dale!.

Junior Tips Photo Gallery

Darren J. Davis Turf Time

If you have read any of my Florida Green "Super Tip" columns, you are aware that I am strong believer of the old saying that imitation is the sincerest form of flattery. With very few exceptions, I have brought home a tip that could potentially help my operation from every golf course and superintendent I have been fortunate enough to visit in my travels.

In looking for a tip for this issue, I realized I have numerous "junior super tips that I have not written about simply because they were smaller in scale and would require minimal text to explain. Therefore, as another often-used cliché goes, "A picture is worth a thousand words." Here are some "junior super tips" that are essentially self explanatory.

Tool Time



Hanging around: Need more room in your facility, but have fertilizer spreaders taking up valuable floor space? At Reynolds Plantation in Georgia a 2 by 8 plank was anchored to the concrete wall and steel hooks were screwed into the full depth of the wood, allowing a quick, easy and inexpensive solution



One man's trash is another man's treasure: Instead of trashing some old tire rims, at Discovery Bay Golf Club in Hong Kong, these would-be discarded tire rims were cut in half with a torch and mounted on a wall to serve as one-inch hose racks.



Nature's best filter: We have been told over and over by scientists, nature's best filter to protect our ground water is turfgrass. At the Thai Country Club in Thailand, the compound of the golf course operations facility is constructed of pavers that allowed a stand of paspalum to be established in the voids of the block, therefore, filtering any potential pollutants.



Making the sell: Want a new grass variety but can't get the powers-that-be to venture to a nursery or an off-site location? At the Hong Kong Golf Club in Hong Kong, a multi-plot test area was established next to the driving range and labeled with the name of the turfgrass varieties so it can be viewed when it is convenient for the decision makers.

Tom Burrows, Consulting
Agronomist/Turfgrass Specialist
Independent Consulting using
"Brookside Laboratory"

Greens Reconstruction

- ◆ Soil Physical Analysis
- ◆ USGA Approved Testing
- ◆ Analytical Service
- ◆ Recommendations
- ◆ Specifications for Contractor Bidding

Soil Testing

- ◆ Greens, Tees, Fairways
- ◆ Analytical Report and Soil Fertility Recommendations

Water Testing

- ◆ Report & Recommendations

In the business 40 years

Jensen Beach, Florida
561-692-1221 cell: 561-485-3776


Lake Fountains
& A • E • R • A • T • I • O • N INC.

Offering a HUGE variety of floating fountains and bottom-diffuser aeration systems at factory-discounted prices! Installation and service available throughout Florida. Spray heights and patterns from 3' to over 60'. Excellent quality construction, many lighting options, deluxe control centers and excellent warranty.



Call us now for a SAME DAY discounted quote and a FREE CATALOG
1-800-353-5253
www.lakefountains.com