

## Coachella Valley

# Greener By The Year

MAINTAINING the landscape for golfing and viewing is not easy. A great deal of skill and ingenuity, to say nothing of money, goes into it. The courses must be carefully designed and laid out in consultation between golf pros, golf course architects and irrigation engineers.

The irrigation systems are the key to the life of the golf courses. They not only water the fairways and greens, but they also feed them with nutrients and keep them free of disease. The irrigation systems, while watering the lawns, can feed them with soluble fertilizers and are used to spray on pesticides.

More and more golf superintendents are applying fertilizers through the irrigation systems. Fertilization, as it is called, saves on labor, is fast and can be precisely controlled. Inexpensive soluble fertilizers can be applied oftener and at low rates for steady, continuous growth.

Arnold Palmer's beautiful, new million-dollar, 125-acre Ironwood Country Club course is an example of a first class, ultra modern golf layout where planning and engineering have combined to produce great results. The name, Ironwood, incidentally, is taken from that of a hardwood tree that frequents arid regions. After playing a practice round on the new course, a pro friend of Palmer told him that the course may be Ironwood to Palmer, but it was "wood wood" to him.

Ironwood is contoured between foothills on a gently sloping (four percent grade) alluvial fan spreading out of a mountain valley into the west edge of the Coachella. Much of the land belongs to the Coachella

Water District, which wants to control the runoff through the valley and wants the water to percolate into the ground to feed the water table.

To accomplish these objectives, the Ironwood fairways were designed by golf architect Desmond Muirhead to surround "islands" of desert left in their natural state — sand, rocks, cactus, and even jack-rabbits. Recently some of the poly-vinyl tee markers were damaged as though lawn mowers had chewed them. Actually, the scarring had been made by coyote pups teething on them.

Water seeps through the natural desert formation readily. Too readily. It needs to be stalled near the surface to give grass roots the opportunity to absorb the moisture. The stalling effect on the Ironwood greens was accomplished by mixing fine sand with a forest mulch of redwood and seaweed, explained Glenn McGihon, who is Arnold Palmer's personal representative, as well as golf professional at Ironwood. The fine "blow sand" was obtained by helping the city of Palm Springs clean it from its streets.

The fine sand and mulch were spread over the greens after the plastic irrigation pipe system had been laid out and in place for the course. The main line for each fairway is either a 4-inch or 8-inch plastic pipe, with the laterals 1 1/4" to 2" in diameter.

The man who helped in the design of Ironwood's \$250,000-plus irrigation system was Bryce A. Hadley, partner-manager of Indio Pipe & Supply, Inc. More than 1,300 Rain Bird sprinkler heads are

strategically located throughout the course. Many are rotor pop-up heads that pop up when water pressure is applied. The Rain Bird TH valve is used on the course because it doesn't clog from the sand in the water. Each valve controls a lateral that has an average of six sprinklers.

A completely automatic watering system is maintained through Rain Bird station controllers, with twelve stations on each controller, on the average. In addition, the course is one of the few equipped with tensionometers that monitor moisture in the soil. Golf course superintendent Michael McGehee is using them to learn how much moisture is required to maintain field capacity.

"Because we wanted everything at Ironwood to be first class," commented McGihon, "we wanted to make certain that the irrigation system was first class too. So we selected Rain Bird equipment. Another reason was that Mr. Hadley, the Rain Bird distributor, was close by in Indio. He worked closely with us all the way." In fact, 29 of the 36 courses in the Palm Springs area use Rain Bird equipment.

At present, the irrigation system is supplied by water from one well. It has a capacity of 1.4 million gallons per day. At the course's reservoir pumping station, 2,300 gpm is maintained at 125 psi. The average head pressure is 62 psi,

*(continued)*

**Right:** *The rugged beauty of the desert mountains provides a picturesque backdrop offsetting the lush green of the fairways in this view from the clubhouse.*





View of Rain Bird No. 51 SAM rotor on first landing zone from the tee in the most unique golf course in the desert. The roughs are undisturbed natural desert and the golfer must tee off over the natural roughs to the landing zone.

## COACHELLA (from page 24)

McGehee said. The course has six lakes, three of them reservoirs and the other three water hazards. All of their bottoms are lined with polyvinyl to prevent seepage.

As desired, the irrigation system also delivers ammonium sulfate and nitrogen for fertilizer, as well as potassium for root structure. McGihon, who appears to know as much about the horticultural side of golf as the playing side, finds that fertigation is "really the answer" to feeding. He believes the irrigation system also will be the answer to combating such invaders as fungus. It can be treated with pesticides delivered through sprinkler heads. Fungus is less of a problem than in more humid regions, he said, but it still can get a foothold in the desert where grass requires frequent watering.

