

WHAT ONE SUPERINTENDENT CAN DO

Armed with 35 acres, 22 years experience as a superintendent and his own ingenuity, Bill Lyons created a "gem" of a golf course. It embodies scores of valuable ideas for superintendents and other club administrators by Jerry A. Olson

After 22 years as a golf course superintendent, Bill Lyons retired—to run his own golf course. While serving as superintendent at the prestigious Firestone CC, Akron, Ohio, he saved his money and in 1950 bought a 65-acre parcel of land in Canel Fulton, Ohio.

Still holding his position at Firestone, Lyons and his wife, Lucile, spent their spare time clearing the land for the new course. It took them 12 years, until 1962, when the first nine holes were ready for play and opened to the public.

PHOTOGRAPH BY RAY KEENE

"I wanted to build a family golf course, Lyons says, "that both men and women of all ages would enjoy and still be challenged."

The immaculately groomed nine holes attracted golfers and nature lovers. "A golfer can bring his family out here and everyone enjoys the atmosphere," he says. "For those people who don't play golf, there is plenty of room for them to just study nature—flowers, 50 kinds of trees, many birds and different kinds of grasses."

But at Lyons Den, it isn't just

"grass." Lyons is the originator of the *Nimisila* bentgrass, now in use on greens at over 100 golf courses throughout the United States. He hunted for and found a bentgrass that would begin to grow before the ice left the soil. That made it a great competitor to *Poa annua*. *Nimisila* also grows well all season and is the last bent to go off color in late fall. Moreover its putting quality is superior. "With 725 blades of grass per square inch, and less grain than coarse bents, it has to be a superior strain," says Lyons.

Another reason Lyons Den is in such superb condition is due to Lyons' expertise in greens construction and feeding. "There are several methods for feeding greens, and each is successful if carried out properly," says Lyons. The key is understanding the method by which a plant takes up nutrients. Ninety-five per cent of all the nutrients taken up by a grass plant are absorbed from the soil solution," he continues. "Water soluble chemicals are the key. If these chemicals are applied in water and then thoroughly and immediately washed down, you not only reduce maintenance time, but allow the nutrients to get into the plant quicker. Within a couple of hours you can see the effect.

"As we approach the season when the greens get the 'hots,' we want our greens starved for nitrogen, so we seldom apply more than one-quarter pound active N (per 1,000 square feet) at a feeding. This gives the plants a seven to 10 day

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SUPERINTENDENT *continued*

supply. Controlled feeding aids in controlling diseases. We applied fungicide only three times last year. Also," he continues, "never apply an ammonium-based nitrogen without applying an equal quantity of potash, because the ammonia will only deplete and leach out the potash already in the soil."

How can a superintendent gauge the condition of his greens?

"For less than \$10, Lyons responds, "a superintendent can purchase a leaf testing kit from Urbana Laboratories, Urbana, Ill., and in one minute can test the clippings. The superintendent can then use his judgement and apply the proper nutrients. Without this \$10 worth of insurance, wouldn't the course superintendent just be guessing?"

For construction of his greens on the second nine, covering almost 3,000 yards over 50 acres, Lyons used the Four Pore System, the first step of which consists of laying a native clay base that expands and contracts as the moisture content of the soil varies. Next, four-inch clay tile, laid to grade, ties into the main drainage system. The tile lines are spaced at parallel, 10-foot intervals. In the third step, Number 67X gravel covers the clay tile and base of the green to a minimum of four inches to a maximum of 18 inches, as needed over the tile lines. Just before the greens mix is applied, the edge of the green is lined with eight or 10 mil plastic. Then, the final step, is the placement of the Plant Growth Medium (PGM), a registered, USGA-tested and approved material, consisting of eight parts concrete sand, one part powdered clay and one part fine peat moss, blended by a special slow process.

Each sand particle is clay coated, making it chemically active. Finally, the *Nimisila bentgrass* is planted. Roots in the alkaline PGM mix quickly extend 12 inches into the gravel and stay that way all summer.

"Greens built over the Four Pore System require less water than other greens," says Lyons. "We water only about six times a year. Water is actually held up

in the PGM by the gravel until the PGM reaches 100 per cent saturation, then it is just like a valve opening. All the water the plant cannot use, is let out automatically. Within minutes after a sudden storm, the greens are ready for play without the danger of destroying the soil pores in which the roots live."

