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An equipment manager also has to be organized mentally and in the physical work space to get the job done properly. Photo by Corby Coggins.



Equipment Manager Corby Coggins (left) trains assistant mechanic Mike Cole on utility vehicle engine maintenance. Coggins believes well-trained assistants make his job easier.



Read up on OSHA regulations and make sure your shop is always clean, organized and safe. You never know when an inspector might show up. Photo by Corby Coggins.

they reflect a good image of the people that trained them.

Professionalism

When you enter the golf course industry and strive to become a quality equipment manager, I can't emphasize enough the importance of professionalism. Equipment managers need to work as a group to create a more professional image for the position. Face it, when most people think of an equipment manager, they think of a greasy mechanic standing around with his shirttail out and a rag hanging out of his pockets. It's sad, but this image was created by us.

I can't say how many times I've seen individuals out in public who are obviously finished with

their day's work but still have grease all over their arms and face. I go to seminars put on by professional organizations only to see individuals come in with hats and shirts displaying their favorite NASCAR driver and a cell phone that won't quit ringing during the session. Don't get me wrong. I like NASCAR too but I think there's a time and place to display those sorts of things. One can dress nicely and look professional for far less money than what some of that race wear costs.

While our job does require us to get dirty or greasy, we can do little things such as wash up and tuck in our shirts before going to pick up items from the local parts store. If you're starting to get a little scruff on your face and you're not trying to grow a beard, shave it and make yourself look presentable.

You never know when you may have a face-to-face conversation with upper management or just people in general.

I'm sure some equipment managers are reading this saying, "I don't care what I wear to the seminars," or "I don't care if I have grease all the way up my arms when I stop for milk on the way home." They should care. These are usually the same people who are always saying they're overworked and underpaid. You never hear a professional-looking equipment manager complain about his pay because it usually matches his image. It's plain and simple: act like a professional and you'll get treated like a professional.

For information about the author, see inside cover.



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Plugging in Paradise

By Darren Davis

Last summer I took a trip to paradise, Paradise Island that is. During my stay I visited with Jeff Hood, the director of agronomy at the Ocean Club Golf Club. Paradise Island is connected by two bridges to the island of Nassau. Together they make up what is known as New Providence, Bahamas. New Providence is only 2 percent of the total land area in the Bahamas, but the two islands account for 60 percent of the country's population with approximately 311,000 residents.

Hood, who also had a stint in Barbados as a golf course superintendent, has been working in the Bahamas since the summer of 2000. He has found that innovation is not just a method or tool to solve an occasional problem; in the Bahamas, innovation is a standard approach to even routine golf course management issues.

Hood previously was employed in Florida as the golf course superintendent of Bonita Bay East, and as the IPM specialist for Colliers Reserve, both in Naples. While Hood's current assignment in Paradise Island is just a short commuter flight across the ocean from Florida, he sometimes feels that the mere 185 miles might as well be half way around the world. When I asked Hood what he misses the most about being stateside, he quickly responded, "Convenience. You can't get in your car and go to a Home Depot or Wal-Mart for one-stop shopping like we have become accustomed to in the States."

One Super Tip that Hood shared with me highlighted the innovative attitude that he and



Paradise Island Superintendent Jeff Hood holding two sizes of pluggers. Photo by Darren Davis.



Bigger than standard pluggers. Less damaging than a sod cutter: Welded bedknives with lifting rings surgically remove Paspalum off-type patches in TifEagle greens. Photo by Darren Davis.

his staff exude. The problem that they were facing was how to effectively and quickly remove paspalum off-type patches in his TifEagle greens and fill the void with pure TifEagle from his nursery green. A sod cutter would be too aggressive and lacked the preciseness that Hood preferred on the putting surfaces. The standard cup cutter or hexagon-shaped plugging tool would be too small for most of the patches and therefore would be too time-consuming.

