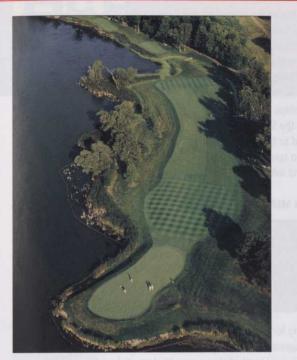
Morgan O'Sullivan reports on his American adventure which saw him working at some of America's best known golf courses







▲ A spectacular view of Hazeltine

▲ A finely built stone bridge

Baltusrol impressed me immediately. I had read a lot about it in various magazines and it wasn't a let-down. Being mid-May, the season was just getting into full swing.

The operation at Baltusrol is like nothing I have ever seen. It consists of two championship courses, the Upper Course – which has held the US Amateur and US Women's Open – and the Lower Course, which has staged numerous US Opens and US Amateur Championships.

On my first day the superintendent of the Upper Course, Scott Bosetti, gave me a course tour and I was amazed at its condition. I clearly remember the words he used to describe the conditioning at Baltusrol. "This is a US Open course and that's what the members want everyday – not just for a week in June," he said.

And it's true; we daily continued to set up the courses to US Open standards. Director of Grounds Mark Kuhns CGCS, who was also a director of the GCSAA, knows a thing or two about championship conditions, after previously working at Oakmont, the recent venue of the US Amateur Tournament.

Luckily for me, I came to Baltusrol at a very good time. They have just completed a maintenance facility that is second to none. Also, they now have on-site housing for two Assistant Superintendents and up to 12 interns. There are presently six interns but Mark Kuhns wishes to have 12 by the time the 2005 PGA Championship is held at Baltusrol.

Baltusrol runs a really good internship programme for students from all over: from Penn State, Rutgers University, the University of Guelph (Canada), and the MAST programme from the University of Minnesota. All interns are treated as team leaders and are given the opportunity to strengthen their weak points and make their strong points even stronger.

All the superintendents were always willing to help us learn on the course. We frequently had question-and-answer sessions with the superintendents, which proved to be extremely beneficial. We were responsible for many of the projects on the course, which tested our skills, knowledge and leadership.

Baltusrol has already begun preparing for the 2005 PGA Championship, with the semi-rough adjacent to the fairways already stripped and re-turfed to

ensure uniformity for the tournament. Greens are being expanded for new pin placements, and some bunkers are being re-shaped to make them more challenging for the tour professionals in 2005.

I finished the MAST programme on October 14, and left Baltusrol to return to Minneapolis and my flight home.

All in all, I can say that the MAST programme, in association with The Toro Company, has been a really good learning experience and exposed me to so many different situations, both workwise and socially; while also working in America. I know that the host superintendent's also learn from students like me as they like to hear about our experiences growing up in our home countries, as well as learning to use some of our language expressions that they don't hear in the USA!

During my time in America I developed many friendships that will continue into the future and provide me with a network of relationships I can call upon when I need help or opinions in dealing with challenges at work.

Currently I am working at The Grove Golf Course, in Hertfordshire, under the guidance of Phil Chiverton. So I am at a top-notch facility and looking forward to continuing my education on the job as this new course becomes established.

I would thoroughly recommend to all young, aspiring greenkeepers to consider taking any similar opportunity to work in the USA, or anywhere else in the world for that matter. The experience of living and working in a different culture provides you with alternative ways of looking at things, both in and out of work settings, and certainly expands the mind when meeting new friends from other countries.

The whole experience will hopefully stand me in good stead as I move onto new opportunities within the golf industry, as I have learnt a lot that I may not otherwise have done if I had just stayed in Ireland.

Finally, I would like to thank Helmut Ullrich and Barry Beckett, from The Toro Company, as well as Toro's distributor Lely UK, and Bruce Jamieson – in fact everyone who was involved with making this learning experience possible for me.

Many thanks.

California Dreaming for the BIGGA Delegation

Ten BIGGA members will head for San Diego next month as part of the fourth delegation, in association with Bernhard and Company.

