

USGA update

Summer Thunderstorms and Fall Preparations

By John Foy

While the Florida rainy season was a little late in getting started this year, typical afternoon thunderstorms began in late July and have continued into August. Each morning starts hot and humid with clouds building the rest of the day until intense storms let loose in the mid to late afternoon. Along with booming thunder and spectacular lightning strikes, periods of very intense rain often occur. Recently, one local golf course measured 4 inches of rain over a two-day period. If you do not have an early-morning tee time, there is a good chance that you will not finish before the lightning sirens sound and it is necessary to get off the course.

The thunderstorms have brought needed rain to replenish lakes and ponds throughout the state. Water levels had dropped extremely low due to below-average rainfall earlier in the year. At some courses along the lower east coast, self-imposed irrigation cutbacks and transfer pumping had been necessary to avoid running out of water completely.

During recent TAS visits, lake levels are back up to normal and, at most courses, major drainage problems are not being encountered. However, with continuation of the current pattern and the inevitable arrival of tropical waves or storms, saturated course conditions can quickly develop. The most modern and sophisticated irrigation system still cannot match rainfall with regards to uniform distribution and the turf growth response that follows a good downpour.

Even with afternoon thunderstorms

occurring on a regular basis, supplemental irrigation cannot be forgotten. With so much rainfall it is no longer possible to effectively manage soil moisture, and a decline in root-system development of putting greens is a common finding. A shallow root system is not able to absorb moisture just a couple of inches below the surface, and the turf has very limited drought tolerance. Thus, following several days of afternoon thunderstorms, the rapid onset of drought stress can occur and it is necessary to begin running irrigation again. This in turn can lead to golfers questioning a superintendent's competence because; "it has rained every day this week and there are wet spots in fairways, but there they go running water all over the place!"

We should not complain about the rain, however, because in Florida it seems as if we go from one extreme to another so quickly. Yet frequent thunderstorms also are starting to impact various aspects of routine course maintenance. During this time of the year, a large number of trees are hit by lightning strikes and are killed or severely damaged. Lightning also can play havoc with irrigation systems, especially the field satellite controllers and computers. Furthermore, keeping up routine mowing and accomplishing cultural management programs such as aeration can be a real challenge. Turfgrass growth-regulator treatments can really pay off with reduced scalping damage and clipping problems when it has not been possible to get out and mow fairways for several days.

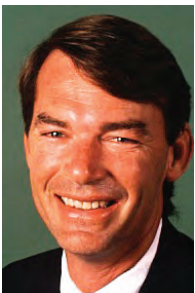
Increased weed pressure, especially rapid development of sedge and kylling infestations is another problem encountered during the rainy season. Access to local weather radar and closely monitoring thunderstorm development and movement is a big help when planning pesticide treatments. Pop-up storms still will occur, and the effectiveness of herbicide treatments is diminished if the material is washed off the leaf surface before it has had time to

adequately dry.

To golfers, afternoon thunderstorms can be an inconvenience. Golfers also incorrectly assume that frequent rain combined with constant hot and humid conditions is ideal for maintaining a healthy bermudagrass turf cover. While hot temperatures are needed to support sustained bermudagrass growth, periods of dense cloud cover have a significant negative impact. Compared to the early summer, daily solar radiation can be reduced by almost 50 percent during the late summer and fall as a result of cloud cover. This in turn reduces photosynthesis rates, and with low energy fixation, carbohydrate reserves become depleted. Unfortunately, at more golf courses there is constant pressure for fast putting speeds to be provided on a year-round basis. While maintaining extremely low heights of cut of 0.125 inch or less on a continuous basis and the resulting reduction in total leaf surface area, lack of sunlight is even more of a problem.

While rapid bermudagrass shoot growth is occurring, the turf is in a weakened condition from intense environmental stresses, and employment of a survival management philosophy is needed. Along with raising heights of cut, care needs to be exercised when conducting cultural management practices such as core aeration and verticutting. Coring replications in August and September are very important for maintaining good oxygen and moisture infiltration, promoting good root system health, and preparing for the fall and winter months. To minimize surface disruption and recovery issues using smaller (3/8 to 1/2 inch) diameter tines is advisable.

