

TURF TALK

Issue 13

DISEASE IN FOCUS

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STRATEGIC PLANNING

The walls of John Band’s mess room at Swinley Forest Golf Club are papered with planners, meticulously prepared and colour-coded for everything from machinery maintenance, to visiting golfer schedules and, now, the turf agronomy programme.

His approach to maintaining top playing surface quality on the prestigious Berkshire course is to use all available Integrated Turf Management techniques, allied to a strategic fungicide programme. Utilising a full range of cultural controls to promote healthier turf, enables the planned use of fungicides to work most effectively, he believes.

“How well we plan and prepare for winter governs how well we will come out at the other end and that is foremost our minds,” reported John.

“In September we’re thinking what will the greens look like in March and April?

“If we plan well and spray in advance of disease attacks, we have a better chance of coming out of winter clean and not getting hit by a disease surge in April as grass and pathogens respond to warmer soil temperatures,” advocated John.

“With healthy, clean and good looking greens in spring there is less pressure to ‘push it’ with fertiliser for recovery, so we can aim to avoid explosions of foliar disease.”

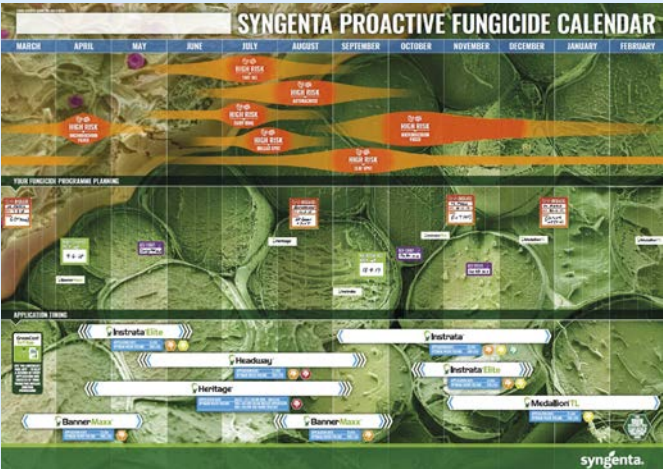
Sound planning means less fire-fighting, and more time to other things across the course, he adds.

The Syngenta **PROACTIVE FUNGICIDE PLANNER** wall poster is designed to help create a strategic approach to season-long disease control. Using the poster will help to highlight potential risk periods, and the tools to protect turf quality. Having created your personalised plan, there’s the full flexibility to adapt it to seasonal pressures and make the best use of every application.

Find out how to make best use of your fungicide planner with the Fungicide Fundamentals report from BTME 2018, in the next issue of Turf Talk



Preventative disease planning needs to be considered right through the season for effective cultural and chemical control, advocates John Band.



POPULATION CONTROL

Syngenta Turf Technical Manager, Marcela Munoz, highlights the challenges of dynamic disease populations within turf surfaces.

Disease pathogens that attack turf are a constantly changing dynamic, affected by variable outside factors - and at different stages of development during any infection.

With Microdochium Patch (Fusarium), for example, there are typically resting spores in the thatch; spores deposited on the leaf surface; recently germinated spores growing mycelia and, if it has got into the leaf, hyphae working through the cells that will sap energy from the plant and cause damage as it develops.

There are two key elements in how the challenge of these dynamic disease populations can be managed:

- Improving the health of turf so it is better able to withstand the effects of the disease
- Well timed fungicide applications appropriate to the stage of the disease life cycle

Turf that is damaged, weakened or stressed is inherently more susceptible to infection, and will suffer more severely from any disease attack.

Cultural controls and making conditions unfavourable for disease, as part of an Integrated Turf Management programme, can have a significant impact in reducing both the risk and severity of disease, as well as helping plants to recover faster from any attack.



ITM practices are essential to minimise disease pressure, and achieve persistent control.

It has been widely recognised that to supplement ITM practices, fungicide treatments timed to prevent disease deliver the best results in terms of turf quality and long-lasting results.

New Instrata Elite trials, for example, demonstrated the potential to achieve almost total control of disease for up to six weeks from application when there was little or no visible disease at the time of treatment.

