More market choice for the clubhouse Christmas tree

Dr Terry Mabbett provides some timely advice on selecting the perfect tree to add the festive touch to your club.
Timing of purchase

Christmas as a commercial event is being forced on consumers earlier and earlier. The Christmas tree industry is not altogether without blame in this respect. Every year starting in July we hear the same old story: ‘urgency’ buyers right along the chain to place orders and to purchase early to avoid disappointment. The industry obliges by forcing growers to harvest their trees earlier and earlier with the traditional first big delivery date of the first week of December now brought forward to the third week of November.

Those two weeks are crucial as far as living Christmas trees are concerned because these conifers require a period of sustained cold to make sure the needles (leaves) are firmly fixed (set). What’s more, harvesting in mid-November means the average tree is going to be out of the ground and devoid of roots for almost two months before being finally taken down and finally recycled.

Even species like the Nordmann fir with one of the finest reputations for needle retention cannot cope with such a long pre-Christmas marketing period.Increasing reports over the last few years of ‘needle drop’ in Nordmann fir are associated to the industry marketing trees much too early before Christmas.

One way around this ‘catch-22’ situation for consumers, of either purchasing a Christmas tree too early or being left disappointed without a suitable tree, is to place an order early in the year and preferably with a grower that allows you to visit the farm and ‘pick your own tree’.

Type of tree

Nordmann fir and Norway spruce at the top and bottom of the market, respectively, are not the only conifers the UK market can offer as Christmas trees. There are no fewer than as many as on the North American market (where believe it or not Leylandii cypress is used as a Christmas tree) but nevertheless an increasingly interesting selection is available in the UK.

Scots pine, one of only three native British conifers (the other two are English yew and common juniper), and to a lesser extent lodgepole pine have niche markets in Scotland and northern England, while two North American favourites, noble fir and Douglas fir, are making their presence felt.

Each four of these conifer species, like Nordmann fir, has a good reputation for needle retention after harvest. Colorado blue spruce is always a firm favourite due to its attractive blue-green foliage and pleasant aroma (and good needle retention) while the more open-canopied Siberian spruce, a favourite in central Europe, makes a good centre display.

The vast majority of Christmas trees are harvested by cutting and sold rootless but an increasing number of consumers are going for root-balled or container-grown trees on the basis that ‘a Christmas tree is not just for Christmas’ and subsequently chancing their luck by planting the tree and perhaps using it in years to come.

Colorado blue spruce has one of the best survival rates in this respect.

Increasing numbers of consumers are also opting for organically grown Christmas trees, raised without use of artificial fertilizers or pesticides. One possible problem with organically grown trees is that organic growers are not allowed to use chemical pesticides and may therefore find it hard to manage insect pests like aphids.

These insect pests may infest and damage new foliage in spring and spoil the shape of the tree and cause it to lose colour.

Time permitting you can’t beat a visit to the Christmas tree farm to choose your own tree. This will help you secure the right quality tree as near to Christmas as possible. One other interesting option is to ‘rent’ a container-grown tree which will be delivered to your door shortly before Christmas, and collected after the ‘12th day’ when tradition says is when the Christmas tree and decorations should be taken down.

You can even opt for a long term contract and rent the same tree year after year.

The supplier provides the tree with tender loving care on the farm throughout the year and will deliver the tree to your door the following Christmas.

Increasing cost

Real live, good quality Christmas trees do not come cheap.

Two metre Nordmann fir, which set the market price, hovered below £50 for several years until 2010 when they broke through this ceiling.

There are significant regional differences in price with London consumers paying a hefty premium.

Customers using garden centres and other mainstream retailers should now expect to pay at least £50 for a 2m Nordmann fir, irrespective of location in the UK, with a same size Norway spruce somewhat less.

Golf clubs and greenkeepers are in an ideal position and situation to beat any shortages and price increases in Christmas trees.

Next time a small plantation of trees is planned for an area of rough on the golf course plant Nordmann fir, Norway spruce, Colorado blue spruce, Scotch pine, or whatever takes your fancy, and then harvest a Christmas tree for the clubhouse in December for years to come.

“Predictions are for a shortage of larger trees in 2013”

L&A FEATURE
Timing of purchase

Christmas as a commercial rather than a religious and cultural event is being forced on consumers earlier and earlier.

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Those two weeks are crucial as far as growing Christmas trees are concerned because these conifers require a period of sustained cold to make sure the needles (leaves) are firmly fixed (set).