By August, a survival management philosophy also is in effect at many courses up north, but shortly after Labor Day, milder temperatures will prevail. However, in Florida, a change in the weather really will not happen until October or November and then we will be heading right into



John Foy



Nematodes killing ryegrass overseeding and weakening the base bermudagrass.

the winter play season. The weather can make it difficult to stay on schedule with course maintenance programs, but if basic and necessary practices are deferred or cancelled, problems will be experienced later in providing the level of conditioning desired through the winter golf season.

Nematode News

Four hurricanes have struck Florida which have magnified John's comments about summer weather stress on turf. Meanwhile, nematodes are replacing molecrickets as the number one pest problem. In the last issue we reported on the work of Dr. Billy Crow as he examined some biological alternatives to Namacur, which is being phased out.

By May 31, 2005 golf courses located on vulnerable soils will not be able to use the product any longer. And all uses of the product will end by May

2007. Nematodes are a leading cause of weakened turf. See the following excerpt from July's Regional Update by Florida's other USGA Green Section agronomist, Todd Lowe.)



Todd Lowe

“...Another common topic of concern on recent Turf Advisory Service visits includes nematodes. Nematodes are microscopic worms that begin feeding on turfgrass roots in the spring and continue to create problems throughout the summer and early fall months. Nematodes damage turfgrass roots, weakening the turf and making it prone to drought stress and poor nutrient uptake. At the recent University of Florida Gulf Coast Research Field Day, Dr. Billy Crow reported that nematodes are definitely a major pest on Florida golf courses as he sampled damaging infestation levels on 87 per-

cent of Florida golf courses.

“He also reported that after two years of product testing, the only nematicides that consistently suppress or reduce nematode damage in bermudagrass turf are Namacur (fenamiphos), Curfew (1, 3-dichloropropene) and an experimental mustard-based product. Namacur will soon be taken off the market, leaving Curfew as the only effective commercially available product...”

Is Seashore Paspalum the Next Great Golf Course Grass?

By Stacie Zinn

The words “seashore paspalum” have been on the lips of many Florida golf course superintendents recently. Those words are usually followed by comments something like this:

“I just put it on my golf course.”

“I heard so-and-so just put it on his

golf course.”

“How do you take care of it?”

“What is it?”

“Huh?”

If you’ve been hearing or talking about seashore paspalum, you’ve probably heard a combination of all of the above.

To answer your questions, let’s start with the basics. Seashore paspalum, (*Paspalum vaginatum*), is a salt-tolerant, warm-season turfgrass. It requires up to 50 percent less water for irrigation than bermudagrass, and up to 75 percent less nitrogen for fertilization.

Seashore paspalum is believed to have come to the United States from Africa as bedding in the bottom of slave ships, but some schools of thought actually attribute seashore paspalum as a native of Asia.

It was introduced to Australia from Africa in the 1930s for use in salt-affected areas as forage and for soil stabilization. By the 1950s and 60s, seashore paspalum had become popular in Australia as a lawn grass and for bowling greens.

In the book, *Seashore Paspalum: The Environmental Turfgrass*, authors R.R. Duncan and R.N. Carrow outline the introduction of the grass as a commercial product into the United States from Australia in the 1960s for use on golf courses and home lawns. According to Duncan and Carrow, those early varieties, mostly Futurf and Adalayd, met with limited success because end users did not know how to properly maintain the grass:

“No additional breeding work was conducted on Adalayd after its initial introduction into the United States. Additionally, no management packages were developed for this grass and it was essentially handled like hybrid bermudagrass. The use of too much fertilizer and untimely irrigation



WCI's new Hammock Bay Golf Course on Marco Island is grassed in SeaDwarf seashore paspalum from tee to green. Photo by Rich Redles.