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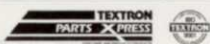
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primarily used for controlling crabgrass, goosegrass and crow'sfootgrass. It has no efficacy on common bermudagrass or nut-sedge, therefore it should not be considered a fumigant alternative.

Which alternative?

There is no single alternative to methyl bromide in turfgrass management. Nonetheless, advocates of the ban say numerous control measures are available, and more will come from research. Yet other than this author's GCSAA Foundation-funded project, no other methyl bromide alternative research is being conducted on turfgrass. Therefore, the future of preplant fumigation in turfgrass does not look promising.

Acknowledgments

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J. Bryan Unruh, Ph.D. is assistant professor of turfgrass science in the Environmental Horticulture Department at the Milton Campus of the University of Florida/IFAS West Florida REC.

Editor's Note: This is just one of several projects being conducted at the West Florida Research and Education Center in Milton which are funded in part by the GCSAA Foundation. This, along with the FQPA implementation, is just another reason why golf course

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superintendents must help get course owners, managers and players to write Congress about the issues facing the turf

and agriculture industries. Credit: Golf Course Management, November 1998

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A Superintendent's Journal

A Year with Champion at Bonita Bay

No. 18 green Cypress course during January cold snap. Note color contrast with Tifway 419 collar. The putting surface greened back up within a few days. Photo by Matt Taylor.

It would be an enormous risk, because at that time, no one had planted Champion on 18 greens in the state of Florida.

BY MATT TAYLOR

Champion bermudagrass had not been planted in Florida when J. Mark Black, former director of golf course operations at Bonita Bay, approached David Lucas, chairman of the board for Bonita Bay Properties Inc., and urged him to look at a new variety of bermudagrass. This grass would be used for the new Cypress Course being built by Bonita Bay (early 1996).

It would be an enormous risk, because at that time, no one had planted Champion on 18 greens in the state of Florida.

It was a risk that has paid off generously for Bonita Bay Properties, Inc. Champion grass has been planted on

three of the latest golf courses built for Bonita Bay from 1997 to 1998. The Creekside course, one of the three original courses on site for Bonita Bay Club was renovated in the summer of 1998 with Champion.

Champion and the other ultradwarf bermudas have finally brought fast, true and consistent putting surfaces to the South without overseeding and their own set of management practices.

Establishment

The first nine holes at the Cypress course were planted in April 1997 with Champion. The greens mix is 80/20, and are built to USGA specifications without the choker layer. The day before sprigging, we spread a pre-plant fertilizer and incorporated it into the

top 6" of greens mix with a Sand Pro. The next day the greens were sprigged at a rate of 20 bushels per 1000 sq. ft.

The first 10-14 days is about the same as the Tifdwarf, so an initial watering sequence is really at the superintendent's discretion. Irrigation cycles were set for every hour starting at 9:00 a.m. and off at 6:00 p.m. (Champion does not like to be too wet after it has rooted).

On Day 10, the greens were rolled with a Salsco roller to start the smoothing process. Day 15, the greens were mowed with a Toro 1000, set at .180. No grass was cut.

Day 16, the mower was lowered to .150, and the tops of the sprigs' clumps were cut off. Starting Day 17, the mowers were brought down in increments of .010 inch to .100 over a two-week period.

The watering program was cut down to twice a day for a few days and then once per day. After a week, we watered

the greens every other day. At that point, the grass began to fill in quickly, (in conjunction with the following cultural practices).

After the greens were established, we used a Toro 3100 Triplex with double wiehle rollers to mow them daily. This was done so that the labor during the grow-in was at a minimum, because we could not spare four employees to walk mow. Two weeks before we opened (Oct. 1997), we switched to the walk mowers.

The grow-in fertility program, consisted of light frequent applications of fertilizer based on soil and tissue samples. The same day (Day 16) that we lowered them to .150" we started the fertilization on the greens.

