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BENHAM"S BEAT

Hunting for This Year's Column in Last Year's Magazine Doesn't Work!

By Don Benham

I called Joel to ask why my beautifully written column wasn't in the Winter issue of *Florida Green*. Joel said, "What are you talking about. It's on page 40!" I called him back a couple of days later and said I couldn't find it. Joel wanted to know what issue I was reading, and I responded Winter 2001. He then suggested that I read Winter 2002.

Joel is still laughing.

I was back-reading several publications as I find that, on second reading, I discover articles that I need to be refreshed on. Old Hickory Golf and Country Club in Ft. Myers with superintendent John Stach was the featured club in the Winter 2001 issue with great photos and featured article that covered their environmental practices. In the same issue was an article about restoring bluebirds to the Everglades. Eight golf courses had volunteered their courses to participate in this program.

In the February 2002 issue of *Golf Course Management*, four Florida superintendents received the 2001 ELGA awards for their environmental efforts: Bill Davidson, Jr,.Colliers Reserve Golf Club, Everglades GCSA; John Scott Kopack at the Legacy Club of Alaqua Lakes, Central Florida GCSA; Jeffery Allen Klontz at the Country Club of Florida, Palm Beach GCSA; and Kyle D. Sweet the Sanctuary Golf Club, Everglades GCSA.

Now why am I writing about golf course superintendents' environmental efforts in my FTGA column? Because as the public relations director for the FTGA, I attend many meetings and read a lot of media reporting where golf is made to be the bad guy of the environment. From Paul Harvey to environmental staff writers at newspapers, it is popular to blame golf for every problem with wildlife.

A recent column in a Manatee newspaper blames a fish kill on fertilizer runoff from the fairways of a golf course. I am not saying that is impossible, but it was only a theory of a spokesman for the Florida Fish and Wildlife Conservation Commission.

I recently attended a Central Florida GCSA fundraiser at the Interlachen Golf Club (Stuart Leventhal superintendent) with state Sen. Darryl Jones (D-40, Monroe and Dade counties) as the featured speaker. Sen. Jones stated he knew we were under the gun with chemical runoff at golf courses. I jokingly responded that he was obviously being influenced by misinformed environmentalist and media writers. He responded by saying that might be true and that we need to put together a pamphlet and arrange to come to Tallahassee and speak with the legislators by calling on certain committee chairmen including himself. Sen. Jones is running for governor so he has some influence with the legislature.

I asked him what his reaction would be if we had 25,000 registered voters, who were golf club members, donating $5.00 a year to do research at the University of Florida. Would we get the attention and support of his committee?

His response was, "if you have 25,000 people doing this then you can probably have anything you want."

Twenty-five thousand people would comprise only about 50 clubs joining the $5 a member program.

I know I sound like a broken record on this subject, but I really believe in it. Golf course superintendents are the best environmentalists in Florida. "Golf is good for the Environment" and that is the name of the $5-a-member program.

PLANTS OF THE YEAR

Common name: Simpson's Stopper (compact form)
Botanical name: Myrcianthes fragrans 'Compacta'
Hardiness: Zones 8 - 11
Mature height and spread: 5' - 10' tall
Classification: Evergreen shrub
Landscape use: Low hedge or specimen plant
Characteristics: An evergreen Florida native shrub with small glossy leaves that bears small white fragrant flowers in late spring followed by reddish-orange berries. Birds are attracted to the berry-like fruit.

Common name: Orange Plume
Botanical name: Justicia spicigera
Hardiness: Zones 8B - 11
Mature height and spread: 4' - 6' tall, 2' -4' wide
Classification: Perennial shrub
Landscape use: Accent plant or massive perennial color
Characteristics: A shrub that bears bright orange tubular flowers during the warm months. Evergreen but possibly cold-damaged in the upper half of the state. This accent plant needs full sun or part shade to exhibit maximum growth habits.