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Colorado blue spruce has one of the best survival rates in this respect. Increasing numbers of consumers are also opting for organically grown Christmas trees, raised without use of artificial fertilizers or pesticides. One possible problem with organically grown trees is that organic growers are not allowed to use chemical pesticides and may therefore find it hard to manage insect pests like aphids. These insect pests may infest and damage new foliage in spring and spoil the shape of the tree and cause it to lose colour.

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Behind the scenes at Toro

We lift the lid on the secrets behind the success of Toro, a BIGGA Gold Key sponsor, and its UK distributor Lely

If you follow sport, the chances are Toro’s footprint will have made its mark on one of the famous competitions you’ve enjoyed from the comfort of your armchair. As well as supplying machinery to the likes of St Andrews, The Belfry and Celtic Manor, Toro have a presence at Wimbledon, the Olympics and the Ryder Cup as well as other glittering events.

The company’s HQ is in Minneapolis in the US and also has manufacturing bases in Australia and across Europe.

My introduction to the UK operation begins in the hamlet of Spellbrook close to Bishop’s Stortford at just one of these bases. Accessed via a narrow and winding lane and surrounded by rolling countryside, it initially seems an unlikely location for a manufacturer of large scale consumer and commercial products.

In 2005 Toro acquired the British mower manufacturer Hayter – who were based at Spellbrook - and now manufacture thousands of machines on site, as Chris Cooper, Product Marketing Manager, explains.

“The location may seem a little unusual but in fact it’s ideal for us. Its close proximity to Stansted airport allows us to host manufacturers, clients and potential clients from across the world.

They can see it all works and also see the human side of what we do.”

“Although most machines manufactured and distributed here are for landscape contractors, councils and homeowners, it’s a great insight into the Toro manufacturing process.”

Chris goes on to provide an interesting potted history of the Toro organisation.

Originally founded in 1914 to build tractor engines, they were almost immediately mobilised to manufacture diesel engines for merchant ships when the First World War broke out.

As if war wasn’t enough of a hurdle, the Great Depression was approaching which slashed the company’s agricultural sales.

However, in 1920 a Minnesota golf club approached Toro to create a motorised fairway mower. Five reel mowers were mounted on to the front of a Toro tractor - and the motorised golf course equipment industry was born.

It’s based in a fairly unassuming building - but behind this quiet facade lies a hive of activity.

Significantly, turf machinery is just one arm of this organisation. Another is the remarkable procedure of robotic milking.

“I’m not sure words can do justice to this procedure which Lely have bed the way in automating so check out www.ley.com/en/milking for more if you’re interested…”

As well as the world of bovine manipulation, the company also offers forage harvesting solutions such as balers, rakes and harvesters (oh much more – but it’s all golf related stuff I really want to get my teeth into.

It’s a welcome opportunity to see the the likes of the Greens master TriFlex greenmower and other staples of the Toro range being painstakingly constructed, tweaked and finally completed before they become fixtures on golf courses across the world.

I also get the chance to meet the sales team who impress on me the importance of providing a friendly and personalised service.

Lely’s Toro Key Account Manager Trevor Chard, who accompanies me on the visit alongside Marketing Manager Holly Jones, is particularly proud of this.

“For us, establishing a long-term relationship with the customer is key. We talk to our customer base constantly – this is absolutely vital”

The next stage of my education sees me head north to St Neots in Cambridgeshire to Lely UK, long-term distributor for Toro golf, grounds and irrigation systems in the UK and Ireland.

It’s based in a fairly unassuming building – but behind this quiet facade lies a hive of activity.

“Toro’s footprint will have made its mark on one of the famous competitions you’ve enjoyed from the comfort of your armchair.”

The technology really has improved greatly during my time in the industry. It’s more durable as it’s of a better quality, is quicker, does a more professional job and is easier to operate.”

Lely was founded in 1948 and successful innovations such as the finger wheel rake and the Lely fertiliser spreader made an impact on the market.

But the big breakthrough came 20 years later with the launch of the Leyterra power harrow – leading to a huge growth in sales.

And in more recent decades, the company became synonymous with innovation, including patenting the unique modular cutting bar which was fitted to the Splendimo disc mower and various new versions of the aforementioned Astronaut automated milking system.

As always, the proof is in the pudding so the final destination is the prestigious John O’Gallant Golf Club in Peterborough.

Here, experienced mechanic and workshop manager Stuart Hall demonstrates the benefits of the machinery, explains the process of grading and enthusiastically praises Toro’s new ‘myTurf’ fleet management system.

