McKenzie at Disney World maintaining three championship courses

Walt Disney World in Orlando, Florida, is a complete vacation for some 14 million people every year. Most famous for its theme park and world-renowed cast of Disney characters, it is also a resort community replete with water and land sports as well as a host of nighttime entertainment.

As varied and diverse as they are, Disney attractions do have one thing in common: they must all live up to a demanding standard of excellence, a standard Disney has set by never settling for less than 100 percent in any aspect of its operations.

It is within this challenging environment that Walt Disney World golf course superintendent John McKenzie, under the direction of Phil Ritson, Disney's Director of Golf, oversees maintenance of three championship golf courses and a junior golf course. "Like all Disney employees, my first priorities are the comfort and enjoyment of our guests," says McKenzie, who came to Walt Disney World while it was still under construction in 1970.

The Disney image and standard of excellence prevail on all of the golf courses. And while they may be part of the Vacation Kingdom, the quality of the courses is the result of excellent management and quality maintenance personnel. McKenzie and his staff of 42 full-time employees work constantly to keep the courses in tip-top shape.

Different Challenges

While the same careful management practices are applied to all three courses, each has its own personality, providing different challenges for golfers at any level of experience.

The Palm, Magnolia and Lake Buena Vista courses, site of the Walt Disney World National Team Championship Golf Classic, offer three types of challenge. Rated as one of "Americas 100 Greatest Tests of Golf" by Golf Digest, The Palm is loaded with water. "The back nine is one of the most picturesque courses in Florida," McKenzie claims, adding that the water reduces the need for large areas of rough.

"The Magnolia course," he continues, "is wide open but heavily bunkered. From some of those tees, it looks like a desert." The Lake Buena Vista course, while operating on a separate budget, is also under John's supervision. A tight, tree-lined course, it too is enjoyable and challenging.

While seasonal weather changes may not seem like a significant problem for a Florida golf course, McKenzie maintains that they are. "We are extermely busy during the winter months," he says, "and we alter our maintenance practices for that reason." With each course averaging 200,000 square feet of greens, John has great flexibility in controlling their size. He allows them to spread over the winter so he can alter his pin placements daily to reduce wear and tear on particular sections of each green. During the summer, he'll restore them to their original size to cut back on the time his employees spend mowing each day.

John maintains a hybrid bermudagrass on his fairways and greens. And overseeds the greens with ryegrass from late November through early December.

Greens Maintenance

John maintains the greens at the standard 3/16ths of an inch yearround, while keeping fairways between 3/8ths and 5/8ths of an inch depending on how fast the grass is growing. "During the summer the grass grows too fast to maintain such a short cut," claims McKenzie. "First of all, you are creating a stubble appearance by almost eliminating the leaf surface. More importantly, you are making the grass very vulnerable to stress." He likens this situation to an animal with a wound that never gets a chance to heal. "That animal will never be 100 percent," John observes.

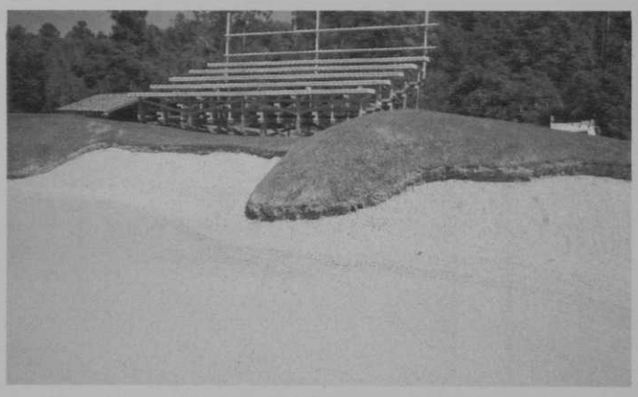
John is now going to "fertigation" on the courses, because he likes to apply liquid fertilizer at night so as to avoid shutting down a course during playing hours. However, since the liquid is extremely soluble and is released into the soil almost immediately under very wet conditions, McKenzie relies primarily on bi-annual applications of slow-release granule fertilizer. All tolled, he likes to apply 26 pounds of N per 1,000 sq. feet of putting surface, and 6-8 pounds on a similar fairway area each year.

"We need the slow release granule out there to give the turf a constant supply of nitrogen," he believes. "It's a chemical-coated form of urea that is broken down by water. We know we can put down 3 pounds and it'll still be releasing three weeks later. If we do the same thing with a pound of ammonium nitrate, I'll have to make another application in a week."