The solution Hood devised was to have his equipment manager weld old bed knives into the shape of a square. Different sizes were developed and hooks attached to allow the home-made tool to be lifted from the surface of the turf. A consistent depth was obtained by inserting the tool to the same depth both on the golf course green and the nursery. The result was a process that went smoothly, quickly and was the least disruptive possible, which was equally important to keep the golfers happy at this high-end facility.

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BENHAM'S BEAT**Why No Media
Respect for Florida
Golf?**

Don Benham

It is amazing how much Florida and Michigan have in common. Both states are almost surrounded by water; Florida by saltwater and Michigan by freshwater. Freshwater lakes heavily populate both states. Each state is also a golfer's paradise with many types of golf facilities. In the last 10 years, the two states have led the nation in the number of new golf courses being built. Is that good or bad? Well it depends on whom you are talking to in each state.

Water is one of the main issues in each state. Would you believe that, around the Detroit area in the suburbs, strict water restrictions are in place? No washing cars or watering lawns. Some cities are on a twice-a-week watering restriction. There really isn't a fresh water shortage in Michigan, but the city of Detroit supplies much of the water to the southeastern part of the state and the further you are from the water source, the less pressure you have. During the morning hours in some areas, the pressure is so low that flushing toilets can cause lack of pressure for your shower. It is recommended that you wash clothes after 9 p.m..

If you are still with me and wondering, "So what!" Why are you telling me this?" You have your own watering problems with restrictions and times you can water. The percentage of water used on golf courses, recreation and home lawns is about the same for each state. Advisory groups in both states recommend "natural plantings". Ok, what is your point Benham?

The point is, in Michigan I have not read a single article attacking golf-course use of water. Not one! The media does not blame golf courses for water usage shortages. In Florida golf is always the main target of the media. What do you think is the reason for that difference? Is it because there is more golf played by out-of-state golfers in Florida? Is that the reason? I don't really know the reason. Do you have ideas for the reasons? If so e-mail me your thoughts.

Both states have strong turfgrass associations and major university turfgrass programs. I do think that Michigan has had a stronger connection between the Legislature and Michigan State University and the Michigan Turf Grass Foundation. I think Florida Turfgrass Association needs to do a better job with the Legislature and I need to do a better job as public relations director.

Michigan turfgrass does not have a lobbyist but has depended on Gordon LaFontaine to get

the message across. He has a ten-year start on me, but I need to catch up fast! I have Joel Jackson on my side and that is a big advantage. We also have a huge commitment from the University of Florida to sell our message with great research done here in Florida. The GCSAA has signed an educational contract with only two states they felt had a solid turfgrass association, a great partnership and strong support from the state GCSA. Guess who? Florida and Michigan.

For information about the author, see inside cover.

PLAYABILITY VS. AESTHETICS Can Expectations Of American Golfers be Met in the Future?

By John Foy

Golf course conditioning has steadily improved. Around Florida and across the lower South, the introduction of the ultradwarf bermudagrasses has raised the bar with respect to putting green quality. These new cultivars can be mowed

average rainfall for two to three years, lake and aquifer levels reached record lows, and in a large portion of the state, the alarming reduction in potable water supplies created a crisis situation. Water management districts around the state were forced to impose - or further expand - landscape irrigation restrictions. For the first time at many courses, it was necessary to manage with significantly less water. While this presented challenges to course managers, they found that it was possible to survive.

By midsummer, it began to rain with a vengeance, and the opposite extreme developed. Though much needed, periods of prolonged and/or extremely heavy rainfall during the late summer and fall resulted in a new set of course management challenges. By year-end, total rainfall amounts for most of the state had reached at least average levels, and in some locations were as much as 10 to 12 inches above normal. Naturally, this brought an end to the drought, and irrigation restrictions were either completely lifted or reduced by the water management districts. With a rapidly growing population in Florida, however, it is a fact that water has become a limited resource,



Like the Old Course at St. Andrews, the New Course at Grand Cypress in Orlando is not always lush green, but it always has great presentation. Photo by Joel Jackson

routinely at 1/8 inch or less, which was unheard of just a few years ago. Golfer expectations have risen, and in some cases the standards for daily conditioning are equal to or better than what was expected of tournament courses just a few years ago. However, environmental extremes and increasing governmental regulations result in limitations on the use of basic resources such as water, pesticides, and fertilizers. Thus, the question arises as to whether golfer demands and expectations can be met in the future.