Common name: Bismarck Palm
Botanical name: Bismarckia nobilis
Hardiness: Zones 9B - 11
Mature height and spread: 30'- 50' tall. 10'-15' wide
Classification: Palm Tree
Landscape use: Specimen plant
Characteristics: A massive robust palm with large silver-blue fronds. A pure green form exists, but it is less cold hardy.

Editor's Note: This program sponsored by the Woody Division of the FNGA introduces purchasers to under-utilized, but proven Florida plant material. Selected each year by a panel of horticulturists, nurserymen, educators, landscape architects and other professional members of the horticulture industry, these plants have attributes which attract wildlife or have minimal maintenance impact on the environment.

USGA UPDATE

Winter Overseeding Blues

By John Foy

Editor's Note: If establishing your overseeding this year was a problem, John Foy explains why in this

USGA Regional Update. The good news is that spring transition shouldn't be a problem. If you have been on the hot seat over your winter greens share this information with your critics.

In our last regional web update, agronomist Todd Lowe discussed the fact that warm to even hot temperatures had been experienced through the fall in Florida. The Green Section Southwest Region also posted an update discussing the difficulties associated with the unseasonably warm fall and early winter temperatures. For a lot of the country, it seems that an abnormal weather pattern has been in place. When was the last time Atlanta had more snow by mid-January than Chicago?

For Florida golf courses, the warm fall temperatures resulted in the base bermudagrass continuing to grow actively and compete against the establishment of winter overseeding covers. While there has been some variation in results, overall this has not been a good overseeding year. For Central and North Florida, the hard frost that occurred resulted in the bermudagrass losing color rapidly and entering into a semi- to fully dormant stage. This condition highlighted inconsistencies and lack of density of overseeding covers.

Winter overseeding is a standard practice at most Florida courses. Yet it needs to be remembered that this is done to provide a temporary cover of the base bermudagrass for three to five months.

If a successful establishment is not achieved in the fall, as is the case at most courses this year, reseeding and continued attempts to establish a cool-season turf cover after the first of January is generally discouraged. This greatly increases the potential for disease outbreaks and problems during the transition back to the base bermudagrass in the late spring to early summer.

While we have the possibility of more cold weather occurring over the next four to eight weeks, it is recommended to focus on managing the base bermudagrass and not the overseeding material. As soon as weather conditions are favorable for the resumption of bermudagrass growth, management efforts should be geared to accomplish a gradual yet complete transition out of the remaining overseeding material.

On a positive note, not being able to establish a dense overseeding cover this past fall greatly diminishes the potential for spring transition problems. This is almost a total reverse situation from the previous fall and winter, when very good overseeding results occurred, but then a lot of courses had a case of the "transition blues" in the early summer. For golf courses in South Florida where overseeding is not conducted, the warm fall and winter have been favorable to providing very good quality conditions.

This regional news update, and others written by the USGA Green Section staff, can be found on the USGA web site at: www.usga.org/green/news/new.html

Disney Walks The Talk

Students help Karnes install a butterfly garden and a bird feeder in a protected area on campus. Photo by Joel Jackson.

Disney's Bonnet Creek Superintendent Bob Karnes and Assistant Superintendent Dale Dexter (back row left and right) work with the students and staff of Spring Lake Elementary to plant oak trees on the school grounds. Photo by Joel Jackson.

Audubon Environmental Education Unit Becomes PR Program for Disney

By Joel Jackson, CGCS

It's one thing to talk about helping the environment. It's another thing to do something about it. Bob Karnes, golf course superintendent at Disney's Bonnet Creek Golf Club, says that we often take the environment for granted and it's time we all did our part to correct that mindset.

Karnes did his part by making the Lake Buena Vista Club a fully certified Audubon Cooperative Sanctuary, and then helped the Osprey Ridge and Eagle Pines courses do the same. In fact last year, all of the Disney courses became certified sanctuaries.

One of the components of the ACSP certification program is called Public Education and Outreach.

ACSP bulletin boards are at all the Disney pro shops to educate golfers about the program, and last April Karnes hosted an Earth Day Walk at the Osprey Ridge GC for Disney employees. For many it was the first time they had set foot on a golf course and they were amazed at the amount of wildlife and the use of native plants on the course. The highlight of the tour was the sighting of nesting ospreys on the specially built nest poles.

