

Following on from last edition's Pulse topic on green speed, AGCSA agronomist John Geary mulls over one of the most hotly debated topics in golf course management.



In the last edition of Australian Turfgrass Management (Vol 11.3 May-June) The Pulse asked superintendents, "Do you lose any sleep over the speed of your greens." This is a subject that has been debated routinely for the past 30 years with a plethora of material written on the merits and demerits of measuring green speed and in particular the use of the stimpmeter to measure green speed.

Nevertheless, it is important to recognise the significance green speed plays in the psyche of the game of golf. When was the last time you read an article about Royal Melbourne Golf Club which did not talk about its famed slick putting surfaces. Similarly, part of the great mystique the US Masters holds for golfing fans the world over are the tales of triumph and tragedy experienced by golfers putting on the ultra slick greens.

To reinforce this point a survey conducted in 2002 by the Golf Course Superintendents Association of America concluded that golfers consider green speed as the number one factor to know about a golf course. Given that almost half the strokes recorded on the scorecard by most golfers are taken on the greens it is understandable that golfers place such a high emphasis on putting green quality.

While the pace of greens and in particular quick greens is seen by many golf clubs, club members and golfers as the most important attribute in determining the quality of good putting surfaces, some such as AGCSA president Allan Devlin, believe "the ridiculous obsession with green speed has had no positive effect on the condition and management of golf courses whatsoever".

HOW IS GREEN SPEED MEASURED?

The device which has been adopted across golf playing nations, including Australia, is known as the stimpmeter. Named after its inventor Edward S. Stimpson, the stimpmeter is a 36-inch extruded aluminium bar with a grooved runway on one side. A notch in the runway is used to support a golf ball until one end of the stimpmeter is lifted to an angle of roughly 20 degrees (Vermeulen, 1995). Three

balls are released in two directions and their distances measured and averaged.

Stimpson first wrote about the stimpmeter in 1937 but it was not until 1978 when the USGA commercially marketed the device that it became widely used on golf courses. Uniformity was a major objective in the creation of the stimpmeter (Nikolai, 2005) and its use is seen as the best way for golf clubs to achieve similar green speed on all 18 holes for play. It is also intended to be used to measure the uniformity of individual greens, in other words to measure the speed of intended pin locations on contoured greens to see if they vary greatly from the rest of the green.

Possibly the most contentious element of the introduction of the stimpmeter was the inclusion of speed charts which accompanied its release (Table 1). Many believe these charts were the catalyst for golf clubs and superintendents to compete with one another to see who could achieve the fastest greens.

Interestingly the stimpmeter instruction booklet still outlines that "it is not intended for course comparisons" and "it is not the intention of the USGA to attempt to standardise green speeds, which should remain up to course officials, with the input of the superintendent of each individual facility".

Thomas A. Nikolai who has published a book entitled 'The Superintendent's Guide to Controlling Putting Green Speed' believes while the speed charts may be partially to blame for accelerating green speed, it was inevitable that green speed would increase with or without the stimpmeter.

This is due to a combination of new technology such as improved grass cultivars,

the manufacturing of thinner bedknives which allows for closer mowing, along with a greater focus on management practices such as vertical mowing, frequent light topdressings of sand, hand mowing, greens rolling and a greater knowledge of watering practices.

David Warwick (Avondale Golf Club) makes an interesting observation when he states, "Why do we produce firm, fast greens of tournament standard on a daily basis? Because we can. Grasses, maintenance practices and technology have all improved but more than anything expectations have increased."

GREAT EXPECTATIONS

The question for superintendents now is what strategies can be implemented to deal with these increased expectations. One possibility is to conduct a survey of golfers to determine the desired green speed for your club. This concept has been pioneered by Nikolai and Mike Morris, superintendent of Crystal Downs Country Club located in Frankfort, Michigan.

In 2002, Morris started taking stimpmeter readings at two different greens twice a day while also recording weather data to determine the actual green speed. Regular surveying of members who represented a cross section of skill levels was also conducted which asked them to rate the speed of the greens as either too fast, fast but okay, okay, okay but slow or too slow.