Successfully managing golf courses in Florida in 2001 meant dealing with environmental extremes. During the winter and into the early summer, a severe drought occurred. This is the normal dry season in Florida, but with below-

and less will be available for course irrigation in the future.

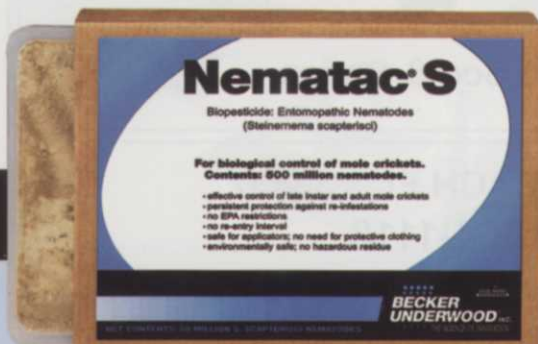
The drought and irrigation restrictions of 2001 were a wake-up call for golfers at facilities throughout Florida. Due to demands for a lush green color, over-irrigation of golf courses has been one of the most common mismanagement practices encountered. The base bermudagrass turf of Florida golf courses does have good drought tolerance, and we found that it was indeed possible to maintain turf coverage and good playing conditions when irrigation restrictions were in full effect. Although adjustments in management programs were necessary, the golfers found better playing surfaces and in particular a lot more roll on their tee shots. Some golfers finally began to



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realize and accept that green color is not a factor that impacts course quality or playability.

In addition to less water for course irrigation, increased regulation of fertilizers and pesticides has and will continue to occur. In response to environmental concerns, the golf course maintenance industry has made excellent progress in reducing its reliance on these materials. Nevertheless, pesticides must be applied to control heavy pest (insect, weed, and nematode) pressures, and fertilizers have to be used to produce a dense, healthy turf cover. The loss of some compounds is to be expected, and this will make it even more difficult to maintain an acceptable level of pest control. Research continues to develop alternative management practices, treatments, and better adapted turfgrass varieties or cultivars, but how many facilities will be able to use materials that cost \$300-\$500 or more per acre on a large-scale basis?

Labor is yet another resource issue that has been a major concern. Nearly every golf course I visited this past year was dealing with a labor shortage. Not only was it hard to find and retain adequate staff to keep up with routine maintenance, but there has been a shortage of qualified individuals for assistant and technician positions. There is simply no way around the fact that modern-day course management is labor intensive and time consuming. This is especially true of course grooming and manicuring, which has a big impact on the average golfer's perception of quality. We can talk

about prioritizing and reallocating resources, but at a growing number of facilities, essential maintenance practices have been curtailed or have become very expensive due to labor shortages and shrinking budgets.

Over the years I have enjoyed the *Greenkeeper International* magazine, published by the British and International Golf Greenkeepers Association. Something that has always stood out has been the use of the word "presentation," with the primary focus being course conditioning. Unlike American trade magazines, every picture is not a shot of a green, perfectly manicured golf hole. I find this refreshing but troubling at the same time, because it highlights the fact that the aesthetic side of course presentation is often over emphasized in the United States.

It has been my contention for many years that unrealistic golfer expectations and demands will not be changed until regulations restrict or remove various management tools. I am confident, however, that American ingenuity will prevail and that the golfers of this country will continue to be provided with good to excellent quality facilities. Nonetheless, with ever-increasing limitations on resources, we remain confronted with the big job of educating golfers about the differences between aesthetics and playability.

(Reprinted with permission from the USGA Green Section Record, March-April 2002. For information about the author, see inside cover.)

USGA Green Section Updates

When it rains, it pours!