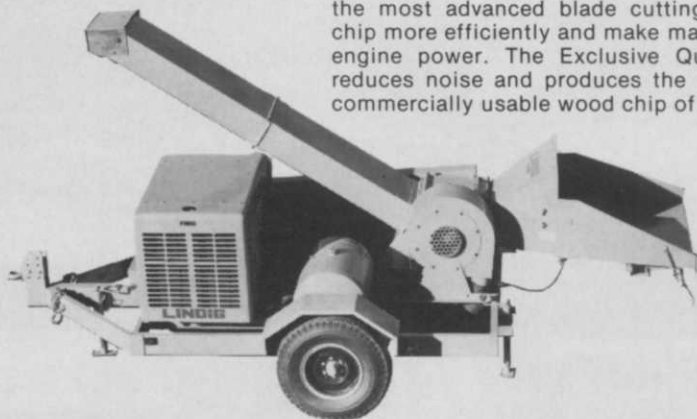
A major green thumb experiment is under way at Ironwood. It could result in greatly minimizing the keeping-things-green problem for future desert golf courses. The standard practice at those courses is to plant the fairways in bermudas and to overseed with winter rye grass in the late fall. This is done so that the rye can take over during the six or more weeks that the bermuda is brown and dormant. It has been necessary to use the bermudas because they are the only grasses known that will withstand the desert heat. Unhappily, the bermuda dormant period happens to coincide with the peak of the winter visitor season in the Coachella. Overseeding with rye costs all the Coachella courses a grand total of more than one million dollars per season just for the seed alone. No small item.

In considering the different kinds of grasses that might be used for the Ironwood fairways, McGihon wondered if some way might be found to eliminate or at least cut down on the expenses of the overseeding. The cost of winter rye seed has been as little as three to five cents a pound. However, last year the price went up from 5.6 cents a pound to 38 cents. It takes 400 to 600 pounds per acre.

"We were ready to seed about the middle of September," McGihon recalled. "If we'd put down a hybrid bermuda it would be

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getting close to the time it would go dormant. The latter part of October when we were likely to get our first flash freeze we'd have lost it. The Santa Ana strain, which is the best of the bermuda hybrids, in my opinion, has a complete loss of color during a dormancy period of about six weeks. Furthermore, the discoloration could last as long as three months."

One alternative that McGihon investigated was to plant bermuda and then overseed with a colonial highland bent that is raised in this country.

"They've been using this bent in California's San Joaquin Valley around Bakersfield, where the temperatures approach those of the desert," he said. "They've gotten up to three years of color out of one overseeding with that highland bent. The bermuda doesn't force it out."

McGihon had to take another factor into consideration. The desert islands adjoining the fairways were to remain in their natural state. If bermuda had been planted, he couldn't guarantee that the grass wouldn't spread into those areas. The only way it could have been prevented was through the use of herbicides, and McGihon didn't want to use them because of the possibility of the herbicides percolating into the underground water tables.

Another possibility was a New Zealand Dry Land Bent Grass that had been introduced into this country from Australia. It had been developed in an arid area and supposedly was heat-tolerant, drought-resistant and would maintain its color through the winter.

McGihon made weekly visits to a turf grower in nearby Indio who had some 20 acres planted in the new grass. He watched its growth, its response to a substandard watering system, and its recovery from adverse feeding practices. Some of the acreage was lost. The observations showed that the grass could not tolerate salinity in the water and required less water than bermudas.

It was not a creeping grass so there would be no problem of its spreading into the natural desert areas at Ironwood. However, this same characteristic meant that the recovery rate of divots on the fairways would be slower. It would result in more hand seeding and top dressing on the fairways. A



*The No. 51 SAM rotors provide an artificial oasis on this desert golf course.*

problem, too, that hadn't been solved was how it would stand up against golf car traffic. Most bent grasses have a very low tolerance to wear.

International Turf Company of Phoenix brought some of the grass to McGihon, its representatives saying they had put some on a golf course at Henderson, Nevada, in a 60-40 mix with bluegrass.

Despite its problems and unknowns, the possibilities of this grass intrigued McGihon. With the well engineered and equipped irrigation system at Ironwood, some of the earlier problems could be overcome, he believed. The grass might

even remain green the year around, eliminating the costly overseeding problem.

McGihon got the go-ahead and the new grass was seeded on the fairways. Added to it was fast-growing red fescue to act as a nurse crop for the Dry Land Bent, shading and protecting the new, young grass, which grows in tufts. The red fescue will go because it is neither heat nor drought tolerant. The greens and tees are of Penncross Bent, which heals more readily from divoting than the other bent grasses.

"The water requirements of our two different bent grasses are entirely different," McGihon said. "But

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**CUSTOM LAWN** (from page 16)  
have to offer and then help them appreciate your efforts.

