

# CASE STUDY: Bluejack National, Montgomery, Texas



# For Tiger Woods' first golf course design to open in the United States, the greens had to be perfect.

For Director of Agronomy Eric Bauer, that meant lobbying to make sure that all 18 USGA-spec greens on the championship course at Bluejack National in Montgomery, Texas, contained Profile Porous Ceramic (PPC) Greens Grade soil amendment in the root zone mix. He'd grown-in three other golf courses before, one of which utilized PPC, (the Fazio Course at The Club at Carlton Woods in The Woodlands, Texas), so Bauer knew by comparison and experience that by incorporating Profile Porous Ceramic he could deliver the quality playing surface that the world's greatest golfer would surely demand.

Soon after he took the position at Bluejack National, he discussed the greens mix with the course owner/developer and the Tiger Woods Design team, then called John Maeder, golf business manager for Profile Products, to ask his advice on the proper root zone mix ratio for his greens. Maeder took samples of the sand to be used in the greens and sent them to a lab for analysis. "Our ceramic particles are always consistent in size and shape, where in contrast sand can vary greatly," Maeder said. "That's why we test it."

The sand was tested for infiltration, total porosity, non-capillary porosity (for air movement), capillary porosity (for water movement), and for its uniformity coefficient to determine the firmness of the sand. The right mix was developed at a 90/10 ratio of sand to PPC, and further testing followed to ensure that the mix would have the optimum performance characteristics that Bauer wanted in his mix.

The PPC mix was included on all 18 championship greens, and on the practice greens and putting course at Bluejack National's practice facility.

LOCATION: MONTGOMERY, TEXAS

ARCHITECT: TIGER WOODS DESIGN

DIRECTOR OF AGRONOMY: ERIC BAUER

#### GOAL:

HEALTHY, QUICK-DRAINING USGA-SPEC GREENS

#### PRODUCT:

PROFILE POROUS CERAMIC GREENS GRADE SOIL AMENDMENT

SAND TO GREENS MIX RATIO: 90/10

GREENS GRASS: TIFEAGLE BERMUDAGRASS

#### **RESULT**:

- » FAST GROW-IN
- » DEEP ROOTS
- » **DRAINS WELL**
- » EXCELLENT PLAYABILITY

"I strongly believe in what I've seen with these products" - Eric Bauer

# **ACCELERATED GROW-IN**

When Bauer oversaw the Fazio Course at The Club at Carlton Woods he said, "I saw an accelerated grow-in." And now, at Bluejack National, he saw that same accelerated growth again. "The greens really grew together very well, very quickly," Bauer said.

Having the PPC in the greens mix also helped Bauer to put out less fertilizer during the grow-in period, as compared to on greens built with straight sand or a sand/peat moss mix.

"Because of the chemistry [of the PPC], we were able to put out nutrients at a much more efficient rate," Bauer said.

A quicker grow-in meant he could get his equipment out sooner and start mowing, helping to groom the greens and get them into shape for Opening Day.



Bermuda rooting three weeks after sprigging



Bermuda rooting eight months after planting



### **STRONGER ROOT MASS**

"Ultradwarf Bermudagrasses are not known to have deep roots or significant root mass," Bauer explained "In the cores we've taken out, we have seen a dramatic improvement with root mass. I attribute that to the roots having air, and the ability to retain nutrients.

I can say from experience, growing in greens on both straight sand or peat moss, the overall visual that you're seeing [with the PPC] is terrific—and it's not just in year one—I can say from the years I was on the Fazio course, we saw that kind of root mass even after year two and three."

Side-by-side comparisons of the two golf courses at Carlton Woods—the Fazio course with sand/PPC greens and the Nicklaus course with straight sand—convinced Bauer of the power of the right greens mix amendment.

"I saw the man hours we put in to hand-water and to manage disease pressure on the straight sand greens, and I'd ask what was different. The fertilizer was the same. We tried to water the same. The difference was how we built the greens."

## LONG-TERM IMPACTS

Healthier roots that require less water and fewer nutrients to sustain a healthy plant make for better greens in the short-term and for the long-term.

"I expect that if we continue to do the necessary management programs, like top-dressing during growing season, continuing with organic mater control, there's no reason why these greens should not perform well past their life expectancy. The Profile Porous Ceramic is proven not to break down," Bauer said.

If Bauer were to grow in another golf course, would he use the Profile Porous Ceramic product again?

"I strongly believe in what I've seen with these products," Bauer said." I wouldn't go down without a fight trying to convince the owners building a new golf course or new greens to really look into the cost and benefits of using Profile."



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