Overcast Skies Stress Bermudagrass

By John Foy



June first is the official start of the hurricane season for Florida, and sometime during this month the rainy season normally kicks in. Leading up to June, we had been in a typical pattern of very sunny, dry, and warm weather. Limited rainfall over the past two months was having some impact, and every course we visit-

ed was dealing with localized dry spots (LDS). In some cases, irrigation water quality (sodium/salts) required adjustments in management practices. Yet, relative to this time last year, when a severe drought was occurring, the weather has not been a major issue.

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It's hard to complain about rainfall after two years of drought, but recent rainy weather patterns are affecting summer maintenance schedules and turf performance.

more than 15 years and I am still amazed at the rainfall extremes that occur. Approximately two weeks

ago, a tropical front moved up from the Gulf of Mexico and settled in over the southern part of the

state. This front fed in a tremendous amount of moisture, which in turn resulted in typical summer thunderstorms. While the thunderstorms have been a little erratic, needed and welcomed rain was experienced throughout the state. That was until Father's Day weekend when more widespread - and at times very heavy - rains occurred. In Naples, more than 7.5 inches of rain came down over the weekend. The month-to-date total rainfall at the Palm Beach airport was reported at 11.92 inches. The normal month-to-date rainfall is 4.65 inches.

Recent rains have complicated course maintenance activities and, in particular, keeping up with proper mowing frequencies. However, far more critical is the reduced sunlight intensity as a result of heavily overcast skies for the past 10 to 14 days.

Bermudagrass originated on the savannas of Africa where high-intensity solar radiation is a constant. Overcast weather results in reduced photosynthesis and growth. Several days of reduced sunlight intensity has a negative impact on bermudagrass health and general turf quality. This is especially true with putting greens maintained at very low heights of cut. For the remainder of the summer until a dryer, more favorable weather pattern redevelops, the practice of slightly higher heights of cut on putting greens is strongly recommended.

For Tifdwarf greens, a height of cut in the range of 0.150-0.180 inch is advisable. While the ultradwarf cultivars can tolerate lower heights, raising the mowers to 0.130 inches or slightly higher

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also is recommended. Furthermore, care needs to be exercised with verticutting frequency and severity. To compensate for higher heights of cut and to continue to provide acceptable play, rolling and/or double cutting, more frequent light top-dressing, and growth regulator applications are the best options. For the next few months, surviving the stressful environmental conditions and maintaining full bermudagrass turf cover on greens will be the main objective at most Florida courses.

As noted in earlier updates, greatly reduced sunlight intensity was as much of a problem as the persistence of moisture-saturated conditions. A primary consequence of these conditions was reduced root-system development. Shallow roots and sandy soils that lack moisture retention are a troublesome combination. Once the rains stopped and the sun popped out, temperatures also quickly shot up. These conditions resulted in the rapid onset of drought stress if supplemental irrigation was not re-initiated in a timely manner. While it may have rained yesterday, don't be surprised with having to schedule irrigation tonight.

It has been a common finding on our Turf Advisory Service visits over the past two to three weeks that accomplishment of routine summer maintenance practices has been delayed. Rescheduling aeration operations and other cultural management practices and adherence to pest management programs has been a problem. This has resulted in a flush of weed invasion, and aggressive post-emergent herbicide treatment programs will be necessary to re-establish an acceptable control level. Along with catching up on routine maintenance, wrapping up summertime projects has become a priority. Most probably don't need to be reminded that the beginning of the winter season is just a couple of months away.

Finally, as it turns out, this has not been a good summer for major course renovation. Unavoidable weather delays have resulted in most renovation projects falling four to six weeks behind.

While bringing in extra people and equipment to try to catch-up is an option in some cases, there is not a whole lot that can be done to reduce the time required for turf establishment and development of proper/acceptable conditioning.

As we move closer to the fall, increasing sprigging rates will help a little. However, exceeding a sprigging rate of 1000 bushels per acre with Tifway bermudagrass when planting fairways, roughs and tees is of no benefit. Even with ideal weather, 8-10 weeks is still required to establish full turf coverage.