Disney took its Audubon outreach off site in 2001 by adopting two schools, Bradenton High School and the Spring Lake Elementary School in Altamonte Springs, by acting as their official sponsor in the Audubon Cooperative Sanctuary Program for Schools.

Disney went a step further with Spring Lake Elementary because Karnes's wife, Rose, teaches gifted students there, so it was a logical opportunity. Karnes and his assistant superintendent Dale Dexter loaded up a pickup truck with shovels and post-hole diggers, oak tree saplings, flowers, a bird feeder and a butterfly box and set out for the school last October.

Karnes and Dexter provided the plants, tools and some muscle to help Rose and fellow science teacher Amy Delachica, Assistant Principal Nancy Fraser and Dean of Discipline Marjorie Adamczyk supervise the kids. Under their guidance the students planted the trees on the playground, installed the bird feeder and a garden to attract butterflies and a butterfly box to shelter them.

This is the school's first year in the ACSP and Rose's class is kicking off the program, but all the grades will be involved by next year. The kindergarten and first grade classes will do aluminum can recycling and the second graders will oversee a composting program. The third graders will set up a bird identification and bird count program. The fourth and fifth grade assignments haven't been decided yet.

The school is planning a field trip to the Maitland Birds of Prey compound, and maybe a trip to Hobe Sound Elementary in Stuart, one of the first Florida schools to enter the Audubon school program with the help of the Treasure Coast GCSA.

Karnes says Disney's participation in the school program satisfies the ongoing requirement of public outreach and education of ACSP certification.

"We learn how to make changes and improvements on what we do on the golf course," he said. "What better use of that knowledge than to share it with others, especially with our children who will be responsible for the future of our planet.

"Teaching these kids about our environment and how we can do simple and effective things to help make it better has been one of the most personally exciting and rewarding aspects of my career at Disney."

Thanks to Bob Karnes and all the Disney golf course staff members for doing something positive for the environment instead of just talking about it. And thanks also to the 261 Florida golf courses that have joined the Audubon Cooperative Sanctuary Program. We still have a long way to go.

STEWARDSHIP NOTES

Could Florida Match Delaware's Commitment To ACSP Program?

By Shelly Foy

This year's GCSAA Conference and Show in Orlando marked the first time I have actually "worked" a booth, and I must say I have never enjoyed myself more, and have never been so tired in my life at the end of the day. I had the pleasure of spending quite a bit of

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time at Audubon International's booth.

Of course I enjoyed seeing all of my Florida friends who stopped by the booth, but I also had the opportunity to meet people who are participating in AI's programs all over the world. It gave me a much greater perspective of how far-reaching AI's programs are.

While in Orlando, I also had the opportunity to represent Audubon International at a check presentation by the Delaware State Golf Association. They are the first state to have 100 percent participation in the ACSP for golf courses.

Through a venture spearheaded by the Delaware State Golf Association's Green Section (formed two years ago to address environmental issues that affect golf courses), the DSGA has agreed to fund membership dues in the ACSP for all of Delaware's golf courses. Delaware is the first state to have statewide participation in the program.

"We have been working on getting statewide participation for the past six months," said Kevin Mayhew, golf course superintendent at Newark Country Club. All of the superintendents believed in the program and wanted to join but saw the yearly dues as a hurdle. The idea of having the Green Section fund the dues was presented to our golf association and was immediately endorsed.

"Delaware superintendents would like to send the message that they want to be the best possible stewards of the land, and by joining the ACSP as a group, the entire state is sending the same message."

"We saw this has a natural progression. There is no better way for the golfers of the state to help keep the courses up with the latest programs to help protect and enhance wildlife and the environment," said J. Curtis Riley, the executive director of DSGA.

The DSGA recognizes the benefit that the ACSP provides its members and realizes that this is a continual education process for golf course superintendents. Riley also added, "We are willing to continue this funding each year and hope that other states realize the importance of environmental stewardship."