After an extended period of collecting data, measuring green speed and what inputs impacted on speed, Crystal Downs Country Club adopted an ideal green speed range which both Morris and his greens committee

TABLE 1: USGA GREEN SPEED CHART – COMPARISON TABLE*

| Relative Green Speed | Regular Play (m) | Tournament Play (m) | Regular Play (ft) | Tournament Play (ft) |
|----------------------|------------------|---------------------|-------------------|----------------------|
| Fast | 2.59 | 3.20 | 8'6" | 10'6" |
| Medium Fast | 2.29 | 2.90 | 7'6" | 9'6" |
| Medium | 1.98 | 2.59 | 6'6" | 8'6" |
| Medium Slow | 1.68 | 2.29 | 5'6" | 7'6" |
| Slow | 1.37 | 1.98 | 4'6" | 6'6" |

(* Adapted from Neylan and Robinson, 1996)

There is no doubt that green speed will always be a topic which will be hotly debated. Above all else, superintendents need to communicate with their greens committee and members on the complexities of producing consistent, firm, smooth putting surfaces

believe can be maintained consistently and keep their members happy.

Another method which can be used to analyse green speed is to adopt the five criteria represented by the acronym S-P-E-E-D. Promoted in the mid-1990s by American agronomist Paul Vermeulen the acronym stands for:

- Status of the turf;
- Principal resources;
- Environmental conditions;
- Expertise of the golfers; and
- Design

Many superintendents lament that their club and members do not recognise the number of variables such as green design, budget constraints, volume of play, weather conditions, soil and grass type and the skill level of golfers which all contribute to the overall quality of putting surfaces. Vermeulen believes that by auditing your greens using the above criteria golf clubs can set a limit for putting green speed by using the two or three criteria that produce the lowest speeds (Table 2).

LOOKING AHEAD

In reviewing the responses of superintendents in the last edition of ATM the general consensus is that firm, smooth, consistent playing conditions are the most desirable attributes. Charlie Giffard (Indooroopilly Golf Club) states that "turf health and consistency are paramount, which, if done well, leads to good fair playing surfaces", while Stuart Gill (Terry Hills Golf & Country Club) believes in "consistency over speed" stating he would "rather have consistent greens running at 10 feet than inconsistent greens topping 12 feet".

While not widely used at present, implements such as a soil moisture probe and the recently released TruFirm are implements superintendents will turn to in the future to quantify green speeds. The TruFirm, which is similar in principle to the Clegg impact hammer, has been developed specifically for a golf course application which is aimed at providing an objective evaluation of surface hardness.

It is also important turf managers keep up to date on the latest information and trial data relating to green speed. As mentioned earlier, there has been a great deal written on the subject, most of which can be easily

accessed by searching the Internet. For a comprehensive summary of green speed, please refer to the references outlined below.

One publication which is not widely read but relative to Australian superintendents managing *Agrostis* greens is the HAL-funded 'Bentgrass maintenance for putting greens' paper. Authored by the AGCSA's own John Neylan along with Michael Robinson, the report outlines the findings of trial work conducted on a practice putting green at Royal Melbourne Golf Club in the mid-1990s.

While we do not have enough space to outline the findings here, the results discuss the effects of variety and cultural practices on green speed, changes to green speed over a day, effects of nutrition and renovation on green speed and turf agronomic characteristics.

There is no doubt that green speed will always be a hotly debated topic. It is interesting to note that a small number of clubs have started to implement green speed key performance indicators (KPIs). While it could be argued that KPIs are in effect what have been introduced at Crystal Downs Country Club, KPIs have the potential to place huge strain on turf managers. Club's implementing KPIs need to be realistic in their expectations taking into account the site's unique characteristics.

Above all else, superintendents need to communicate with their greens committee and members on the complexities of producing consistent, firm, smooth putting surfaces. Using the club newsletter or club website to outline your management strategies is a simple yet effective way to constantly reinforce your management goals.

FURTHER READING

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TABLE 2: S-P-E-E-D COMPARISON TABLE