Each machine at John O’Gallant is fitted with a wireless hour meter which transmits data to a control box – similar in size to a wireless router.

Every time the vehicle passes this it sends information to the box. This means a greenskeeper simply has to log on to the myTurf system to get every imaginable detail about every vehicle on their fleet.

It also offers online access to Toro manuals – a real space saver – and the ability to order parts at any time. Because each vehicle in the fleet is monitored, myTurf ensures the correct part is ordered.

The system is currently more widely available in the US, and John O’Gallant is one of the test sites – something which has delighted Stuart.

Stuart says: “I can’t imagine why any club of reasonable size would not have myTurf. The key is, you can view how much a machine has cost you £500 it’s worth keeping. But if it’s cost you £3,000 you have a strong case with clear evidence to go to your committee and ask for a new machine.

“It’s a no-brainer and I hope more clubs get to take advantage of it.”

Thanks to Trevor Chard, Holly Jones, Chris Cooper, Stuart Hall and all at John O’Gallant Golf Club.
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We lift the lid on the secrets behind the success of Toro, a BIGGA Gold Key sponsor, and its UK distributor Lely.

“If we establish a long-term relationship with the customer is key. We talk to our customer base constantly – this is absolutely vital”

Lely’s Toro Key Account Manager, Trevor Chard, who accompanied Holly Jones, Chris Cooper, Stuart Hall and John O’Gaunt to the Club in Potton, Bedfordshire.

For us, establishing a long-term relationship with the customer is key. We don’t conclude a transaction then abandon the customer. We’re proud of our aftercare service, and many of our customers are on first name terms with our colleagues which is superb.

“Toro have not only grown but become a significant player in the marketplace. We’re proud of our aftercare service, and many of our customers are on first name terms with our colleagues which is superb. We talk to our customer base constantly – this is absolutely vital. We like to think we’re set apart by the service we provide. We present our experience, product knowledge and ability to meet our customers’ long-term needs.

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UK clubs show world-class environmental credentials

Richard Stuttard from the STRI hands out the awards, supported by BIGGA, for 2012’s most environmentally aware golf clubs

This year, golf clubs throughout the UK have shown STRI judges just how committed they are to adopting environmentally sensitive best practice management techniques. As always, after the difficult task of selecting 32 finalists from a large number of applicants the judging team have visited all corners of the UK witnessing the very best that environmentally focused UK golf has to offer.

This year more clubs new to the Golf Environment Awards have become involved, providing our team of assessors with a fascinating insight into how the role of environmental management is becoming an increasingly common factor amongst our course managers, greenstaff and club representatives.

For those not familiar with the Golf Environment Awards the premise is that by applying for this free to enter programme and informing the team of judges of all environmentally positive works you are undertaking, there are a number of benefits to both the individual golf club and the golf industry as a whole. Firstly, simply by applying, the club are sending out a message that the environment is important to them. Secondly, if you apply and become one of our 32 finalists, you receive a visit from an STRI consultant to view and discuss your work and provide advice on how things can progress even further. Accompanying this visit is a feedback report which you can use to help promote your achievements as a finalist within the programme and gain external support for the work you have been doing as well as using this as a valuable marketing tool. Finally, if you become a prize winner you will be exposed to a considerable amount of marketing publicity both in the media and at key media events including RIME and our own marketing event held at Wentworth.

So, if you haven’t already, why not give it a try next year? Here are our ten winners from 2012:

Overall Achievement Award – Thorpeness Golf Club
Conservation Greenkeeper of the Year – Dan McGrath, North Foreland Golf Club
Scottish Region – Dundonald Links
Northern Region – Lee Park Golf Club
Welsh Region – Aberdovey Golf Club
Southern Region – Hankley Common Golf Club
Nature Conservation Award – John O’ Gaunt Golf Club
Water Management Award – The Rochamption Club
Waste Management Awards – Fairhaven Golf Club
Turfgrass Management Award – Royal Aberdeen Golf Club

Many congratulations to all our winners – their attention to detail and enthusiasm was hugely impressive and we are delighted to see such a broad range of clubs involved.

Thorpeness Golf Club, located in an idyllic area of Suffolk, has long been an advocate of environmentally friendly golf course management and has been involved in the Golf Environment Awards for many years. Course Manager Ian Willett has stressed that it is the enthusiasm and dedication of his greenstaff that has enabled them to achieve so much in just a 12 month period – and they have certainly achieved a lot. The course supports a wealth of different habitats – from fine leaved grasslands and broad leaved trees, to heather, gorse, bracken and water features and all are managed for the good of golf course strategy, visual appearance and biodiversity value.