Ron Dodson, president of AI offered his congratulations to the DSGA for taking a leadership role in preserving our environmental future. Ron added, "For over 10 years, the ACSP for golf courses has benefited not only the natural environment, but also the people who are educated and forever changed through participation. It's my hope that this DSGA initiative will be replicated in states and regions throughout the country. One hundred percent participation in the program nationwide may occur someday, but at least today we are one state closer to that goal."

I spent some time talking to the DSGA representatives and they were very excited about the opportunity they have before them with their commitment to the ACSP for Golf Courses. I expect we will be hearing great things from the state of Delaware in the years to come.

According to the USGA, Florida has more than 1340 golf courses, or 21,500 golf holes. We currently only have 251 (18.4 percent) courses that are members of the ACSP for Golf Courses. Only 54 (4 percent) of Florida golf courses are fully certified in the program. We are obviously a long way from 100 percent participation in the state. However, we could follow Delaware's lead and offer a challenge to each chapter in the state of Florida. So, who wants to step up to the plate and have the first chapter to have 100 percent participation in the ACSP for Golf Courses?

Here in Florida, we always like to take the lead in so many areas, so talk to members of your chapter and let's at least get started on working toward 100 percent participation, chapter by chapter.

ACSP UPDATE

New Members
Audubon C.C., Naples
Lost Tree Club, North Palm Beach
Laurel Oak C.C., Sarasota
Caloosa Greens G.C., Sun City Center
Victoria Hills G.C., DeLand
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ALTERNATIVES FOR NEMACUR?

Turfgrass Manager's Goal is Vigorous Healthy Turf, Not Dead Nematodes

By Joel Jackson and Billy Crow

Unless you have had your head stuck in the sand for the past year, you should be aware that the Environmental Protection Agency is in the final stages of reviewing the registration of the organophosphate nematicide fenamiphos (Nemacur). In fact by the time you read this, the decision probably will have been made.

Over the past year, the Bayer Corporation, the FGCSA, the state of Florida and the U. S. EPA have been conducting numerous conference calls to discuss the importance of the product, the risks and benefits and just how the product is used on today's golf courses. It seems inevitable, regardless of the real-world data, that EPA is leaning heavily to a three- to five-year phase-out of the product. Curfew is another synthetic nematicide on the market, but so far only slit injection for fairways is workable. Research continues on less disruptive ways to apply it to greens.

In the late stages of the discussions, a chemical company, Parkway sent an email to the EPA stating that their organically-based product Neo-Tec might be considered as an alternative product. In fact Parkway recommends a combination of applications of a "conventional nematicide" with its product, especially if you have high nematode populations.

Parkway reports that 150-200 courses in Florida have purchased and tried the product. I have had one reliable source confirm he is getting satisfactory results using Neo-Tec.

I have also had recent reports from two highly respected Central Florida superintendents reporting positive results in reducing nematode problems using another organic product called Synzyme distributed by the Howard Fertilizer and Chemical Company.

Every time someone uses an organic product; we always ask "Where's the university research?" A couple of years ago, UF nematologist Dr. Bob Dunn shot down a whole bunch of natural products.

With the testimonials by some pretty reliable superintendents, I asked UF/IFAS nematologist Billy Crow the same question that arose when the Neo-Tec issue surfaced in the Nemacur discussions.

"I wanted to pass on some more info regarding the Neo-Tec," he said. "I did one study with the product while I was in Texas, but it had a different name 'Sincocin.' In that test it did not perform well, but neither did Nemacur.

"The main thing I wanted to point out that, other than my one test - which was inconclusive - this product has never been evaluated for nematodes on turf! It has also never been evaluated on any other crop in the US.

"Joe Noling, another nematologist with UF will be testing it this year on tomatoes and I plan on doing the same for turf."

We may be in a situation with conventional nematicides, where you are going to have to try some of these products and put their claims to the test. If you do try one of the organic products how do you know what's happening?

Dr. Crow responds:

I agree that products that prevent problems are hard to quantify. If you use a product and don't get a problem does that mean that the product worked or would you not have had a problem anyway?