While hot temperatures will persist in South Florida through October and into November, as the day length progressively becomes shorter, bermudagrass growth rate slows down. If turf establishment is not well under way at this time, it is advisable to begin an education program to make golfers aware that it may not be possible to make the originally scheduled fall reopening for play. Also, at least one full summer growing season will be required to achieve a truly mature character.

Nematodes Adding to Deluge-Induced Bermudagrass Stress

By Todd Lowe

Much of Florida is still receiving routine, weekly (sometimes daily) rainfall that began in early June. After having weathered through a two-year drought, the extended rain is welcomed at most golf courses.

With the frequent rainfall, mowing is difficult to impossible at times. The turf continues to grow and excessive amounts of clippings are generated during subsequent mowings. The plant growth regulator Primo is applied to many golf courses in Florida to improve overall quality. However, it has also been an effective tool to use during rainy periods. Primo decreases vertical turf growth thus decreasing the need for routine mowing. Therefore, clumps of clippings are not as prevalent on courses that apply Primo every three to four weeks during summer months.

The abnormal rainfall pattern also is bringing with it extended cloudy weather. Bermudagrass putting greens are very sensitive to reductions in sunlight and become chlorotic (yellow) when low mowing heights are maintained during these stressful times. As mentioned in the previous update, it is important to maintain higher mowing heights during this time to increase photosynthesis and improve turfgrass quality.

Nematode damage has been visible at many of our visits lately. Nematodes are microscopic worms that feed on turfgrass roots, making the turf more prone to drought stress and nutrient deficiencies. As a result, yellow, thin patches of turf are created and these are often associated with a small purple weed called spotted spurge. In addition to the standard nematocide NemaCur, Curfew is an experimental product that has been providing good results for the past two years. Eradication is not possible with any product and golfers must accept some occasional discoloration.

There are several products on the market that claim to provide nematode suppression, but most have limited non-biased research to substantiate their claims. University of Florida nematologist, Dr. Billy Crow, has been evaluating many different commercial products for several years. He has finally found a promising product that may be developed within the next two years that provides control as good as NemaCur and is safe to the environment. It is a byproduct of the mustard industry and has provided excellent results in his trials for the past two summers. The results from these studies as well as others (weeds, insects, diseases, fertility) were discussed at the University of Florida turfgrass field day on July 25.

For information about the authors, see inside cover.

USGA web site
www.usga.org/green/news/new.html



Todd Lowe

PLANTS OF THE YEAR FOR 2002 - PART 4

Editor's Note: Last in the series for 2002. 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.

Jewel of Thailand Ginger

BOTANICAL NAME: *Curcuma cordata* (petiolata)

HARDINESS: Zones 8-11

MATURE HEIGHT AND SPREAD: 3' tall
CLASSIFICATION:

Perennial

LANDSCAPE USE:

Specimen or ground cover for shade

CHARACTERISTICS:

Bears a 1-foot-tall pink inflorescence with yellow flowers in the fall.

The pleated leaves are a handsome addition to the garden through the summer.



"ZZ"

BOTANICAL NAME: *Zamioculcas zamiifolia*

HARDINESS: Zones 9B-11

MATURE HEIGHT AND SPREAD: 2'-4' tall, 3' wide

CLASSIFICATION:

Foliage plant

LANDSCAPE USE:

Ground cover, accent or specimen plant

INTERIORSCAPE

USE: High indirect light location, can tolerate low light

CHARACTERISTICS:

The succulent aroid resembles a *Zamia* cycad. It has thick glossy leaflets and is one of the few aroids (*Philodendron* relatives) that can be grown from a leaf cutting.



Giant Plume Ginger

BOTANICAL NAME: *Curcuma elata*

HARDINESS: Zones 8-11

MATURE HEIGHT AND SPREAD: 7'-8' tall
CLASSIFICATION:

Perennial

LANDSCAPE USE:

Specimen plant or ground cover

CHARACTERISTICS:

The perennial bears a bright pink inflorescence in spring as the massive foliage emerges to form impressive clumps. The exotic-appearing bloom can be cut for a long-lasting cut flower.