The result is a golf course which provides great pleasure to all who play there.

Dan McGrath is a first time entrant, and over the last few years he’s made quite an impact at North Foreland. Prior to his arrival the classic chalk grassland characteristics of the course were becoming lost to an influx of coarse leaved grass species, scrub and ground ivy.

Dan has however managed to turn this around through the application of well-timed cultural management techniques include cutting and scarification and scrub removal. The club are now at a point where there are huge expanses of fine leaved grasslands providing stunning definition to the fairways and providing invaluable habitat for a wide range of species.

Congratulations again to all of our winners and on behalf of STRI I would like to extend our sincerest thanks to BIGGA for their continued support of the awards and to our sponsors, Ransomes Jacobsen, Everris, Syngenta, County Turf, Golf Monthly, Greenkeeping and Operation Pollinator, without whom this free to enter scheme could not occur.

For more information on this year’s winners and details on how to apply for next year’s awards please visit www.golfenvironmentawards.com

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**Image:** North Foreland Golf Club

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EnVIronMent AWArDS
**Compost tea use a case study**

**Introduction**
Long Ashton Golf Club was founded in 1893, first as a 9-hole course then extended to 18 holes twelve years later. The current layout largely dates back to a Hawtree & Taylor design in 1937 although more recent changes have since taken place, namely holes 6 and 7. Extensive views over Bristol, a mere 3 miles from the city centre, can be seen from the limestone ridge on which the course is located.

The site consists of around 220 acres, with 145 acres being maintained as golf course and the remainder consisting of deciduous woodland. Although the soil type is classified as Red Kypey Marl, clay/silt mainly, drainage is reasonably good with only a few low-lying areas requiring drainage. With an average of 36,000 rounds per annum, it is a popular, private members club that attracts visitors throughout the south west. 15 of the greens which are 75 years old, are soil "push-ups" with the remaining 3 being of a modern sand construction. A Hydroway drainage system was installed on 4 greens several years ago which has led to a significant improvement.

James Braithwaite, a previous Toro Student of the Year winner and now 46, has been at Long Ashton since 1996. Following previous work at Hallgarth Golf and Country Hotel in Darlington, James was first employed as Deputy Head Greenkeeper before becoming Course Manager in 2007; following on from past BIGGA Chairman Ivor Scouller. James heads up a team of 6 full time staff plus a part time gardener & handyman. With a good range of modern equipment and a recent upgrade to the Rainbird Nimbus 2 irrigation system, Long Ashton is a progressive club and keen to invest in its main asset in order to continue to be one of the best clubs in the area.

**Previous Greens Maintenance**
Until 2005, the greens were first fertilised with an "in-house" mix of traditional fertiliser consisting of dried blood, hoof & horn and sulphate of ammonia, followed by the proprietary SBD brand of N-P-O. This was applied during April and August with an annual input of around 80kg N/Ha. Greens which are barely 400mm2 were cut daily at 5mm, lowered to 4mm for key tournaments with aeration consisting of regular solid and slit tining. Pressure from Fusarium Patch disease was high, requiring up to 8 applications of Chlorothalonil, Carbendazim or Iprodione each year preventing severe scarring. Surfaces on the Poa/Bent greens tended to be soft with a fibrous that layer of up to 35mm present. For the following 3 years, a change in fertiliser application was made using another standard granular product but this time supplying equal amounts of Nitrogen and Potassium, giving an average annual input of 779, P6 & K82 Kgs per Ha. A more intensive aeration program was put in place whereby greens were being hollow-cored for the first time in many years along with an increase in top dressing. Fungicide requirements remained much the same. In 2009, greater use was made of foliar fertiliser although the overall Nitrogen amount remained much the same. However, there was a dramatic increase in Potassium in the attempt to strengthen the plant against disease attack. Increased aeration continued and the level of OM content started to reduce slightly but fungicide use remained high, mostly in preventative mode. This program continued in 2010 but with the addition of Symbio products for thatch reduction such as Thatch eater, Greens circle, Phyto-gro 0-0-18 liquid, Fungo booster and a granular Myco-gro 5:0:29 at start and end of the summer season.