One of the key advances with Instrata Elite to tackle a more dynamic disease population is the combination of actives that give the ability to target Microdochium outside and in the leaf. Whilst the fludioxonil coats the leaf surface and prevents germinating spores from penetrating stomata or cut leaf ends to get into the plant, the difenconazole element is active within the leaf to stop disease developing inside.

STRI research has shown that fungicide application timing based purely on GreenCast disease forecasts could maintain better turf quality through the season using fewer fungicide applications, compared to either routine treatments or application at the first visible signs of disease.

Live Maps Track the Future

A new disease forecasting tool on the Greencast website now gives a clear picture of disease pressure across the UK – and a forecast of where there risk of infection is set to occur and will enable more informed actions.



Live Maps combine accurate weather forecast information along with proven disease prediction models, to foresee and track risks for up to five days before they occur.

Encompassing Google maps, users simply zoom in to their own area for a close up of detailed local information. The maps cover all key turf diseases, along with forecast changes in soil temperatures and a new feature for Grass Growing Potential.

Daniel Lightfoot, Syngenta UK Turf Business Manager, enthuses that one of the great advances of Live Maps for greenkeepers is the ability to visibly track conditions and risks progressing across the country – and giving time to make action plans.

“Targeting preventative disease programmes during periods of infection risk, but before symptoms break out consistently maintains better playing surface conditions,” he advocated.

Fungicide Futures Shows The Way

Low resistance risk fungicide programmes must be adopted universally to prolong the efficacy of disease control chemistry, according to experts at the 2017 AHDB Agronomists' Conference.

In a move that will have resonance across the turf management industry, AHDB also announced it would work more closely with the Fungicide Resistance Action Group UK (FRAG) to communicate anti-resistance management information, via a new initiative called Fungicide Futures.

Fungicide Futures specialists agreed the current approach was not fit for purpose. Recent survey figures suggest pesticide usage does not appear to fluctuate in response to seasonal risk. The use of 'insurance sprays' was cited as a key pressure point and more needed to be done to give people the confidence to apply fungicides only in proportion to the risk.

The use of real-time disease pressure information – from technology such as biosensors – could revolutionise spraying in the future, according to the group.

Paul Gosling, who manages disease strategies at AHDB, said: "The panel debate made it clear the key to success is to promote management that combines good control with best resistance management practice."

"A key take-home message from the debate was it doesn't make sense to have a fixed spray programme. To protect efficacy, programmes must respond to risk and, when a spray is required, chemistry must be protected with different modes of action in mixtures combined with alternating chemistry."

Dr Ruth Mann, Head of Research at STRI has produced a brilliant series of videos to guide turf managers and agronomists through the process of Integrated Turf Management, disease risk assessment and fungicide selection – including strategies that will minimise the potential of resistance.



NEW BANNER MAXX II

A new formulation of Banner Maxx II has created an even faster uptake fungicide, giving the chance to tackle disease inside the leaf – before it can damage turf plant health.

Launched at BTME 2018, the high-performance formulation delivers over 130% faster uptake of the active into the leaf, compared to original Banner Maxx.

R&D trials at Colne Valley Golf Club in Essex demonstrated results with Banner Maxx II were unaffected by simulated heavy rainfall just 15 minutes after application. The trial showed the treatment prevented the development of Microdochium Patch (Fusarium) outbreak at less than 0.5%, compared to over nine per cent on untreated turf.

The new Maxx formulation has been designed specifically for turf, offering exceptional plant safety. Manufactured to nanotechnology particle size, the active can quickly enter the leaf, with rapid highly systemic movement.

Once safely in the leaf, the active targets disease pathogen cell membranes and stops development of early mycelial growth.

It is well proven on a broad-range of turf disease, including Anthracnose (see Summer Stress feature), Dollar Spot, and Brown Patch, as well as Microdochium Patch.

The fast uptake makes it especially effective for use in catchy wet weather conditions highly conducive to disease, and means it is unaffected by irrigation scheduling. Banner Maxx II is even in rapidly taken up in relatively cool conditions, making it well suited to early spring or late autumn treatments, as well as right through the growing season.