In previous years the party has travelled to Vancouver and the Canadian Golf Superintendents Association Conference and Show and since then to Orlando and Atlanta, for the GCSAA Conference and Show.

So far 30 BIGGA members have benefited from the opportunity to attend the Conferences and Shows and meet greenkeepers from around the world. The 10 greenkeepers who will visit San Diego have a similar opportunity.

The group comprises those who took the trouble to fill in the entry form which appeared with the September issue of the magazine and then progressed through the two stage process - the initial written element in which questions were asked about themselves, BIGGA and what they felt they would achieve from being a part of the delegation. Those who were selected from this stage were then interviewed at either BIGGA HOUSE or a Heathrow hotel.

The interview panel for both comprised BIGGA Past Chairman, Richard Barker; David Haskell-Craig MG, Course Manager at Maidenhead Golf Club, and Sam McLean, Sales and Marketing Director of Bernhard & Co.

Much store is made of the information gleaned by the Delegation being spread and widely as possible and the 10 will be expected to give talks at Club, Section and possibly Region level when they return.

Bernhard & Co are to be congratulated for their commitment to the delegation, without which this valuable opportunity for BIGGA members would not exist.

Stephen Bernhard comments...

We are delighted to be taking our fourth Bernhard-sponsored delegation overseas to attend the GCSAA Conference and Show in San Diego, California, next month.

The growing number who apply hoping to be selected for these trips. not to mention the quality of entrant, reflects well on how the opportunity to take part in the delegation is viewed by the BIGGA membership. I am sure that the 10 greenkeepers selected will each take as much from the trip as is possible.

The information exchange which will inevitably take place between the delegates and the Superintendents they meet during the trip, together with an exposure to a different way of life, will be extremely useful to everyone, in the weeks, months and years following their return.

We are extremely fortunate to have a wonderful relationship with the GCSAA and their members and staff are generous in their support of the BIGGA delegation. This, again, adds to the experience and we thank everyone involved for their hospitality.

The 10, who for the second time include an overseas member - on this occasion from Switzerland - will be encouraged to spread the word when they return and give talks to their own golf clubs, BIGGA Section and Region. That way what is learned during the trip can be spread more widely. Each delegate will have extensive homework to do before leaving for California but it will be rewarding and fulfilling as he develops long term relationships with his fellow delegates and other and like-minded colleagues in the States.

I am proud to be part of the enthusiastic team at Bernhard and Company who sponsor the group to San Diego and I hope everyone enjoys a fun filled and informative trip.

DELEGATION MEMBERS

Name:

Club:

Age:

Name:

Club:

Age:

Designation:



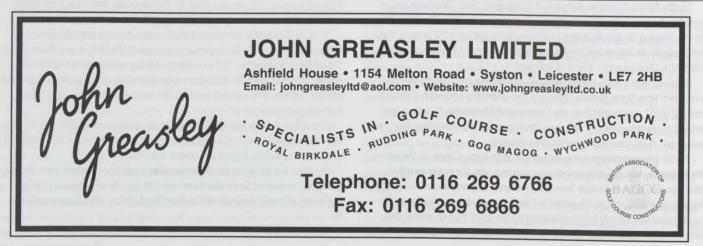
Peter Cross **Deputy Head Greenkeeper** Woolton GC 29

Peter is looking forward to the opportunity to mix with greenkeepers from different backgrounds and share and discuss education and greenkeeping practices. He is hoping, then, to pass on his knowledge to his work colleagues and the wider BIGGA membership.



Leslie Howkins Designation: Head Greenkeeper Cleethorpes GC 30

Leslie feels the benefits he will derive from the trip are almost impossible to calculate but is sure they will last for many years to come. He is particularly looking forward to meeting people from the USA and Canada and learning about course management in different parts of the world.







Name: Designation: Club: Age:

Sid Arrowsmith MG Course Manager Frilford Heath GC 50

Sid is keen to speak with Superintendents and exchange views on course management with them. He has never attended the GCSAA Conference and Show and he feels it will give him a good insight into how the industry in America is run compared with the UK.