**Key Challenges and Revised Strategy**
Having been in charge for 3 years, the improvements in greens performance and playability that James had hoped for were fairly minimal. James takes up the story. ‘Although the members were reasonably content, there was still too much OM present and too much dependence on fungicides, which were adding to the cost of maintenance. I was aware that in order to produce healthy turf, the rootzone too needed to be healthier and that meant increasing the microbial activity. Following further discussions with Symbio, I decided that a different approach was needed and that part of the answer lay in the brewing and application of composted tea. At least to start with, the current fertiliser program would continue but with a reduced amount of N and K. In preparation for 2011, a 600 litre brewer was purchased costing £1,800 to apply. The former amount of N and K. In preparation for 2011, a 600 litre brewer was purchased costing £1,800 to apply. The former 5 fungal brews which cost around £360 each to apply. The former 5 fungal brews which cost around £360 each to apply. The former requires 16 hours to brew and is applied through a conventional Gambetti sprayer at the rate of 500 lts per Ha. The Fungal brews which favour their degradation take 24hrs to produce and are applied at the same rate. However, this brew contains the following additives of

- **Bacterial Compost**
  - **Hydroway drainage system**
  - **Increased aeration**
  - **Potassium increase**
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  - **OM content reduction**

For the following 3 years, a change in fertiliser application was made using another standard granular product but this time supplying equal amounts of Nitrogen and Potassium, giving an average annual input of 779, P6 & K82 Kgs per Ha. A more intensive aeration program was put in place whereby greens were being hollow-cored for the first time in many years along with an increase in top dressing. Fungicide requirements remained much the same. In 2009, greater use was made of foliar fertiliser although the overall Nitrogen amount remained much the same. However, there was a dramatic increase in Potassium in the attempt to strengthen the plant against disease attack. Increased aeration continued and the level of OM content started to reduce slightly but fungicide use remained high, mostly in preventative mode. This program continued in 2010 but with the addition of Symbio products for thatch reduction such as Thatch eater, Greens circle, Phyto-gro 0-0-18 liquid, Fungo booster and a granular Myco-gro 5:0:29 at start and end of the summer season.

**Compost Tea Program**
James continues. ‘The program in use since 2011 consists of monthly applications from April to September of 1 Bacterial followed by 5 fungal brews which cost around £360 each to apply. The former requires 16 hours to brew and is applied through a conventional Gambetti sprayer at the rate of 500 lts per Ha. The Fungal brews which favor their degradation take 24 hrs to produce and are applied at the same rate. However, this brew contains the following additives of

- **Bacterial Compost**
  - **Hydroway drainage system**
  - **Increased aeration**
  - **Potassium increase**
  - **Fungicide reduction**
  - **OM content reduction**

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Introduction
Long Ashton Golf Club was founded in 1893, first as a 9 hole course then extended to 18 holes twelve years later. The current layout largely dates back to a Haetree & Taylor design in 1937, although more recent changes have since taken place, namely holes 6 and 7. Extensive views over Bristol, a mere 3 miles from the city centre, can be seen from the limestone ridge on which the course is located.

The site consists of around 220 acres, with 140 acres being maintained as golf course and the remainder consisting of deciduous woodland. Although the soil type is classified as Red Kypar Marle, clay/silt mainly, drainage is reasonably good with only a few low lying areas requiring drainage. With an average of 36,000 rounds per annum, it is a popular, private members club that attracts visitors throughout the south west. 15 of the greens which are 75 years old, are soil 'push-ups' with the remaining 3 being of a modern sand construction. A Hydroway drainage system was installed on 4 greens several years ago which has led to a significant improvement.

James Braithwaite, a previous Toro Student of the Year winner and now 46, has been at Long Ashton since 1996. Following previous work at Hallgarth Golf and Country Hotel in Darlington, James was first employed as Deputy Head Greenkeeper before becoming Course Manager in 2007, following on from past BIGGA Chairman Ivor Facer. James heads up a team of 6 full time staff plus a part time gardener & handyman. With a good range of modern equipment and a recent upgrade to the Rainbird Nimbus 2 irrigation system, Long Ashton is a progressive club and keen to invest in its main asset in order to continue to be one of the best clubs in the area.

Previous Greens Maintenance
Until 2005, the greens were first fertilised with an ‘in-house’ mix of traditional fertiliser consisting of dried blood, hoof & horn and sulphate of ammonia, followed by the proprietary SBD brand of R-O-G-T. This was applied during April and August with an annual input of around 8,000kg N/Ha. Greens which are barely 400mm2 were cut daily at 5mm, lowered to 4mm for key tournaments with aeration consisting of regular solid and slit tining. Pressure from Fusarium Patch disease was high, requiring up to 8 applications of Chlorothalonil, Carbendazim or Iprodione each year preventing severe scarring. Surfaces on the Poa/Bent greens tended to be soft with a fibrous that layer of up to 35mm present.

