

Quantifying the effects of water injection on ball roll and 'bite'...

By BEN STREET

Ever since its ear-pulsing introduction at the 1989 Golf Course Superintendents Association of America show in Orlando, superintendents continue to find more benefits from regular use of the HydroJect 3000 water injection cultivation system.

From an agronomic standpoint, the machine has exceeded the initial claims of The Toro Company, whose research preceded its introduction. The HydroJect has allowed superintendents the ability to maintain healthy, less stressed turf throughout the growing and golfing season.

However, while the HydroJect was developed to directly assist the superintendent, it appears the machine provides benefits for the game's ultimate end user: the golfer.

First, the HydroJect 3000 doesn't leave the green in an undesirable putting condition. Further, the agronomic benefits have allowed some superintendents to reduce the frequency of coring treatments (to the delight of golfers), while still providing excellent playing conditions.

Yet, ultimately, the golfer wants a firm putting surface that rolls fast and true. In addition, the surface must be soft and non-compacted to accept incoming approach shots. And, of course, it has to be lush and green — all the time!

Trying to meet these desires, superintendents have resorted to shorter cutting heights or frequent rolling. Although these practices have short-term results, the stress and compaction they create can have severe detrimental effects on the green, long term. So how do superintendents provide these conditions for their customers without jeopardizing their jobs?

Since its introduction, some superintendents have claimed the compaction relief provided by the HydroJect 3000 will reduce the bounce and roll of a typical iron approach shot. Easy to claim, but how do you verify it?

And how to find a golfer who can hit numerous golf balls with consistent shot profile and spin? You can't!

Knowing this, we contacted Karsten Manufacturing Corp. in Phoenix. We asked if the company would be willing to help us test this claim using their golf club and golf ball testing machine, the Pingman. The people at Karsten were more than willing to help.

The test was conducted at two different locations: Moon Valley Country Club in Phoenix and the Desert Mountain Renegade Course in Scottsdale. At both locations, the Pingman was set up 145 yards from the green. First, a number of balls were hit to one side of the green. The distance each ball traveled following green impact was measured and recorded.

The green was then treated once with the HydroJect 3000, followed by another round of shots. The distance each ball traveled was again measured, recorded, then compared to the first set of measure-

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Ben Street is product manager for the HydroJect 3000 at The Toro Company. He lives in Minneapolis, Minn.

GOLF COURSE NEWS

Moon Valley Country Club Moon Walk	Average Ball Roll (inches)	
	One Treatment (3" x 3" Spacing)	Two Treatments (3" x 3" Spacing)
Before HydroJect 3000 Treatment	267.3	239.5
After HydroJect 3000 Treatment	214.0	182.0
Percent Reduction	18.8%	24.0%

Desert Mountain Renegade Course	Average Ball Roll (inches)	
	One Treatment (3" x 3" Spacing)	Two Treatments (3" x 3" Spacing)
Before HydroJect 3000 Treatment	428.9	442.6
After HydroJect 3000 Treatment	335.7	279.0
Percent Reduction	21.7%	37.0%

Source: The Toro Company



Ben Street



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Street comment

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ments.

The same test was then conducted on the other side of the green. This time the green was treated twice with the HydroJect 3000. Again the numbers were compared.

The results indicate the HydroJect 3000 has a significant impact on compaction and the distance a ball bounces and rolls following impact with the green. At

these locations, the average distance the balls traveled was reduced, respectively, by 19 and 22 percent after one water injection treatment; and 24 and 37 percent, respectively, after two treatments (see charts, page 9).

Based on this information, superintendents can use water injection aeration to provide optimum golf conditions while maintaining healthy turf throughout the hot summer months in the North, or during the winter season in the South.

Phillips comment

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sue: USGA lab protocol and the liability for failed greens," page 11). McWilliams, the president and chief executive officer of Turf Diagnostics & Design in Olathe, Kan., is rightly concerned about the liability associated with root-zone specifications and, more important, the adherence thereto during greens construction.

The Hawtree case could well be a ground-breaker and precedent-setter in the golf course industry. Anyone involved in golf course design,

construction or maintenance should read this both letters.

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In the July edition of *Golf Course News*, we ran a front-page story on the proliferation of golf courses on Indian reservations, where tribes are also developing gambling resorts. As you can see from the story on page 3

("Wampanoag tribe uproots course with casino plans"), it doesn't always work that way.

While the golf/Indian/casino trend clearly remains a boon to course development, there are exceptions.

Leslie comment

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A companion note:

Audubon magazine Editor Michael W. Robbins, in his July-August editorial, wrote of the ability nowadays to doctor up photographs. *Audubon* was offered an image of an "eagle soaring before a stormy mountain range," he said. "Trouble was, it was two transparencies that had been combined.

"So what?" Robbins continued. "So this. We spend time and effort checking the accuracy of what is on these pages—not only the text but the photos. We make mistakes but we work at being truthful and accurate. To deliberately falsify a situation, whether visually or deliberately, is unacceptable."

Later, Robbins wrote: "The veracity of what's on the page is a matter of trust."

Accurate to their own agenda, perhaps. But accurate? If you've read *Audubon* and have a complaint, they accept one-page letters, with name, address and a daytime phone number. Send them to *Audubon*, 700 Broadway, N.Y., N.Y. 10003; FAX 212-477-9069. It's one way to go beyond "preaching to the choir."

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Have you considered the effects of the baseball strike on golf?


With no games to attend or watch on the tube, people of all ages have more spare time this year than normal, and golf courses should benefit from more rounds played.

...

An insight from Tom Doak on political pressures within clubs for course renovations: "If their course is short and not challenging for them, [scratch golfers] want to move the bunkers back.

"I think those courses of the '20s are so interesting to people because they were built when good players hit the ball 220, 240 yards. Today, the average 10-handicapper hits the ball that far. He appreciates it because he is playing it the way it was designed. For the five guys who are one-handicappers, equipment improvements have made it easier for them than the architect meant it to be. But that's only five guys out of 300 of the members.

"Yet, those five guys are probably the greens committee."



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