SUMMER STRESS ISSUES

Rising temperatures are set to trigger further damaging Anthracnose attacks on courses across the UK this summer.

Daniel Lightfoot of Syngenta highlighted that increasing summer weather extremes can stress turf - particularly prolonged hot, dry periods where Anthracnose thrives.

"GreenCast historic disease records and disease forecasts, are a useful management guide, alongside a greenkeeper's experience, to predict when future infections may break out on individual courses," he reported.

Anthracnose (*Colletotrichum graminicola*) is the second most common disease on turf in the UK, after Microdochium patch (*Fusarium*).

Daniel pointed out a number of the stress factors that increase the frequency and severity of Anthracnose outbreaks - including heat, drought, height of cut and nutrient deficiency - have become more pronounced in recent seasons.

"It's one disease that responds extremely well to an Integrated Turf Management approach to alleviate stress," he advised. He cited two particular aspects of water management and nutrition that could have significant beneficial effects.



Anthracnose Foliar Blight (left) and Basal Rot can cause extended damage through the season

Using Qualibra wetting agent in combination with Primo Maxx can significantly enhance water utilisation and enhance plant health, he advocated.

"Whilst cultural actions can effectively reduce the risk of disease attacks, a well-timed fungicide application can protect turf quality during high pressure situations that inevitably arise," advised Daniel.

"As with all treatments, where the turf is inherently strong and healthy the results from the fungicide treatment were more effective and longer lasting," he said. "Using Banner Maxx II as part of an integrated approach is the best way to tackle Anthracnose and prepare turf for winter disease pressure."

Trials by STRI, supported by Syngenta and ICL R&D, demonstrated that when Banner Maxx treatment was combined with a fertiliser programme, the result was a step change in Anthracnose control - down to just 1% of infection across the green, compared to the outbreak spreading to 18% of the area when left untreated.



FOLLOW LE GOLF TURF TEAM

This summer Syngenta will be working with Le Golf National, hosts of the Ryder Cup 2018, to sponsor the International volunteer greenkeeping team working at the course in September.

Golf Course & Estates Manager, Alejandro Reyes, highlighted the golf course maintenance operation for Ryder Cup week will be approximately 180 people strong. "Approximately 140 of these team members will be volunteers. They will be coming from all around Europe, USA and even from the Middle East.

"The volunteers and Le Golf National staff members will work hand-in-hand in order to provide a golf course of the finest quality," he said.

"Le Golf National is the proud host of this prestigious event and we look forward to presenting the finest golf course conditions to 24 of the world's greatest players," added Alejandro.

The Club anticipates that the Ryder Cup will have a television audience of over 500 million viewers worldwide, while around 65,000 supporters will be on-site each day of the event.

"This will truly be a once in a lifetime experience for all involved," pointed out Alejandro. "As the golf course superintendent, I take great pride in being able to share this event with greenkeepers around the world."



Le Golf National's stunning courses

As the premier golf venue in France, Le Golf National, 35 km south west of Paris, has two 18-hole courses – the Albatros where the Ryder Cup will be played out and the Eagle (Aigle) course – along with the nine-hole Birdie (Oiselet) course.

The Albatros is recognised as one of the top Championship courses in Europe. Its design has sought to combine a traditional feel of a links, with the modern features of target golf. Whilst links golfers may be surprised to find the number of water features – integrated to aid drainage and maintain 365-day play – the wide undulating fairways, slick greens and innumerable links-style bunkers make it a formidable challenge.

The club prides itself in ensuring every club in the bag will be utilised on a round of the Albatros.

The Eagle is recognised as a less demanding course, but more in the true links style. With the club's roots firmly in the local community and support it's a busy facility – maintained to the same high quality by the Le Golf National team.

Creating a National golf resource

Le Golf National was the brainchild of the French Golf Federation, to develop the country's own golf course complex as a resource to promote golf industry and a showpiece for national events. The plan was launched in the autumn of 1985, and inaugurated just five years later.