Name: Designation: Club: Age:

Brian Boyle Deputy Head Greenkeeper County Sligo GC 26

Brian is looking to the trip to broaden his horizons on all greenkeeping issues. Having been out of college for five years he feels the next five years are critical in forming sound principals in greenkeeping and management. He is keen to discuss these matters with American counterparts.



Name: Warren Bevan **Course Manager** Designation: Stockport GC 29

Club:

Age:

Warren is constantly looking at new innovative ideas to help his greenkeeping team prepare their course and he is sure that the GCSAA Seminars will help him to pick up new ideas. He is also looking forward to spending time with like-minded greenkeepers.



Name: Designation: Club: 37 Age:

Steven Tierney Superintendent Golfpark Nuolen AG

Despite living and working in Switzerland since 1986 Steven has not missed a single BTME and is well aware of the benefits of networking with other greenkeepers. He is hoping to track down some American Superintendents who work in mountainous regions to discuss common issues.



Name: Designation: Club: Age:

Philip Cooper Head Groundsman/Greenkeeper Milton Abbey School 38

Philip feels that it must be everyone's dream to be selected for the trip and he is getting a tremendous buzz from the thought of meeting some of the top greenkeepers and seeing some of the world's top courses. It all adds up to giving him a in-depth insight into the whole greenkeeping industry.



Name: Designation: Club: Age:

Will Bowden Deputy Course Manager The Hertfordshire GC 26

Will is determined to make the very most from the trip and gain as much information and knowledge as possible. He is relishing the opportunity to meet both British and American greenkeepers. A keen part-time journalist, photographer and artist Will will be the delegation's magazine correspondent.



Name: Designation: Club: Age:

Paul Jenkins Course Manager Westridge Golf Centre, Isle of Wight 44

Paul hopes to return with as many ideas and procedures as possible then incorporate them into his own regimes. As a BIGGA Board of Management member he is also hoping to return with useful information which might assist the running of BIGGA.



Name: Designation: Club: Age:

Terry Farkins Course Manager Dartmouth G&CC 39

Terry is looking at gaining a much deeper technical knowledge, being able to discuss theories used in America and learning more about season grasses and their problems. He is sure the opportunity to increase his own confidence and make him a better Course Manager.



Others shake, rattle and roll. We prefer the twist.

Powerful Toro Workman utility vehicles will bend to your every need, whether you're transporting equipment and materials out to the roughs or working in bunkers or wooded areas.

With Toro's Active In-Frame suspension, these highly manoeuvrable and productive units literally twist over your terrain to provide incredible traction and an unequalled smooth and stable ride.

The range comprises 1100, 2100 and 2110 petrol models. The 2100E is an electric version that's quiet, environmentally friendly and features automatic braking that slows the machine on downward slopes.

Paying a little more up front for technologically-advanced features and greater productivity will reap long term savings. For a ride without the shake, rattle and roll, call Toro on 01480 226800.



Workman 3000/4000 Series With high payload and big productivity, the Toro Workman 3000/4000 Series utility vehicles are the toughest, highest capacity, most versatile vehicles in the world.

TORO Commercial and Irrigation Products are distributed by Lely (UK) Limited, St Neots Cambridgeshire PE19 1QH. Tel: 01480 226800 Email: toro.info@lely.co.uk

TORO Commercial Products are distributed by Lely Ireland Limited Kilboggin, Nurney, Co. Kildare. Tel: 00 353 (0)45 526170 Email: torosales@lely.ie www.toro.com



A Purposeful Approach

Roland Taylor investigates what is available to the Course Manager who is looking at a Utility Vehicle you sit in*.

"Useful with some purpose", defines the word utility and vehicles under this category are somewhere between ATV and tractors. Their role as far as golf courses are concerned seems to fall in the area of transporting people, top dressings, fertiliser and mowers around a course. As such they could be a very useful addition to any fleet.

There are several advantages in this type of vehicle compared to a tractor and trailer. They are highly manoeuvrable and have similar characteristics to the ATVs, in that they will travel over terrain where other units will not. In addition, their ground weight is light enough not to damage the turf, even in the wettest of conditions.

Petrol, diesel, LPG and electric models are available with a wide variety of configurations and specifications.