These types of products can have several ways of working, if they do work.

They can kill nematodes. If they do this you should be able to detect nematode reductions compared to untreated plots. You should also get a turf response if nematodes were causing damage.

They can change the nematodes behavior (as Neo-Tec claims) by preventing feeding, reproduction, etc. If the product works this way then you may or may not see a short-term nematode response as the nematodes will still be present in a soil sample even if the product works. However, you should see a turf response in comparison with untreated plots.

They can cause a turf response that has nothing to do with nematodes. For instance, if a product stimulates root development, the turf can become more tolerant of nematode damage and have a turf response even if nematodes are unaffected. This is a valid nematode-management approach, and I will be working with a couple of these products this year.

They can affect another organism. For instance; in some of my tests last year I included both Nemacur and Heritage plots for comparison. Interestingly, often both Nemacur and Heritage gave a visual turf response. This could be because both nematodes and fungi were causing damage so you get a response if you control either pest, or because the nematodes and certain fungi like take-all fungus can work together to cause damage in many instances. So, if you had a product that was primarily a fungicide you could get a visual turf response in some cases in areas with "nematode damage."

Turf performance has to be a major criterion for evaluating all of these products. The goal is to have healthy turf, not necessarily to kill nematodes. But, if you are preventing nematodes from feeding over a period of months there should be a reduction in populations over time because nematodes cannot reproduce without food.

My plan is to apply Neo-Tec and similar products monthly and then evaluate nematode populations, turf visual performance, and root production over a period of 6 months. If the products have any efficacy there should be both turf responses and nematode responses in comparison with untreated plots.

NEMATODE MANAGEMENT IN GOLF COURSE PUTTING GREENS USING 1,3-DICHLOROPROPENE

Help For Nematode Control Pending Registration Approval by EPA

J. Bryan Unruh and Robert A. Kinloch

Plant parasitic nematodes have long been known to adversely affect plant health. However, only since the early 1950s have nematodes been known to negatively affect turfgrass health (Dunn, 1999). Today, nematodes cause significant injury to both cool- and warm-season turfgrasses by puncturing and feeding on turfgrass roots. By debilitating the root system, nematodes weaken the turf and additional nutrients and water


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Figure 5*. Nematode damage on a green at Fort Walton Golf Club. Photo by J. Bryan Unruh, Ph.D.*

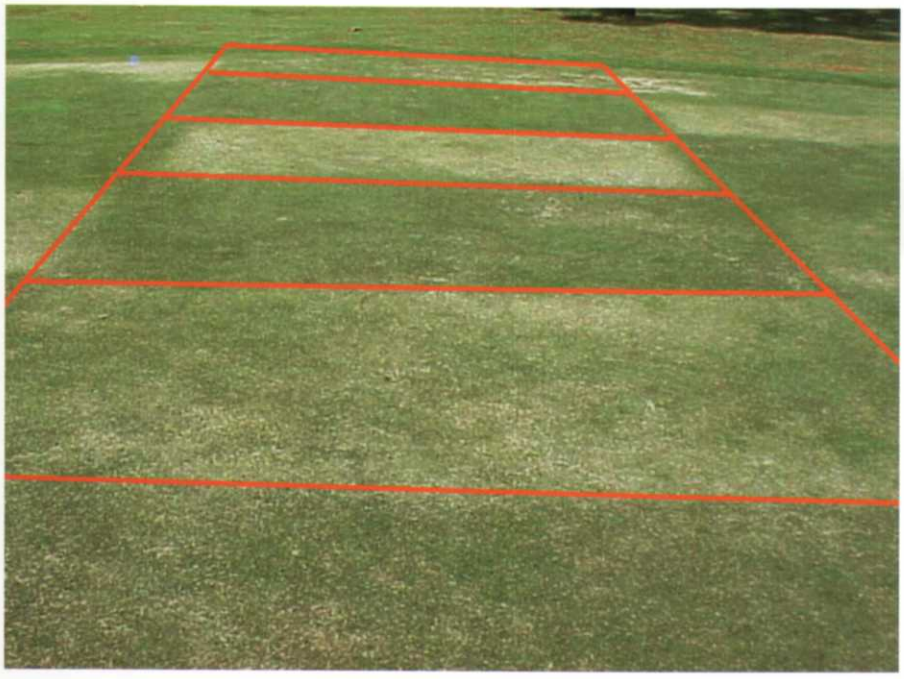

Figure 7*. 1,3-D test plots on the same green above, 19 days after application. Photo by J. Bryan Unruh, Ph.D.*