For the project's architect, Hubert Chesneau, the site at Saint Quentin in Yvelines offered a continuation of his already started municipal golf course project, but more importantly, with the entirely flat landscape, a blank canvas in which to design and build his vision.

"My inspiration was to create a stadium: a golf course that would be able to receive great championships, with ideal conditions for not only players, but also spectators and the media – particularly television coverage," he reported.

"Contrary to most of the courses being built at the time, on natural undulating ground, I preferred to create a landscape that would be ideal for 'natural grandstands'."

Hubert forged the plans to create the courses utilising earth-works materials from across the Parisian Region. From July 1987 the site received around 400/450 lorries of soil and material a day. In all, the land fill and the creation of water hazards, created a land-mass movement of 1.6 million cubic meters. During the summer months of 1988/89 the nine hectares of water hazards were dug out and all the natural water courses re-laid.

First sowings of turf took place in late summer of 1989 and despite heavy rains washing away much of the work, the course opened for its first major competition in October 1990.

The first Open de France on its 'home course' – The Albatros – was played in June 1991, with the completion of the second 18-hole Eagle course and the nine hole Birdie in the following months.

In 2011, the PGA made the announcement that Le Golf National would be the host for the Ryder Cup 2018.

Greenkeeping heroes

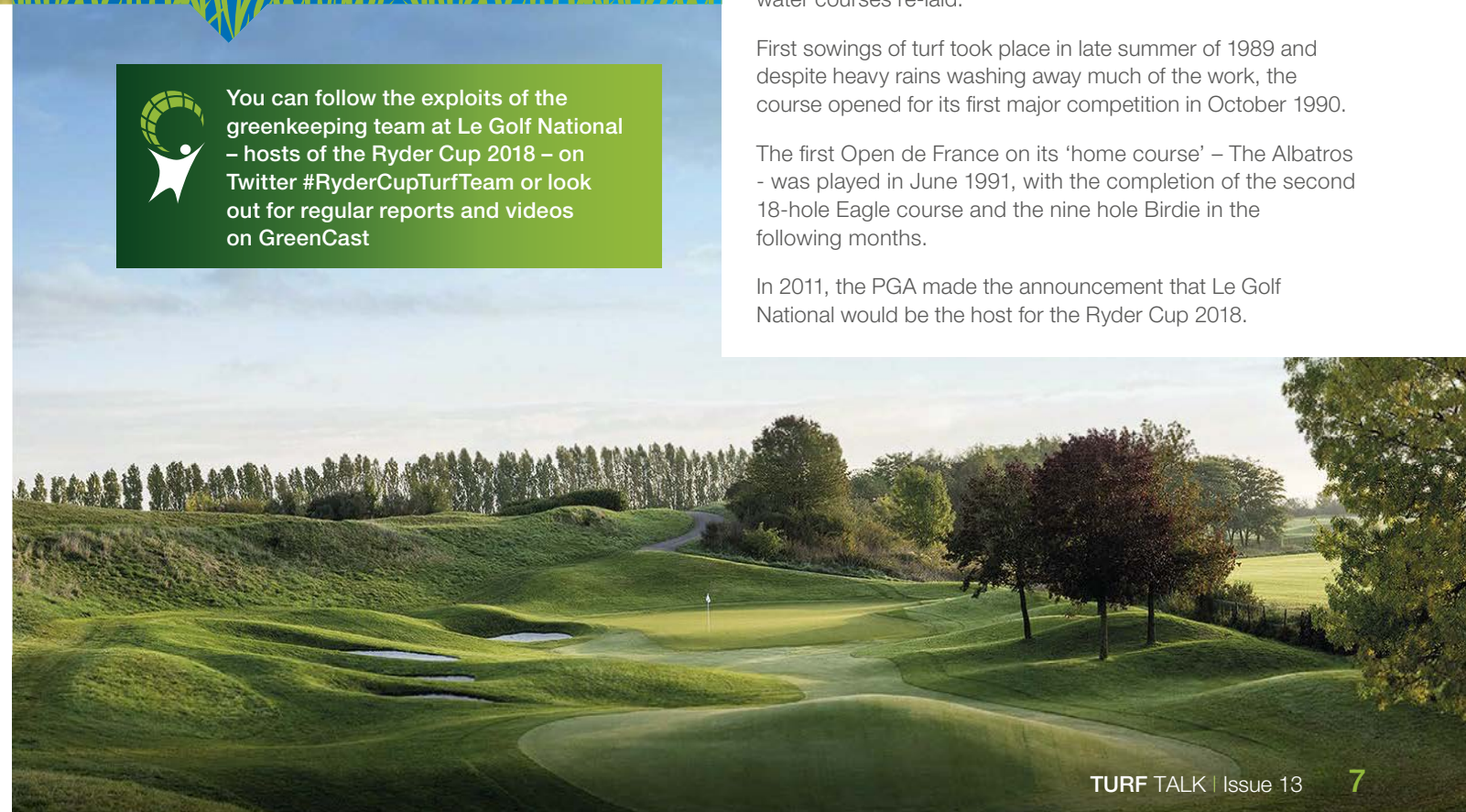
The huge greenkeeping team work incredible hours to have the immaculate course ready each day. It's an immense logistical undertaking for Alejandro Reyes and his team at Le Golf National – hosts of the Ryder Cup 2018.