Here in the UK there are a number of suppliers who offer a utility vehicle in their range.

BSG TRACTORS & MACHINERY

From this Essex based company come the Carons. The Runner series has a load capacity of one tonne and four-wheel drive. Their 26hp version has a basic driver platform and cargo carrier, whilst its larger 35hp cousin comes with three-way tipping body.

For those looking for a larger unit there is the 700 series, with a choice of 30hp, 35hp or 50hp diesel-powered models. These have 16-forward and 8-reverse syncro speeds, plus power steering and a 540/1000rpm PTO. Three-point-linkage comes as an optional extra.

Hull Golf Club purchased a 40hp Caron 747 in 2000. This parkland course underwent an Eco study and following the report, one of the recommendations is now well under way. This is a long-term programme to replant the course with native trees. The soil is a clay base and although the Caron is a relatively large vehicle, Head Greenkeeper, Stephen Thackeray, says he has had no problems with the unit damaging the turf or getting stuck.

The cargo bed often carries three tonne loads and its three-way tipping facility makes it ideal for filling bunkers. In addition to transporting equipment and materials the Caron is also used to operate a Sisis Veemo.

Hull GC also has two Gators, which they largely use for the lighter carrying work. Stephen says all his utilities have proved to be a highly cost effective method of quickly and easily transporting staff between sites. There has been a considerable reduction in non-productive travelling time and labour costs.

JOHN DEERE

John Deere's GATOR stands for General All purpose Turf Off Road vehicles, which are designed to have a low centre of gravity, stability and safety. Low ground pressure is also a priority; they say that their 6x4 model, when fully loaded, delivers just 7psi.

There is a 4x2 10hp or an18hp 6x4 petrol engine model and a larger unit is also available with a diesel engine. All have large capacity tipping cargo boxes and differential lock, plus variable speeds up to 15mph. A turf version, which was introduced for golf courses, has a top speed of 18mph.

The Royal West Norfolk Golf Course uses two Gators. This links course, which was opened on 1 January 1892, is built with the sea on one side and a marsh on the other. At certain times of the day the clubhouse and course are cut off from the mainland by the tide, making access virtually impossible. There is no landmass between this area of England and the northern ice flows so it is often bitterly cold and bleak in winter.

Gavin Playford became Head Greenkeeper in 1993 and has a staff of six including one member who is responsible for all the machinery maintenance. He purchased his first Gator, a diesel, in 1999 and was so impressed with this unit that he bought an electric version two years ago. This was followed a year later with a 6x4 diesel and another is scheduled for delivery in 2004.

Why an electric? Gavin said it fitted our requirements exactly; we were looking for a quiet utility that could be used to transport staff, tools and materials around the course with minimal disturbance to the player. Following the purchase of the larger 6x4 the E-Gator is now used for light transporting work.

Trailers are fitted to both machines and as the mowing regime, from October to March, entails using pedestrian mowers on both tees and greens, the utilities are kept busy. Gavin has found that the units easily cope with the steep dunes without damaging the turf. The course is on pure sand with fescues and bents the dominant grass species.

The Gator that is on order is being modified to take a three gang ball collector for the practice area.

Gavin likes his Gators, but has one plea. "A factory fitted cab would be nice." Standing in the cold wind that was blowing across the course one could well understand this request.



At the Royal West Norfolk GC Head Greenkeeper, Gavin Playford, John Deere Gators are ideal for transporting staff and materials plus mowers around this links course.



▲ Jim Read at Hunstaton Golf Club likes his Ransomes Jacobsen E-Z-GO because it is fast, light and highly manoeuvrable

RANSOMES JACOBSEN

For 2004 Ransomes Jacobsen are launching their E-Z-Go ST, 4x4 turf utility vehicle. This latest introduction has a load carrying capacity of about 500kg and a top speed of 25mph.

The possibility of corrosion has been taken into account by using a wax dipped, galvanised steel frame, onto which is mounted a polythethylene cargo bed.

A combination of articulating front axle, McPherson struts and self adjusting hydraulic brakes are said to add up to a vehicle that can be used safely over a relatively steep terrain.