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Key Challenges and Revised Strategy
Having been in charge for 3 years, the improvements in greens performance and playability that James had hoped for were fairly minimal. James takes up the story. ‘Although the members were reasonably content, there was still too much OM present and too much dependence on fungicides, which were adding to the cost of maintenance. I was aware that in order to produce healthy turf, the rootzone too needed to be healthier and that meant increasing the microbial activity. Following further discussions with Symbio, I decided that a different approach was needed and that part of the answer lay in the brewing and application of composted tea. At least to start with, the current fertiliser program would continue but with a reduced amount of N and K. In preparation for 2011, a 600 litre brewer was purchased costing £1,800 and a Gambetti sprayer at the rate of 500 lts per Ha. The Fungal brews which cost around £360 each to apply. The former requires 16 hours to brew and is applied through a conventional Gambetti sprayer at the rate of 500 lts per Ha. The Fungal brews which favours their degradation take 24hrs to produce and are applied at the same rate. However, this brew contains the following additives of...
Seaweed 3-0-15, Bio Booster 8-7-7 and both Humic and Fulvic Acid amendments, totalling 55 litres. The total cost for the 6 applications is around £2,100. Fertiliser applications have continued largely as before, rising in 2011 but falling back this year with an expected total of N75-P3-K160 being applied.

The greens have been regularly aerified throughout the past 3 years using a mixture of tine sizes and depths. All greens were recently hollow-cored with 13mm tines at 50mm centres and deep tined in March. About 100 tons of sand top dressing are applied each year in monthly applications.

The PGR Primo Maxx is applied every 2 weeks in season, mixed with a small amount of foliar N. After being cored, Bent was over-seeded broadcast style in mid-September. Summer mowing height is usually 3mm, but this season it has remained at 4mm due to the high rainfall and limited use of vibrating rollers. This year, Liquid Air was applied after coring and also on occasions when aeration couldn’t take place due to the wetness of greens surfaces: this being a trial otherwise this program has been consistent for the past 2 years.

Results to date

So after 2 years have the objectives been achieved? James concludes; ‘The greatest difference has been the reduction in OM content, falling from around 35mm to 20mm, in spite of a very wet summer. Root depth has generally increased, with most greens supporting a root depth of between 60 and 70mm. Disease pressure is still a threat but not as virulent as before and the number of fungicide applications have been reduced to 5, with most now being preventative to ward off Anthracnose and Fusarium as opposed to being curative.

Whether or not this number of applications is still required remains to be seen but with memories of severe scarring in the past, perhaps I’m erring on the side of caution.

There may be no hard evidence to vindicate the use of compost teas, nevertheless the health of the greens have improved and more progress has been made since 2010 than in the previous decade so something must be working.’

James adds, the next step is to take measurable data of bacteria counts before and after and to compare greens with fairways and that is on the agenda for my next meeting with Symbio.

I aim to make a few tweaks to the current program by introducing Phosphite into the tank mixes during the latter part of the year and to increase the amount of top dressing by 20 to 40 tons. That apart, I am satisfied that the investment made in applying compost tea has led to a steady improvement and will help Long Ashton to become more sustainable in the future.

Summary

A healthy living soil with a good microbial population will give the best opportunity for growing and managing fine turf. That is without doubt. What is in doubt is whether adding additional soil microbes in whatever form to a greens root zone will help to achieve this objective for a sustained period of time. Those who have used a compost tea program for a number of years certainly think so and appear to be seeing a reduction in disease and lower requirements in fertiliser. What needs to be established is a measurable threshold of soil bacteria on a green whereby it can be accurately measured to indicate sufficient numbers or deficiencies.

It would also help to compare these numbers on the same greens 1 day and 7 days after compost tea was applied in order to verify that an improvement in numbers had taken place. There are numerous other questions to answer, too many to list in this article but there is an overwhelming need to have greater clarity supported by measurable facts and figures. Only when this is achieved and hopefully vindicated is there likely to be a concerted move away from current greens management and less reliance on plant protectants.

TurfMaster One Ltd is grateful to James Braithwaite and Long Ashton GC for their support in producing this article.