They also have to be ready to respond to any unforeseen events. The heroics of the greenkeepers has never better been exemplified than the 2010 Ryder Cup at Celtic Manor, where it was only the superhuman 24-7 efforts of the team that averted a disaster from torrential rain and flooding, and got the players back out on course to complete a historic European victory to reclaim the Cup.

The joyful pictures of the players and the exhausted greenkeeping team celebrating together at the end of the event was genuine appreciation of the efforts of all involved.



You can follow the exploits of the greenkeeping team at Le Golf National – hosts of the Ryder Cup 2018 – on Twitter #RyderCupTurfTeam or look out for regular reports and videos on GreenCast



KEEP IT LEGAL

Reports over recent months have highlighted the potential for residues of plant protection products previously approved for amenity use being found in water courses. Chemical regulatory specialist, David Payne, explains how and why the amenity sector needs to avoid the risk of such instances occurring.

The key point to note is that the Environment Agency and regulatory bodies are actively monitoring situations - and that golf clubs and their greenkeeping teams do need to ensure they are in compliance with the products they are using and the way that they are using them.

It is essential to keep fully up to date with legislative changes and product approvals, such that they don't use any product that is not approved for use on turf in amenity situations, or for which a previous approval has subsequently been revoked.

That is especially important in the current climate, where a number of products have been permanently withdrawn from the amenity market, but may still be available for purchase of old stocks or in stores. No matter some of the challenges posed, if a product is no longer approved at the time of application it cannot be used.

Golf clubs and sports turf facilities are highly visible in the public eye and have a duty of care to both their visitors and the environment in which they operate. That means only using products that are approved for use, and always in accordance



with the label recommendations - including recommended application techniques and timing - that can assure the safety of operators, users and the environment.

There has been a huge amount of R&D involved in the development of new products for turf management. That includes up to 10 years of ecotoxicology testing before a new active ingredient can be brought to market - covering many different scenarios of its use, including amenity exposure where appropriate. Around 35% of the \$280m Syngenta invests in developing a new active ingredient is spent on environmental and ecological product safety testing.

Everyone involved in buying and selling regulated plant protection products in the amenity sector must ensure they are fully compliant in the way that they buy, store, apply and record their use. It is essential to protect their own and their club's reputation - along with the wider environment they work in. Only by ensuring that the process and protocols are rigorously applied, can the industry be confident of gaining and retaining a range of products for the future.



ASOY WINNERS ANNOUNCED

The three category winners for the 2017 Amenity Sprayer Operator of the Year Awards were announced at the Amenity Forum conference

Chris Phillips of Complete Weed Control, South Wales won the Sports Turf category, with his contract application on golf courses widely praised.