Under the covers is an 18hp Honda engine, which is easily accessible. Other features include front and rear differential locks, rear leaf springs and hydraulic shock absorbers and the unit has a ground clearance of 24cm.

There is bench style seating for two people and the console has a host of instrumentation that tell you what is doing this and that, plus somewhere to a park your drinks and mobile telephone.

Hunstanton Golf Club overlooks The Wash and is very much open to the elements. In fact the wind, together with the rough, can make many of the holes very challenging. Hunstanton's choice of utility vehicle is a petrol engine Ransomes Jacobsen E-Z-GO.

A nine-hole course was built in 1891 and five years later the second nine was added for the princely total sum of £25.

The Club has a reputation for some of the fastest greens in the country thanks to the Course Manager, Jim Reid, whose magic formula for consistently obtaining readings of 11"+ (using a Stimpmeter) includes a weekly light dust of sand on each green.

A golfing record was also achieved on this course. During the Eastern

Counties Foursome in 1974 Robert John Taylor from Leicestershire achieved a hole-in-one, three consecutive days on the 189-yard, 16th green. The first time was using a one iron and the other two were with a six iron, downwind.

Hunstanton's E-Z-GO is used for a variety of jobs around the course, including transporting staff mowers and materials between greens and ball picking up on the practice area.

Jim Reid said. "It is fast light and highly manoeuvrable.Some parts of the course flood during the year and the E-Z-Go travels over these areas without getting get stuck or damage the turf. We have found there is very little maintenance to worry about and although we would prefer a diesel version this unit represents good value for money.

TORO

During 2003 the Workman 3300 and 4300 were introduced with a number of upgrades.

A more powerful and reliable Briggs & Stratton Vanguard, 26.5hp diesel engine, that complies with the 2003 EPA/CARB Regulations on emission and noise levels, has been fitted. This unit replaces the previous Mitsubishi 23hp engine.

For increased comfort and safety, bucket style seats have been introduced in addition to front mounted progressive suspension springs, to give a smoother ride and to absorb heavy loads.

Other improvements include easier access for maintenance and cleaning, plus a newly designed rear stub axles and high traction tyres.

A high flow heavy-duty hydraulic kit is now available and this comes with oil cooler fan, 15-litre reservoir, 30.2litre pump and quick release couplings to the rear of the unit. Toro say that all the present attachments can be fitted to these new units.

For anyone looking for a smaller vehicle, there is the Workman1100. The unit has the company's 'twister' Active In Frame suspension that is said to provide better traction, plenty of manoeuvrability and comfort in addition to improved operator control.

The unit has independent front suspension, which is claimed to give an almost zero turning radius and 70-degree steering, when working in confined areas.

The unit has a carrying capacity of 454kg with tipping facility and optional electric tipping kit. Other features include, pedal operated start accelerator and a stop brake.

Girton Golf Club is situated on the outskirts of Cambridge and they have a Toro Workman300D. Ian Hankin has been greenkeeping at this parkland course for 23 years.

The site is on a clay base soil, so good drainage is a top priority and to this end a full programme of slitting and vertidraining is carried out during the year.

Their Workman, in addition to transporting is used for spraying, top dressing and spiking. Ian says he likes the unit's good ground clearance and how it closely follows the ground contour.

They have also found the ground weight has not damaged the turf, even when the cargo box is fully loaded.

When looking for a utility, a good payload was near the top of the list of requirements and the Workman has proved to come up to their expectation. One minus point is the length of the vehicle, when fitted with a rear attachment. At Girton this is not a major problem, but it could be if there were confined areas to work in.

KAWASAKI

The new 3010 diesel Mule was launched at the back end of 2003. This latest utility is said to be the best yet produced by Kawasaki.

So, what have they done to substantiate this claim? A 23hp liquid cooled three-cylinder diesel has been used to provide a low rpm torque and the transmission system has high capacity and includes an automatic torque converter. In addition there is selectable two or four-wheel drive. Load carrying capacity is rated at a total of 740kg and this includes the cargo bed that is capable of handling 499kg.

