

Learning & Development

IMPROVING PERFORMANCE AND PROFIT IN A CHANGING ECONOMIC CLIMATE

Barenbrug's Research and Development Manager, Jayne Leyland, discusses the findings of the company's latest STRI golf greens' trial

Given the current economic climate, golf courses would be wise to prepare for fierce competition for income, combined with escalating costs via prudent and informed planning for the future.

In a buyer's market, golfers will doubtless demand the best possible quality of playing experience for their money, so how best to keep and attract their custom? Concentrating budgetary investments on making noticeable key improvements, such as grass species exchange programmes, could make all the difference.

The results of Barenbrug's STRI (Sports Turf Research Institute) golf greens trial equips Course Managers with the latest information on improving both playing performance and aesthetics so that any investment made in this respect will be a positive one.

OPPOSING MAINTENANCE REGIMES

The trial's aim is to observe how both traditional and innovative mixtures and monocultures for golf greens' application perform under two opposing maintenance regimes – a 'standard' input and a 'relaxed' input. Following this first year of trial, further experimental assessments will be made beyond the establishment phase.

Two trials with eight mixtures and four monocultures (treatments) were sown at the recommended sowing rate on a sand-dominated rootzone at the STRI in July 2006. The trials were sown in a randomised block design with three replications per treatment.

Mowing commenced in August 2006 and reduced gradually from 30mm to 12mm by October 2006. Mowing was carried out three times per week during active growth and then as necessary during the winter period.

On May 3, 2007, a mowing height of 7mm was implemented and, at this time, the trials were also overseeded and top-dressed. Mowing was then resumed on May 17 at 10mm, with the

final mowing height of 6mm for the second trial achieved on June 8 and the final mowing height of 4mm for the first trial reached on June 19.

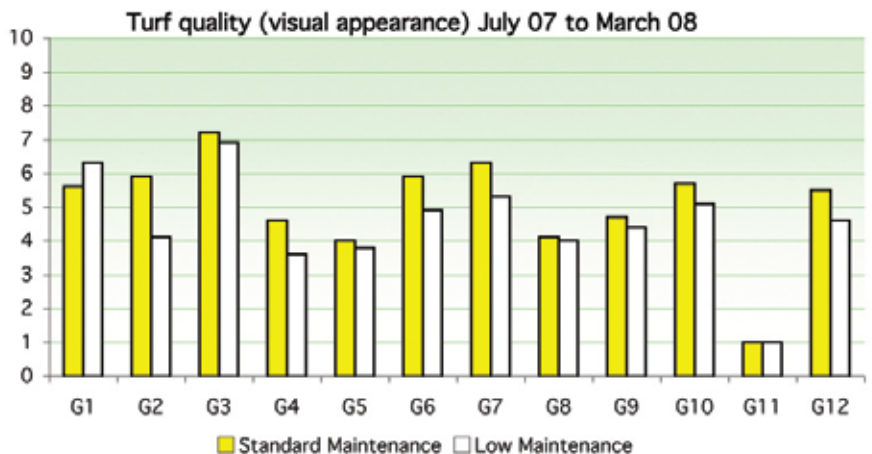
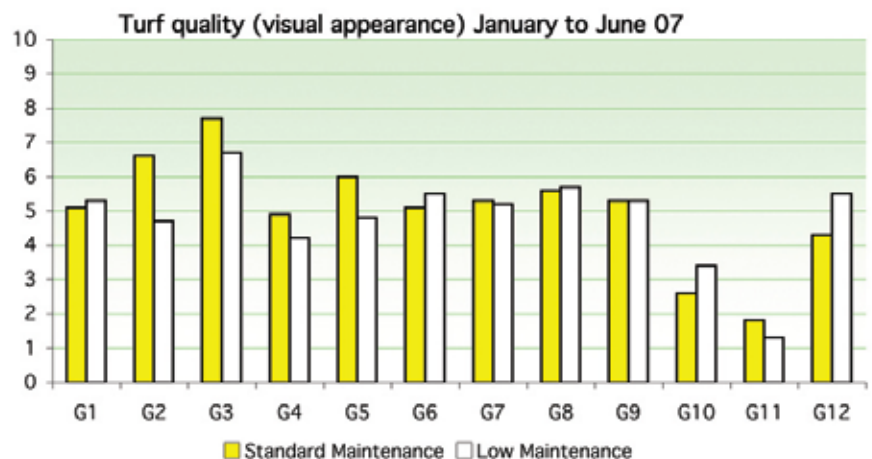
Assessments were made between October 2006 and March 2008 for disease incidence, turf quality (including its visual appearance), playing quality in terms of firmness, green speed and thatch depth, and botanical composition.