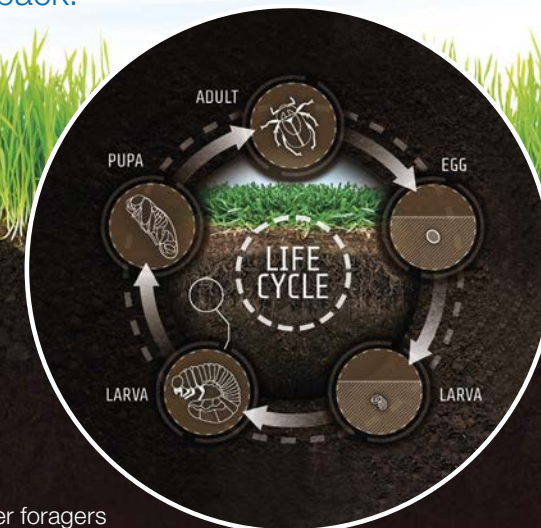
Lee Harrison, also of Complete Weed Control won the Landscape category for a vehicle sprayer, credited for his knowledge of all aspects of spray application, and particularly calibration.

The third category winner, for knapsack application, was S H Goss' Contracts Manager and Ecologist, Nathan Hume.

Look out for the Winners' Top Tips and advice on GreenCast and in the next issue of Turf Talk

LOW DOWN ON SOIL PESTS

Chafer grubs & Leatherjackets cause damage to turf through the larvae feeding on roots, which can be severe in localised patches. Leatherjackets in particular often occur in concentrated areas, leading to yellowing turf and die back.



Subterranean tunnelling of pests will result in uneven golf putting surfaces, or dangerously poor stability for sports turf and racecourses. Heavy rain or irrigation will encourage larvae activity closer to the surface.

Turf that is under stress, or with poor rooting, can be especially affected, and become more susceptible to drought and disease.

However, the most extreme damage can occur when badgers, birds and other foragers root through turf in search of the grubs.

Understanding the life-cycles of the different pest species - and conditions conducive to pest attack - is essential to develop a targeted strategy to prevent damage.

PEST PROFILE - LEATHERJACKETS

Conditions have been particularly favourable for Crane Fly (Daddy Long Legs) in recent years; the larvae (leatherjackets) thrive in wetter soil conditions over the summer, and then dry, settled weather when the adults emerge. The flies have only a few days in which to mate and lay their eggs in the soil, before they die.

In the UK, peak adult Crane Fly activity would typically be seen in mid-July and August. Eggs are laid and hatch in around two weeks, after which feeding begins.

As the leatherjackets go through several growth stages (instars) as they feed near the soil surface. Larvae can continue to feed all year around, with high organic matter encouraging greater populations.

PEST PROFILE - CHAFER GRUBS

Three key species of Chafer affect turf in the UK - the Garden Chafer; Summer Chafer and Cockchafer (Maybug). All are characterised by the similar white grubs that feed on turf roots and can cause extensive damage.

However, there are differences in the life-cycle of each species that has an impact on their turf effects. The Garden Chafer goes through its entire life-cycle in one season - from egg laying, through all larval stages (instars) and emergence of adults; whilst the Cockchafer larvae live and feed in the soil for three years to go through the same process.

The adult egg laying and hatching period is also different for each specific species which would impact on control timing. As Chafer grubs develop through successive moults, they get progressively larger which can cause greater damage to turf - as well as being far more difficult to control.



ORGANIC MATTER

Deep thatch encourages grubs so reduce the build up of organic matter to minimise grub activity. Aeration, top dressing and keeping surfaces well drained all have a big impact.

New data has shown Qualibra wetting agent can reduce organic matter by moving water through and away from the surface layer.

Get the Greencast Turf App



The GreenCast Turf App is the essential all-in-one tool to help golf and amenity turf sprayer operators deliver more timely and accurate applications, as well as automatically recording and storing records of each treatment and decision making.

Designed as practical smart phone or tablet tool, it has directly addressed the key concerns of greenkeepers, agronomists and club managers for spray record keeping and improving application techniques.

The GreenCast Turf App is available now for free download from the **iTunes Store** or **Google Play**.



LADIES LEAD THE WAY

Golf clubs are having to adapt to a new era of family-focused customers with a totally different lifestyle and expectation. Syngenta Marketing Communications Manager, Caroline Carroll, visited Golf at Goodwood in Sussex, to see how it has developed a thriving business.