The dual mode differential to the rear axles is claimed to give a minimum turning radius of 3.4 metres. The bodywork is of a pick up truck styling and the bench type seat is capable of carrying two or possibly three people at a push.

From the courses that were contacted it is clear that utilities have a place in the fleet, largely for transporting operations. They do save time and money when it comes to moving bodies, material and equipment around a course, especially where there is some difficult terrain to transverse. Utilities appear to be an addition rather than a replacement for the compact or medium size tractors, even where they are used to operate equipment such as top dressers and sprayers. Certainly, all those we spoke to were very happy with their utilities and find them a very useful addition to their fleets.

*Next month it will be vehicles you sit on.



Greenkeeper International 27

OnCourse



The powerful organiser keeping your golf course green!

Golf Club members and owners are continually demanding better quality playing conditions, which brings the role of Golf Course Managers into sharp focus. Not only are they expected to keep the course in excellent condition they also have to be skilled administrators and personnel managers. Additionally, Golf Club Managers need detailed and well-structured reports on golf course operations, which can be a time consuming task. *OnCourse*[™] has been developed to make all of these things easier.

For more detailed information and a free demonstration CD, please contact ken@bigga.co.uk 01347 833800 or from Stand Q8 BTME & ClubHouse





Compact plus 1.5m DEFENDER

The leading European supplier of golf, grass-care and utility vehicles

MOX - Member of LeasePlan Corporation - Tel : 0870 1646 004 - Fax : 0870 1646 009

NEW HARDI SWIFT 12v sprayers

The complete amenity range







Active Bulging Base tank designed to reduce residues Reliable diaphragm pump Built-in carry handles plus recessed pump

BINIT N2

and control unit

HARD

HARDI Ltd

Unit 1, Europark (A5), Watling Street, Clifton-upon-Dunsmore, Rugby, Warwickshire CV23 0AQ Tel: 01788 861144 Fax: 01788 860469 Email: office@hardi-uk.com Website: www.hardi.co.uk

Greenkeeping in Denmark 2



Ian Tomlinson, Course Manager at Rungsted Golf Club, gives an update on the work he has carried out in the last two years.

Since writing about my experiences in Denmark in January 2002 many colleagues have since asked about the greens and how my war against Poa Annua is going. Then I read the August edition of Greenkeeper International, and the article on Disease Management difficulties in Sweden and the Netherlands, and feel that the following article will reassure my Scandinavian colleagues that there is a possibility to manage greens without chemicals although disease will always be a problem in the early stages on poa greens.

There are many sceptical people out there who say you cannot eradicate poa annua from your greens so I wish to contradict that statement and offer hope to all those greenkeepers young and old who still believe that you can grow fescue and bent turf on a green today at the expense of poa.

It is just over three years since I started the work on Rungsteds greens (which were 100% poa when I started). At that time we had 1cm of root and 5cm of thatch. The greens are 66 years old and made up mainly of clay soil but some are made entirely of peat. Today there is a complete ban on fungicides for golf courses in Denmark and a Nitrogen tax levied by the government for every kilo used.

The sward composition today on the greens is starting to take on another look. On some greens when you look at them in the morning dew you can see pale green patches half a metre in diameter. These are patches of pure fescue that have established mainly in the last year. The rest of the sward is a mix of poa and bent. I would estimate that we have 40% fescue/bent on some of the drier greens now established and on the wetter greens 20 to 30% of mainly bent grass.

This is a huge transformation from the wet boggy poa greens I inherited back in 2000. The 5cm of thatch is history as we have hollow tined with 16cm tines 12 times throughout the playing season and applied 900 tonnes of top dressing. What was once thatch has now been replaced by a layer of top dressing 7cm deep. You could say that we are actually building a new green on top of the old soil one. We now have firm dry surfaces on most of the greens but have four greens that need some extra work on them to help dry them out. Recently we had 33mm of rain a few hours before a competition. Members turned up expecting to find the course unplayable but the only areas not waterlogged were the greens that we managed to cut with a triplex. We may still have slow internal drainage but now the surface water can get away from the surface thanks to the top dressing in the top of the green profile.