We alternated the products, ammonium sulfate, di-ammonium phosphate and a complete fertilizer, every three days at 1/2 lb. nitrogen per 1000 sq. ft., until they were completely filled in. Once they were filled in, we went to

Key Points

- The sprigging rate on the greens was 20 bushels per thousand square feet.
- The first 10-14 days of grow-in is about the same as Tifdwarf, so the initial watering cycle is at the superintendents discretion.
- Champion bermudagrass does not like "wet feet" after it has rooted. On average we deep water only once or twice every seven days.
- Fertility and cultural programs have to be fine tuned to prevent excessive thatch.
- Super thin bedknives are required for the necessary low heights of cut preferred by the ultradwarf grasses.
- Most people who have planted the new varieties feel the rewards are worth the effort

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Matt Taylor is the director of golf course operations for the two Bonita Bay East courses, the Cypress and Sabal in Naples. The putting surfaces of these courses were planted with Champion bermudagrass. Photo by Joel Jackson.

once a week at 1/2 to 3/4 lb. N/1000 sq. ft. depending on the growth rate.

After six weeks (on a normal program), we started to see a layer of "mat" or "thatch" on the greens that was difficult to get under control. This could have been caused from over-fertilizing the grass after establishment.

Since the 1997 Cypress grow-in, Champion was planted on the Sabal Course in 1998. The Sabal is the second and final course built at the East site.

We tried to lower the nitrogen rates to almost a normal program after the greens had filled in: once every two or three weeks in the summer.

This produced a better product in terms of "mat" production, and caused fewer problems. The grass will naturally produce its own layer, if not mowed low, and cultural practices are not followed.

The greens were topdressed with a Toro Topdresser when they were stable enough to support the top dresser and tractor. The sand was put down heavily at first so that it filled in the voids. When it was dry it was brushed with a steel drag mat.

This was done until the greens were smooth and level. Then we topdressed on a normal two-week schedule lightly.

Verticutting with a Toro Triplex started as soon as the grass was able to be verticut without ripping it from the ground.

Verticutting was done when the grass was dry and then topdressed. (The depth of the verticutter was the thick-

The grass will naturally produce its own layer, if not mowed low, and cultural practices are not followed...

Verticutting was done once a week. We have found verticutting is better to do more often than once deeply.

ness of a dime). This was done in two directions, usually 4-10 and 8-2. Verticutting was done once a week. We have found verticutting is better to do more often than once deeply.

Fertilization

During the last 18 months we have learned a lot about the ultradwarfs, mainly Champion, in terms of fertilization. Our normal program includes dry products as well as many liquid products.

We rely on tissue and soil samples to provide us with data to determine our fertilization needs. Bucket counts on the amount of grass being harvested

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is also very important to us to use a guide to overall health and vigor of the greens.

Our basic program consists of a dry fertilizer every two to three weeks. It is put out at 1/2 to 3/4 lb. N/1000 sq. ft. depending on growth and time of the year. Usually we use a blend that can be put down evenly at the 1/2 lb rate.

Our liquid program consist of a minor element package once per month or as needed. We also use a 12-0-0 with Fe once per month. During the winter potassium nitrate is sprayed for color and growth response after cold snaps.

Dry fertilizer incorporation is a problem on these greens. A mini or micro blend must be used when heights are below .140.

We are still in the process of fine tuning the program, which has been successful. Rick Tatum at Shadow Wood CC has gone to more of a liquid program and is having great success with his Champion.

Dry fertilizer incorporation is a problem on these greens. A mini or micro blend must be used when heights are below .140. We are still in the process of fine tuning the program, which has been successful.

Topdressing

Topdressing is very important with this grass as with Tifdwarf if you are going to produce smooth surfaces with consistent root zone mixes. We built the greens with 80/20 and switched to 90/10 for topdressing six months after construction.

We have tried straight sand to cut back on the amount of organic matter but found that it dried or wicked the moisture out of the top quarter inch of the profile.

The greens are topdressed every two weeks lightly with a Terra Topper set wide open. At this setting it applies a very light, even coat of sand.

The greens are then brushed with a drag brush when the grass is actively growing. During cooler times when the grass may not be growing as quickly as desired we use a steel drag mat with a piece of shag carpet bolted to it.

During the summer after core aerification or verticutting, a Toro topdresser is used to apply more sand

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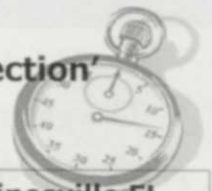
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Regular topdressing is a must to groom the putting surfaces. During the cooler months a carpet, which is more gentle on the turf, is attached to the drag mat to work in the top dressing material. Photo by Matt Taylor.