are often required to counter this destructive activity. Additionally, weakened turf also favors pest infestation, especially troublesome weeds, which necessitates herbicide applications.

Nematode Control

Several decades ago, many fumigant and non-fumigant nematicides provided effective control of nematodes. In 1977 however, environmental and health safety issues brought about restrictions on DBCP (1,2-dibromo-3-chloropropane) and since this time, many other nematicides have been removed from the marketplace (Dunn, 1999).

Today, control of nematodes has been relegated to only one synthetic pesticide, fenamiphos, and this material is available only to the golf course and sod industries. At present, there are no synthetic nematicides available for the landscape and athletic turf markets.

Although numerous products claim nematode control, these materials have proved largely ineffective in university-conducted research (Dunn, 1999, Giblin-Davis, 2000; 2001).

1,3-dichloropropene (1,3-D), a soil fumigant, was developed in 1943 and was the first effective and inexpensive nematicide for general field use (Noling, 1996). In turf, 1,3-D was first tested for nematode control in bermudagrass turf in 1953 (Heald and Perry, 1969) and over the years, researchers and practitioners have noted exceptional control of nematodes and some soil-borne insects with this soil fumigant (Noling and Becker, 1994).

More recently, researchers have been evaluating 1,3-D for its usefulness in controlling nematodes and soil-borne insects in established turf situations (Unruh and Lickfeldt, 2002). Specifically, 1,3-D was applied at rates up to 10 gallons per acre through a coulter-shank injection machine into established bermudagrass fairways and driving ranges. Although surface disruption was minimal and recovery was quick, concern over using this application equipment on putting greens is noteworthy.

High-Pressure Subsurface Injection Technology

High-Pressure subsurface injection technology has made a dramatic impact on turfgrass management (Perrault, 1998). This equipment allows greater control of pesticide application - most notably, precision placement. Furthermore, research conducted in Georgia showed that subsurface injec-

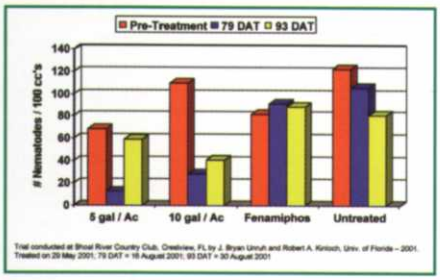

Figure 1. Control of Lance Nematodes with 1,3-Dichloropropene Soil Fumigant

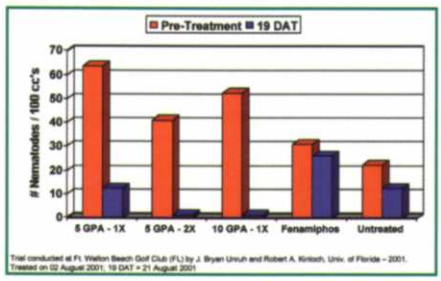

Fig. 2. Control of Lance Nematodes with 1,3-Dichloropropene Soil Fumigant

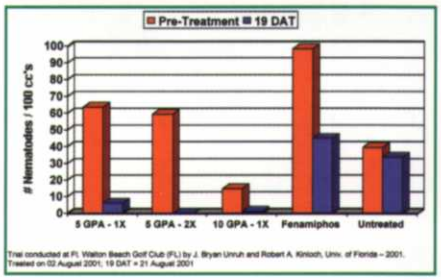

Fig. 3. Control of Lance Nematodes with 1,3-Dichloropropene Soil Fumigant