While the greens, tees and fairways present the usual problems for McKenzie and his staff, he finds the bermudagrass is particularly troublesome in and around the sandtraps. McKenzie says the grass crawls down into the traps almost as rapidly as it fills a divot on a fairway. "Bermuda spreads so quickly through its rhizome system that if we left it undisturbed for a month it would cover a third of a trap." To eliminate the need for a man to spend all day edging with a shovel, McKenzie uses a 2 per cent solution of Roundup, applied at a very low pressure, to create a two-inch lip and provide a neat, manicured look.

If long periods of rain prevent McKenzie's staff from making the regularly-scheduled application of Roundup, McKenzie will resort to using a nylon string trimmer. "We just turn it on its side and run it along the rhizomes like Roundup can. It also takes more time," he says.

Bermudagrass is not the only vegetation thriving in the ideal Florida climate. To John's dismay, the tropical sun and rain also provide encouragement to virtually every weed in existence, and add to the difficulty of



In the photo at bottom left on page 18, McKenzie sprays Round-up around the palm trees he uses as 150-yard markers. This prevents tall grass around the base, but doesn't harm the trees. In the photo above, McKenzie places great emphasis on maintaining his sandtraps. "We have so many," he says, "that if they don't look finely manicured, the entire course looks a little ragged." At right, this photo of the Magnolia course shows how some of the greens are heavily bunkered.

control.

Poa annua, a weed that is sometimes desirable in more northern states, is a source of headaches for McKenzie and many other golf course superintendents in the South since low cut grass allows the poa to spread. John bases his control program on pre-emergence herbicides, applying a selective liquid or granular grass herbicide to poa-infested areas prior to weed germination in late October.

Still in all, he's found that these selective applications have not controlled all the fast-spreading *Poa annua*. He now intends to go "wall to wall" with the treatments. "We used to just spot treat our tees and slopes," he recalls. "But what we weren't controlling just continued to spread, and we don't want to let it get out of hand."

"Impossible To Control"

Another fast-spreading perennial that McKenzie considers by far his most difficult weed control challenge is torpedograss. "Every weed presents a problem for us," he points out, "but torpedograss is almost impossible to control.

"We don't have many heavily-infested areas," John continues. "Most of it comes in through canal banks which provide the wet conditions torpedograss thrives on." Having achieved only marginal results with conventional herbicides and diesel fuel applications, John decided to tackle his nemesis the same way he handled bermudagrass. "You can burn torpedograss back with other non-selective chemicals, but it comes back so fast you are always trying to catch up," he laments.

"We haven't found anything more effective for the torpedograss than Roundup," he claims. "You don't have to go back and spray every week like we used to with other nonselective chemicals." The lack of soil activity with Roundup allows him to apply herbicide around all his trees, as well. "We use small palm trees as 150 yards markers, and one application enables us to control any high grasses growing up around them," he notes.

When asked about his other serious pest problems, John quickly points to mole crickets, explaining that "torpedograss and mole crickets are the two most widespread problems for Florida golf course maintenance people."

Underground Damage

Mole crickets cause damage by burrowing underground and feeding on the root systems of bermudagrass. Dormant throughout the winter, they lay their eggs underground and leave holes when they emerge in the spring and summer months.

To control the crickets McKenzie uses systemic chemicals "which we incorporate heavily with water to get the insecticide down within striking distance of the pests."

John is fortunate in that he doesn't face all of these challenges alone. He has a fully qualified assistant for each of his courses—Scott Welder, for the Palm course, Milt Starr on the Magnolia, and Joel Jackson at Lake Buena Vista. They're all experienced professionals.

McKenzie also cites the skill of Larry Kamphaus, his mechanical superintendent, in keeping all the equipment in tip-top shape. Larry fills in for any of the other assistants on their days off, and will also cover for McKenzie.

John McKenzie himself has already reached what must be considered the pinnacle of any golf course superintendent's career. In 1979, he successfully completed all the required work and testing for certification by the Golf Course Superintendents Association of America, a distinction held by less than 500 of his peers across the country. He is also a member of the Florida Turf Grass Association, and the Central Florida Superintendents Association.

Controlling Algae

Sometimes, however, even all his experience and skillful assistants aren't much help in combating certain problems. Algae, for example, is uncontrollable. "You can work at repairing it," John says, "but the sun has got to come out to dry the grass." To help nature along, McKenzie brings up the height of the grass to reduce stress as much as possible, and shuts off the irrigation.

"We have also come up with a way of spreading some of the water around our fairways that don't drain very well," he adds. What he did was devise a squeegee-like attachment for a normal sandtrap rake. The strip of rubber spreads the water around more evenly, or off into a canal or lake where possible."

It's this type of innovation that enables McKenzie and his staff to keep abreast of the challenges presented in maintaining the Walt Disney World courses. Working closely with Golf Director Ritson, McKenzie and his crew consistently meet those challenges.