This grass does not produce a very deep root system; most of its strength is in the rhizomes. This will concern most people until you are comfortable with it. I can remember during April of 1998... I would look at the roots and wonder when it was going to check out and it never did.

it needs to be done more or less often. Bottom line it is not on a certain schedule... just as needed.

The grass can definitely take as much light grooming as it can get. It can produce a mat layer that will affect mowing, ball roll etc, if not controlled. When we groom, the grooming reel is set at "0."

This will just tickle the grass and stand it up. You can go deeper if you do not mind the grooves made by the groomer.

Please keep in mind we keep our greens at .120 or lower during the season. We also try to control the mat layer with topdressing and mowing low.

When the grass is actively growing, we use a triplex mower with verticutting reels set at the thickness of a dime in the afternoons between play

to help control the mat layer. We then take triplex mower out behind it and mow them dry. During the summer months the verticutting with the Triplex is stepped up to once per week and is done somewhat deeper.

After the first full season with Champion, we decided in early May 1998 to Mat-a-way them. The aggressive verticutting produced some interesting results. We went very deep, setting the blades until they actually penetrated the soil slightly. After verticutting them we collected the material produced. We then mowed, fertilized and watered them.

After two days we aerified with 5/8-inch tines. They actually came back very well until we got into some weather-related stress. The conditions caused them to thin and turn yellow

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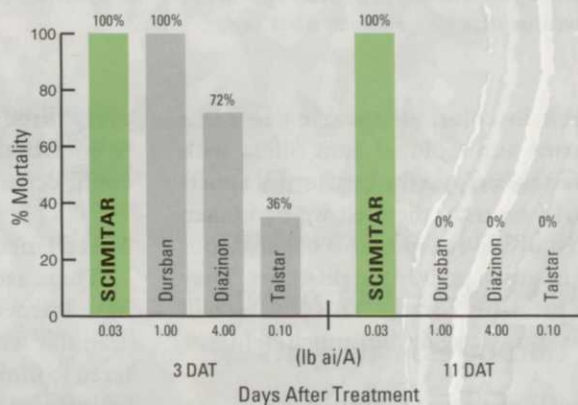
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Source: J. Reinart, Texas A&M University, Dallas, TX, 1996.

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Once a year, usually in May, an aggressive Mat-A-Way verticutting is performed to control potential thatching. Photo by Matt Taylor.

green in color. In speaking to Mike Brown and Colonel Sam Sifers with Coastal Turf and the Institute of Sports Turf Research, they felt we had taken most of the recuperative capacity out of the grass, mainly the rhizomes. They are probably correct. This year we will Mat-a-away again but much lighter.

Aerification

Aerification is done up to six times per year on our Champion. Three times with 5/8-inch tines and three times with 1/4-inch tines. The cores are harvested and then topdressing is applied. We also put down the Toro product 12-3-9, which is an organic fertilizer, both the sand and the fertilizer are then drug into the holes. During the winter the greens are also Hydrojected

every three weeks. The Aeration helps to control the mat or thatch layer that could occur.

Miscellaneous

There are a couple of things that we have learned with the Champion: the granular fertility program must be altered to more of liquid diet. During the winter, dry blends are still very important, but at times of the year depending on heights of cuts are difficult to get incorporated.

We have also learned that during the summer we can keep the height around .150 and spray them with Primo and still produce excellent putting surfaces.

We started with a rate of .05 ounces/1000 sq. ft. and then went to .06 ounces/

1000 sq. ft. every two weeks. The Primo is mixed with 12-0-0 with Fe from Harrell's to help mask potential bronzing. After the first application we got some slight discoloration, but after that received none.

We have also found the walking greens mowers must be equipped with Micro-cut bed knives (thinner than the Tournament knives) to keep the bed bar from dragging at low heights of cut.

I have heard many negative Nellies comment that all of the ultradwarfs are more expensive to maintain. When it comes to the bed knives, I will agree. After you topdress, and the greens are being mowed at .110 no matter how lightly you apply the sand, the bed knives are disposable.