

PGA TOURING PROS RATE GREENS FOR SPIKE DAMAGE

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History

The original Softspike swirl was created as a green friendly design for winter golf in the Pacific Northwest. The concept of a green friendly spike took hold and approximately a decade ago a handful of country clubs banned metal spikes initiating an alternative spike revolution.

Initially, numerous alternative spikes hit the market with green friendly designs; however, just being green friendly wasn't enough. Alternative spikes that remain viable in the market are both green friendly and infrastructure friendly, and must have the best possible traction. Opponents of alternative spikes regularly sited their lack of traction and often complained that, "The Pros wear metal spikes and I should be able to too".

Currently

Truly, The PGA TOUR is the last bastion of the metal spike-wearing golfer. However, the majority of PGA TOUR Pros freely choose to use alternative spikes. It would probably surprise most golfers to learn that the majority of professional golfers wear the Blackwidow and that fewer than 25% were wearing metal spikes at the conclusion of the 2002 season.

Now, recall those debates that took place in your locker room and clubhouse when your course entertained banning metal spikes? Imagine what those debates would be like if your entire membership made their living playing golf. Additionally recall that the rules of golf do not allow the golfer to repair spike marks (uplifted turf or indentations) in the line of a putt. Certainly, The PGA TOUR Pro has a great deal at stake when they are putting and it is understandable if they are concerned about what their competitors are wearing on the soles of their golf shoes.

So with this friendly banter-taking place in the locker room, the PGA TOUR contacted Michigan State University regarding alternative spike research. It was decided a study would be set-up for the PGA TOUR Pro to rate greens trafficked with the most common golf spike/sole designs worn on The PGA TOUR to determine from the professional perspective the extent of damage done by the various spikes/soles.

Materials & Methods

The study was a randomized block design with 12 shoe/spike designs and 3 replications. The treatments are reported in Table 1. It was conducted on the Warwick Hill Country Club nursery green on 6 August 2002 during a practice round for the Buick Open in Grand Blanc, Michigan. The green was a creeping bentgrass *Poa annua* mix mowed at 0.125 inch. All maintenance practices that took place on the other greens also took place on the nursery green.

Table 1. Treatment List for the 2002 Buick Open Spike Study

<u>Treatment Number</u>	<u>Shoe</u>	<u>Spike</u>
1	FootJoy (FJ) Classic	8 mm metal
2	FJ DryJoys	8 mm metal
3	FJ Classic	6 mm metal
4	FJ DryJoys	6 mm metal
5	FJ Classic	Black Widow
6	FJ Classic	Scorpion
7	FJ DryJoys	Black Widow
8	FJ Classic Teaching Shoe	NONE
9	Nike	Scorpion
10	Etonic	Scorpion
11	Adidas	Traction cleat
12 (CHECK PLOT)	NONE	NONE

Traffic was applied to each plot to represent 70 rounds of golf around the cup. Each person that applied traffic wore every pair of shoes (all wore a size 11 shoe) in the study and applied the same number of footsteps in a similar manner for each plot.

At the end of the traffic period the plots were rated using a high school report card scale of A-F where:

A = Excellent (No visible wear due to golf spikes or sole)

B = Very Good

C = Good (Visible foot traffic but acceptable wear)

D = Fair

F = Poor (Suggest banning spike/sole due to excessive wear)

Approximately 70 PGA TOUR Pros took the time to rate the plots. From their comments it was clear that this was a serious matter to them. Many politely commented on why they preferred either the alternative spike or the metal spike as they carefully investigated the wear on the plots. One chuckled that “those wearing metal spikes should have to use wooden clubs with steel shafts”. Another argued that those that do not wear metal spikes should be able to repair spike marks, but those that wear spikes should not be able to. Yet another claimed that alternative spikes were only around because metal spikes caused damage to infrastructure. However, no matter what their opinion or comments, all were cordial and almost all of them heartfully thanked us for our efforts.

Results

Results of the study are presented in Figure 1. Note that in the Figure every rating is accounted for and the cumulative percentage of the responses are on the y-axis. The x-axis has the treatments coordinated from the most visible damage (left) to least visible damage (right). Treatments sharing the same capital letter in parenthesis are not significantly different.

The 8mm metal spike in the FootJoy Classic was the least favorable among the Pros with 46% rating the treatment as poor. The no traffic check plot and the FootJoy Classic Teaching Shoe were statistically the most favored treatments with excellent ratings of 85% and 78%, respectively.

Results also indicate that golf shoe outsoles (bottom) can make a difference. The FootJoy Classic has a smooth (or flat) outsole while FootJoy DryJoys have some protrusions or built in studs in their outsoles. Golf shoes with these traction elements built in are referred to as “combination outsoles”. Numerous individuals see the traction elements built into the outsoles and understandably assume these aggressive looking protrusions would cause additional damage to a green. However, results from this study indicate otherwise. Note that the 8mm and 6 mm metal spikes as well as the Black Widow in the DryJoys combination outsole created less visible wear than the 8mm and 6mm metal and the Black Widow in the FootJoy Classic (flat) outsole, respectively. From a mathematical standpoint this makes sense since the increased points of contact on the combination outsole decreases the amount of pressure at each point. This is not unlike snowshoes increasing the surface contact area allowing an individual to travel atop the snow. However, note all combination outsoles in the study performed equally as the Nike combination outsole with the Scorpion cleat was not significantly better than the FootJoy Classic with the Scorpion cleat.

Other interesting comparisons include the Black Widow and the Scorpion cleats inserted into the FootJoy Classics. From this cleat comparison in identical outsoles it is apparent the Pros felt the Black Widow was more green friendly than the Scorpion cleat. In regards to combination outsoles with different cleats inserted into them, the Adidas with the Traction cleat and the FootJoy DryJoy with the Black Widow cleat were seen as more green friendly than the Etonic and Nike outsoles with the Scorpion cleat inserted into them.

The 6 mm metal spike in the DryJoy combination outsole received significantly better ratings than the Scorpion spike in the FootJoy Classic and in the Nike combination outsole. Additionally, it was just as green friendly as the Scorpion cleat in the Etonic and the Black Widow in the FootJoy Classics.

Conclusions

The majority of the PGA TOUR pros have freely switched to alternative spikes. The results of the study at the Buick Open indicate that the 8 mm metal spike in smooth sole shoes causes the most unfavorable putting surface. However, the type of outsole (smooth vs. studded) does make a difference. In fact, 6 mm metal spikes were rated as less damaging to the putting surface than two other non-metal treatments given that the 6 mm metal spikes were inserted into a pair of DryJoys.

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