Lyons estimates that the cost of materials to build his greens runs about \$2 a square foot, which "is cheap compared to the rug on the clubhouse floor. I ask you which will last longer?"

The success enjoyed by Lyons Den cannot be attributed solely to Lyons. His family helps operate the course. Lucile handles the modest clubhouse and snack bar, sons Bill Jr. and Carlos handle the main-



Bill Lyons

tenance chores on the course and their wives help run the clubhouse. Lyons' only outside labor costs occur in the summer when he hires high-school or college bound youngsters. To several of these young people Lyons has given \$300 bonus as scholarships to enter turf management schools.

Lyons also has initiated other innovative features at Lyons Den to make the course more profitable.

Because of the heavy demand from golf leagues formed by surrounding corporations, Lyons installed a 3,000-watt lighting system for the last holes. "We found that the last of the league teams

were always finishing up in near darkness, so we experimented with lights on the last hole. It paid off for us, and so we are lighting the next to last holes. It would have been too costly to light the whole course, and we didn't have that great a demand that late, but this additional convenience has already paid for itself."

One major and novel undertaking by Lyons was the restoration of the six lakes on his property.

"Eutrophication had created scummy water, which was a breeding ground for mosquitoes. In our case, we use the water to irrigate the course, so I couldn't use some of the algacides now on the market. Some superintendents fail to recognize," Lyons points out, "that some algacides have copper as their basic ingredient, and greens are very sensitive to copper. A superintendent can end up destroying his greens if he uses the same water for irrigation. You have to watch what you dump into your water supply to control weeds and algae."

Lyons experimented with the Air-Aqua system, made by Hinde Engineering Company, Crystal Lake, Ill. The system raised the oxygen level far above that required for raising trout in the two-acre lake. Water temperature, even in winter, was 36 degrees F. at top and bottom. No freezing. Basically, a lead weighted tube with very small holes, spaced about 12 inches apart, is laid in the deep part of the lake. Then a compressor pumps air into the lake, which rises, making it look as if it were boiling. Because eutrophication is caused by a lack of oxygen, by adding oxygen, weeds and algae are reduced.

Now with an attractive, healthy lake, Lyons has stocked fish and added a feeding program. Bass grew from June eggs to six inches by September. He plans to add lighting to the lake and open it up for fishing from 8 to 12 p.m., when golfers are not using the course. It may sound like a harebrained scheme," Lyons says, "but you'd be surprised at the number of fathers who will bring their family out here for an evening of fishing."

Lyons also keeps a flock of tame mallard ducks on his lake,

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which not only adds interest to the setting, but helps control weed and algae growth.

One of the major and unforeseen problems Lyons has encountered, along with other golf course owners in the area has been taxes. "In 1960, we were building the number four green, and I wanted to put in a sand trap. While we were digging, the tax appraiser walked up and said it was going to cost me an additional \$500 in appraised valua-

tion. I said, 'Boys, fill it in.' The year after the completion of the course, we got our tax bill. It was five times higher than the assessment on the farm across the street. I kept saying to myself, why should I be penalized by five times higher taxes than the playboy farmer across the street who raises horses for his own enjoyment? I questioned the tax people and found out that in Ohio the tax laws did not mention recreation. The laws were written when people worked 10 to 12

hours a day. Land was classified as agricultural, residential, commercial or manufacturing. This was a loophole for the county auditor," Lyons explains. "They slapped us with a commercial tag on our entire acreage, and we had no recourse. He wouldn't classify us as agricultural."

Lyons, determined to change the situation, embarked on a campaign with other golf course owners in the area to establish green belt legislation.

He helped form the Ohio Outdoor Recreation Assn. and served as its first president. His initial crusade resulted in the passage of a bill putting Ohio on Daylight Savings Time. This allowed local working people extra time to utilize the golf course and increased the number of golf leagues.

More important was the push for green belt legislation. "It took six years for ORA to get the legislation passed through both the senate and house and signed by the governor, only to have the Ohio supreme court rule it unconstitutional."

Will Bill Lyons ever retire?

"I guess I'm a glutton for punishment," he responds. "There is something about working with nature, feeling the earth between your hands and watching nature at work. I guess that's what living is all about, and no man should retire from that." □

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RICHMOND, VA.—*Richmond Power Equipment Company*, a full-line distributor for The Toro Company, has a new proprietor.

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