Golf at Goodwood has a long history of ladies taking a leading role. The first course on the Estate was laid down in 1892 by Lady Helen Taylor, and the strong connection between women and the course still continues.

The 36-hole facility that you find today holds a key spot in the 12,000 acre family owned estate. A large part of that success has been attributed to an innovative Points Membership model, costing only £250 to join - with a 'Pay as you Play' model to make membership tailorable and affordable to everyone. It's particularly actively targeted to attract women and youth.

A key part to that development can be placed on the Growing Golf in the UK Report, conducted and commissioned by Syngenta. The research clearly highlighted a number of key points that have become the cornerstone of the club's marketing of the sport to women and juniors.

Stuart Gillett, General Manager of Golf at Goodwood expressed how the research led to a change in tack at Goodwood: "We have a product that people see as good value for money, but it did not necessarily fit with their modern lifestyles.

"We realised that to develop golf for a larger audience, we had to get people to look at Goodwood and golf differently - not for the exclusive thing and place it traditionally was," reported Stuart.

"Over the last four years we have developed a contemporary business model that adapts to the needs of customers."

He launched a golf introductory programme that gives people the opportunity to come down and try the game in a relaxed environment. "It has led not only women, but many whole families getting involved in the club," enthused Stuart.

Another example of how the Growing Golf in the UK research has helped Golf at Goodwood is through its findings that dated rules and etiquette could be putting new players off.

"Here we have no dress code, people are able to answer their phones when they want etc.," reported Stuart. "It hasn't seen a moral break down in behaviour or whatever many clubs fear.

"It has led to a happier, more vibrant club that has attracted many new people who were put off by their earlier pre-conceptions of what golf and being a member of a golf course entails."

Stuart is adamant that keeping it fun has been key, not just in lessons but the whole ethos of the club.

The success at Golf at Goodwood shows that a thriving club can be built by making simple changes that bring massive benefits. This not only secures the future of the industry, but makes the experience more inclusive and enjoyable for all.



Visit GreenCast to see the full story of how Golf at Goodwood has built a sustainable business

Love.golf
TRY IT LOVE IT

Lessons in Love

The love.golf initiative continues to gather momentum and successfully attracting more women to play golf – bringing a welcome revenue stream to participating clubs.

The first love.golf golf professionals' conference, held in Birmingham, provided an opportunity to share experiences and identify the best ways to bring more players into the game.

Creating the right environment to get more women involved is typically the precursor to whole families getting involved - and injecting money into the club, pointed out Syngenta love.golf manager, Caroline Carroll.

"At a time when the golf industry has been facing falling participation and declining incomes, it's really positive that the initiative to attract women to golf can turnaround fortunes.

"It's not for every club, but for those willing to open-up and adopt new practices that make them a welcoming environment for the whole family, it can offer a sustainable business model that can keep the whole club viable."



Environmental Awards

Four of the UK's leading environmentally managed golf courses have been short listed for the Syngenta Operation Pollinator Award 2018.

The Operation Pollinator Award is judged and presented as part of the national Golf Environment Awards.

This year's finalist clubs and their course managers were:

Bowood Golf Club
Jaey Goodchild

Kingsdown Golf Club
Tom Freeman

Ufford Park Golf Club
Michael Halliday

Warrington Golf Club
John McCloughlin



Syngenta Operation Pollinator clearly demonstrates that it is possible, and rewarding, to balance managing the course to give the players the ultimate golfing experience, along with developing surrounding and out-of-play areas to provide an immense ecological resource.

Golf Environment Awards judge, Sophie Vukelic, said: "It is not getting any easier choosing the finalists; we had an outstanding array of applications this year, with familiar faces and exciting newcomers to the awards.

"The Awards shine a good light on golf and the work of everyone involved in positive environmental management."

The 2017 Operation Pollinator Award Winner, Steve Thompson of John O'Gaunt Golf Club in Bedfordshire, was also short-listed finalist for Conservation Greenkeeper of the Year for 2018.

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