Much as each businessman should periodically take inventory of his physical assets, we should also take realistic stock of our promotional ammunition, meaning our own ability to "package" our service so that a positive overall message is conveyed to our customers. If you know that promotion and merchandising are your weak points . . . get help! This is the age of specialization and paying a promotional expert is preferable to paying a bankruptcy lawyer. Hiring a professional advertising agency or counselor may be one of the best investments you can make, just as you tell your customers that they will receive special knowledge and skills when they retain you.

As custom lawn application services become even more popular with ex-do-it-yourself homeowners, it seems inevitable that the number of profit minded laymen attracted to this field will increase because the investment required to get started is relatively small and superficial know-how can be acquired in a short time. This has been the case in

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## **COACHELLA** (conclusion)

this combination can be programmed into our flexible irrigation system, which has been designed with this combination in mind."

McGehee points out that the New Zealand grass gets more watering because there is no retention mulch on the fairways, as there is on the greens. During May the fairways got 30 minutes of watering every 24 hours (three inches a week) and 20 minutes for the greens. The entire 125 acres are watered at night in 13 hours. Slightly longer watering periods were anticipated as the weather got hotter in the summer.

The course opened on schedule April 30, and golf superintendents are watching with great interest the 125-acre experiment at Ironwood. If the New Zealand grass proves to be a good, year-around grass, it will mark a milestone in desert golf course history.

Unfortunately, if the new grass does survive well the year around, it will not help already established golf

the past and it's a good bet that the trend will continue, particularly with the large number of capable people who have lost jobs in the past two years and are seeking security in their own businesses.

Even though the opportunities in this field presently are still vast, at some point in the future the competition will become keener. By that time many of these promotional minded newcomers will have gained extensive practical experience and staked out strong competitive positions in their markets.

Today's complacent professional who ignores the handwriting on the wall and does not sharpen his promotional skills with as much care as he devotes to his equipment runs the risk of experiencing a harsh financial jolt in the not-to-distant future. Knowing how to identify and control insects, fungi and weeds is, of course, indispensable to the conduct of a professional lawn service, but this knowledge can be obtained rather quickly. Knowing how to identify and control a customer in a rapidly changing market may be more important in the long run to the financial health of the professional. □

courses that have been using bermudas. They could hardly afford the shut-down time required to kill off the bermudas before reseeding with the new grass. But any additional courses built by the existing golf clubs could take advantage of it.

Additions to courses are constantly being made in the Coachella. Although Ironwood has a ways to go before it sells out the condominiums and lots associated with its country club, it already has plans to add a nine-hole executive course, and, south of the clubhouse, an additional 18-hole course that will be shorter and less difficult than the present one. Then, too, seven acres have been set aside for a par three short course.

Since last year the Coachella golf growth has looked something like this: Ironwood has completed its first 18. Indian Palms has added another nine. Sunrise and Sun King each has added another 18. Palm Desert Country Club has added a nine. And so it goes. The Coachella continues to get greener and greener. □

## **REDUCING** (from page 22)

"We start our fairway program about March 15 to April 1 with RZ, sometimes in combination with chelated iron," Santoianni explained. "That first application usually takes care of leaf spot. Our last application depends on the weather, but you have to spray sometime for snow mold. One year, we made our last application just before Christmas."

Santoianni's preventive four-season treatment usually amounts to 36 to 44 fungicide applications per year. Besides the regular treatments, Santoianni and his assistants check the turf regularly for disease problems that may have come on since the last regular spraying. "There are a couple key spots I always check, where disease always starts first," the 27-year grounds-keeping veteran noted. "But usually, the only time we make an extra spraying is when we find Pythium."

Getting the most value out of any chemical depends on proper timing, Santoianni said. He'll reschedule a routine fungicide or fertilizer application if the weather conditions aren't right. "Knowing when to use any product is the secret of getting effective results," he said. "Your most effective products — including fertilizer — can be ineffective or actually damage the grass if they're applied under the wrong conditions. Then you've not only wasted your money, but you may have done harm rather than good."

Santoianni has experimented with still another innovation that he thinks will make for more timely and economical insecticide use. "I tried a sample of Diagnostic Aid last year, and it really will help you find out what kind of insects are present," he said. "Different insects are present at different times of the year, and you need to get your insecticide on at the day of hatching. Diagnostic Aid can really help you target your applications. I plan to use it next year, spot-checking a few greens about every two weeks."

Santoianni considers his program of increased efficiency and budget-consciousness a return to "the old way." But with increased golfer traffic on most courses, and the looming threats of recession and inflation, a program that trims the fat from the operating budget may be more of a glimpse into the future.