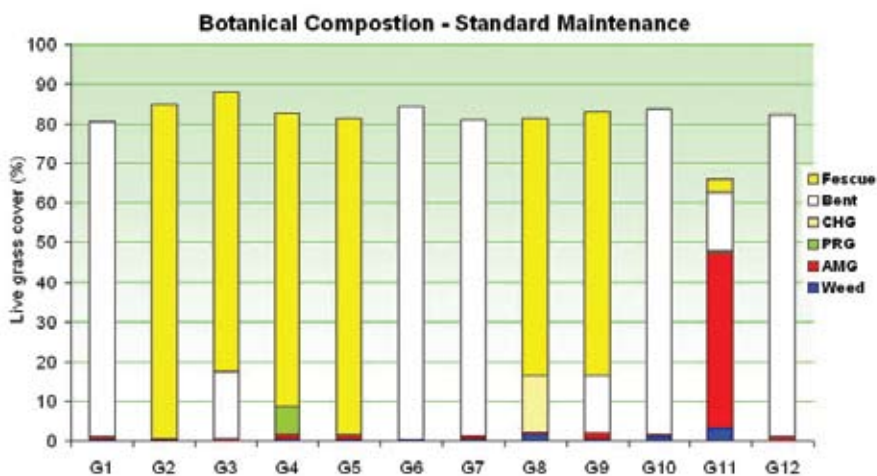
Key findings of the disease incidence assessment were that take-all patch was less severe in the low-input trial due, in part, to the increased fescue content, and that fusarium and red thread were generally less severe on the standard input trial, largely due to the reduced nutrient stress and healthier plants.

Overall, disease incidence undoubtedly influenced the turf quality assessments, proving that the selection of disease-tolerant cultivars is more important than ever, for both financial and aesthetic reasons.

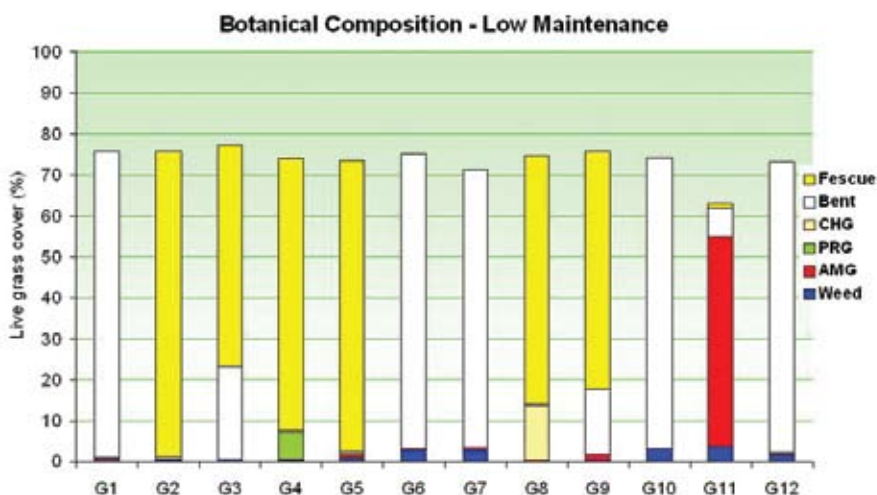
In order to gauge turf quality, we examined the impact of disease and nutrient status on sward density, species composition and the visual appearance of the treatments. Our 80/20 mixture – marketed as BAR 2 – was shown to have the most consistent turf quality and tolerance to fusarium to-date.

The playing quality tests showed that there are already significant differences between mixtures and species and that seasonal variations also play





Winter stress following insufficient nutrient input.



Late spring/summer growing conditions with increased nutrients.

their part. Assessments will continue and will be regularly recorded.

Finally, the botanical composition assessments showed that mowing heights and nutrient input significantly affect the botanical composition of the sward. Further conclusions will be drawn following a period of increased nutrient input.

THE CHALLENGES OF CLIMATE CHANGE

With the trial having been affected by the unusually high temperatures prevalent at the time of sowing, the challenges courses face due to climate change also became clear. The soaring temperatures continued for several weeks and had a negative impact on both germination and early establishment, despite the application of irrigation.

This factor delayed the implementation of the different management regimes until June 2007 and was also evident in the first series of experimental assessments, which began in October 2006. Seasonal variations were also shown to be significant in all assessments.

Rainfall also has an interesting affect on turf quality. Adequate nutrient input on free-draining, sand-dominant rootzone for successful establishment of even lower-input species like fescues was found to be essential. However, the high level of summer precipitation in 2007 had a particularly dramatic effect on demand, with fescues dominating the swards.

This shows that fast establishment is essential for successful species exchange programmes in order for them to offer continued savings into the future, with nutrient input now shown to be crucial to achieving this.

These findings are valuable as inclement summer weather not only negatively affects green fees and clubhouse spend, but also leads to a decrease in turf health and quality, with new and

more aggressive diseases and other environmental stresses requiring increased inputs for treatment and recovery. Hence species exchange can help courses overcome the challenges of climate change, ensuring 'survival of the fittest' in the sward.

In conclusion then, this trial has already highlighted some significant differences from the experimental assessments during the establishment phase. It is too early to say whether previously held positions have been categorically confirmed or countered. However, the findings to-date are a positive indication that the trial will yield information of great practical value on an ongoing basis, and particularly now it has 'opened for play' with simulated golf wear now being applied.

The results of Barenbrug's STRI golf greens trial are available in a handy fact file, which can be downloaded free from www.barenbrug.co.uk. Alternatively, copies can be obtained by calling 01359 272000 or emailing info@baruk.co.uk

