



Jon Peck, assistant superintendent at the South Course, looks out at the 5th green at LACC.

Clean start for LACC greens

Bruce Williams jumped in to a greens renovation program at the Los Angeles Country Club with a mandate to keep the topography as is.

By DON DALE

When Bruce Williams came to work at the Los Angeles Country Club nearly two years ago, this beautiful pair of courses in one of the high-rent districts of LA was in the middle of an extensive greens renovation program.

The North Course was half-completed, with the South Course due up next. Williams modified the program somewhat, but more importantly, kept a meticulous record of each step along the way.

That's because Bruce Williams is an exacting kind of guy. Which is a good thing, because Los Angeles Country Club is an exacting kind of golf venue. The two were made for each other.

The LACC project started in an odd way, because the country club board of directors was upgrading the greens to USGA standards for the first time since the club's inception in 1898; yet they wanted the greens design to remain exactly the same for the sake of tradition.

A laser survey was done to record the topography of the greens.



Bruce Williams: greens crew has things well in hand.

The old greens, sub-grades and drainage pipes were removed. A clean start was necessary for this project, Williams says, and it's vital to remove all the old contaminated debris and soil.

"You develop a smooth contour for the new subgrade," he says. That is composed of the native clay soil and follows the contour of the eventual green.

Nutritional balance before and after

Williams says that one requirement for healthy establishment and growing of a fine turf surface is a "heavy" nutrient balance prior to seeding.

"I'm a firm believer in having good nutrition at the beginning," he says.

His pre-plant mix was 70 pounds of Milorganite (6-2-0) per 1,000 sq. ft.; 40 pounds of Roots Topdress, organic matter derived from seaweed; 10 pounds of gypsum; 16 pounds of Scotts STEP for micronutrients; 5 pounds of Scotts starter fertilizer (19-26-5); and 15 pounds of sulphate of potash (0-0-50).

"That ends up being 5.15 pounds of nitrogen per 1,000, 2.7 pounds of phosphorus, and 7.75 pounds of potassium," Williams notes. "That might be more than some people would use, but I had good success with it."

Williams says the above formulation was based on his own experience and his colleagues' advice, based on their experience in growing in greens. He says he is a firm believer in going to the people who know the answers and taking their advice.

One of the reasons that he fertilized so heavily is "to establish appropriate levels of ferti-

lity in an otherwise sterile, sandy greens-mix." He used 1.1 pound per 1,000 of A-4 bentgrass seed. This seeding rate is lower than for other bent varieties, but it produces a plant population of 2,200 to 2,500 plants per square decimeter.

Follow-up nutrition consisted of 5 pounds of Scotts starter fertilizer per 1,000 sq. ft., applied weekly for three weeks. Top dressing, using the original greensmix material, was applied weekly for 10 consecutive weeks.

New greens were planted on June 1 and were ready for play in the first week of September. Total N used during that period was 9.55 pounds per 1,000; total P was 6.6 pounds; and total K was 10.64 pounds.

Growing a championship golf green is only half the battle. Williams is just as precise in maintaining it with a regular fertilizer schedule.

Fertilizer is the primary component of maintenance, and the greens get a weekly foliar feeding of Gary's Green (18-3-4 plus iron) at .9 pounds of nitrogen per week.

"We supplement that with a 1-0-14 product for an equal ratio of potash to nitrogen," Williams says. Soil and tissue testing is done regularly. Micronutrients are added as needed.

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No choker needed here

For the drainage system, four-inch ADS pipes were laid in a herringbone pattern dug into the subgrade. The angles of the herringbones point down the slope to more efficiently catch water and carry it away. The pipe trench is backfilled with pea gravel.

"Then you put in a gravel layer—again maintaining the contour of the subgrade." Four inches of $\frac{1}{4}$ to $\frac{3}{8}$ -inch gravel does the trick, and 12 inches of top mix is the final layer. Williams decided he didn't need the "choker" or transition layer between gravel and top mix because the sizing of the gravel allowed for proper drainage.

The top mix consisted of 85% sand and 15% peat moss. Williams worked with a soil consultant to get the right sand.

"Once you get the top mix established you make sure it's compacted sufficiently so it's not going to sink on you," he says. That means light hand-rolling, because it should not be compacted so tightly that it loses its porosity.

Precise seeding of A-4

That plant population, along with the thin leaves of the A-4 variety bentgrass gives a very dense turf mat. It also has an upright growth habit, and this new-generation variety has been rated high in NTEP

trials across the country.

"It all equals quicker putting speeds without having to go to lower heights of cut to achieve it," Williams emphasizes.

He's aiming for 10 to 10 $\frac{1}{2}$ on the Stimpmeter, and the ability to go to 11 or higher for tournaments and special events.

"We're able to achieve that without going below a .125-inch cut."

Half the seed was planted in one direction, and half at a 90-degree angle with a drop spreader, using Milorganite as a carrier to improve distribution and avoid skips. Hand leaf rakes were used, also working in two directions, to manually dig in the seed and remove footprints.



Poa annua on greens is removed by hand. Here, staffer Leopoldo Castillo gets the job done.

"Then we rolled it with a hand roller to accomplish soil/seed contact," Williams says. The greens were watered uniformly immediately after rolling.

At germination, Williams' able crew, led by North Course assistant superintendent Doug Martin and South Course assistant Jon Peck, applied Subdue fungicide uniformly to prevent pythium. That treat-



Bruce Williams with assistant superintendents Doug Martin, left and Jon Peck

ment was repeated every three weeks.

"Within seven days we had germination. Within 14 days we were able to mow the greens for the first time."

Double row works

Irrigation systems were improved on the new greens, and one feature of that facilitated the growing-in. Williams had double heads installed on the South Course greens, and that proved an excellent move.

"At times the greens required more water than the greens banks did," he says. Double heads allowed precise watering according to grass species and soil type.

Germinated greens were watered by manual operation of the sprinklers. Checked hourly during daylight hours, the greens were kept moist constantly.

Poa annua control

Getting rid of *poa annua* was one object of renovating the Los Angeles Country Club greens. Williams did that during the renovation, and is assiduously fighting its reemergence.

"We decided our best practice was mechanical removal of *Poa annua* plants," he says. That means the staff use knives to physically cut out poa plants found during the daily inspection program designed to locate and remove it from greens. Remaining patches in other areas of the golf course are attacked with Kerb or Progress.

"The men who mow our greens are re-

Lower the mower, slowly

As with everything Williams does as a greenskeeper, his selection of mower height on the growing greens was meticulous.

► The first cut was at .375-inch with a walking mower, no basket.

► Week 2: mower height was reduced to .250

► Week 3: .215

► Week 4: .200

► Week 5: .185

► Week 6: .170

► Week 7: .160

► Week 8: .150

► Week 9: .140

► Week 10: .130

► Today, greens are mowed at .125.

ally on top of it, and they do a wonderful job," Williams says of his crew.

It's worth noting that Williams credits his hard-working staff, especially his two assistants, with much of the success of the renovation—which also covered tees and bunkers.

The governing board's commitment in the \$2.5 million-plus renovation was crucial to its success, as was the support from General Manager Jim Brewer.

Williams, a past president of the Golf Course Superintendents Association of America, and one of the industry's more progressive superintendents, says it was "extremely exciting" to move into such a challenging situation.

"This, as a package, is rated one of the top country clubs in the United States," asserts Williams, who came to LACC from another fine course, Bob O'Link Golf Club in Chicago, where he was superintendent for 20 years. □

Don Dale writes for LM from Hollywood.



5th hole on the South Course of the Los Angeles Country Club