Ian has worked hard on his greens at Rungsted

The first phase of our programme is now complete but the next is the hardest part - the establishment of the new seed. The success of this procedure is dependent on the fescue and bent being able to grow in dry conditions. When I started overseeding the greens three seasons ago the new seed was not surviving because of the wet surface due to the thatch holding the water. As the greens became drier I was getting more seed to establish but was still losing a fair percentage. I then read Henry Blechelet's, of the STRI, article (March 2003) on overseeding greens and contacted him to discuss my situation. Henry was marvellous and came back with some sound advice that I have followed with great success. The main advice was not to disturb the new seed once it had germinated. I asked what he meant by disturb? Did it mean do not aerate? What he meant was mechanical removal of the leaf blade and aggravating and bruising the plant. So no verti-cutting or top dressing for six weeks following germination. In my situation, however, I had to top dress after overseeding but if you must during this establishment period, be sensible about it. We pull a drag mat with the bunker machine very slowly, just once across the green surface then off and let the grass grow through the top dressing. This way we eliminate the bruising and aggravation that a mat can cause to the new seedling.

Now we all know what a difficult start to the season we had last year. We also had a severe winter –18 degrees interspersed with mild periods and some snow cover that resulted in on some greens 50% of the poa being hit by fusarium brought on by the huge swings in temperature. As we have no fungicide we took a different view on this damage to the greens than you might take in the UK. For us this was a really positive situation to be in. We had lost 50% of our problem in one go. The poa was hit and we sowed 500kg of BAR 2 seed in March and April into the greens. The cold spring held the poa back but the new seed still germinated then we waited as the scars started to fill in, not with poa but fescue. It would have been so easy to reach for the fertiliser spreader and hit the irrigation switch to on and hey presto no more scars and a nice crop of poa.



A core sample from the year 2000 with 5-6cm of chatch and little rootzone



A measure of improvement

I have 1100 members who like some of yours were not over impressed by their playing surface this spring but by communicating they understood what our aims for the greens were and that we were looking to the long term not a quick fix. (If you want a member to read a report leave a few copies in the bar area as well as on the information board). We could never have achieved so much without the understanding and support of the membership. If you do not communicate you would probably never get past your first season doing a renovation of your greens on the scale that we have done.

So how do you stress out the poa without losing your playing surface altogether? The one thing that poa loves is fertiliser and water and lots of it so this is were you take control. Water is only applied just before the greens start to show signs of wilting. Our greens used to receive 200kg of N/Ha per year. The first year we were down to 120Kg of N/Ha, last year 90Kg of N/Ha and this year I am looking at 70Kg of N/Ha. This is probably still a lot of fertiliser in some people's eyes but you cannot just shut off the nutrient and water supply and expect fescue and bent to take over.

I am the first to admit that we still have a lot of poa but this is a long term process and you have to try and push the balance in favour of the finer grasses and let the poa struggle and at these levels of nutrient it struggles. When the poa gets anthracnose you know that the nutrient level is on the limit and a small application of Sulphate of Ammonia, (which the poa hates), will keep it tickling along but, because it is so weak, the fescue and bent dominates. It is at this stage that management of the anthracnose situation is critical. If you let it run too far you will end up with thin, possible bare, areas. What is really interesting is that on three greens we have developed Take-All. After discussing this with Chris Haspell, who has already gone through this process at Falster GC, he informed me that in his third season of changing the grass type his greens also developed Take-All. I can only put it down to the 900 tonnes of Topdressing applied during the last three seasons and that we have now, in effect, a sterile growing medium and not a soil green anymore, therefore very little bacteria to counteract the disease.

Regular applications of seaweed helps with the rooting and establishment of the young fine grass plants. We aerate with 8mm solid tines every two weeks throughout the playing season to keep the surface open and allow the new grasses maximum chance for establishment. If anyone should follow a similar programme you will have challenging periods as you try to keep the nutrient balance in favour of the fine grasses and will have to be very patient as it will take at least five years before you will start to see a dominant of fescue/bent in the sward. It is a slow process and we are so dependent on the weather that the process may take even longer if we have wet seasons. The important thing is to keep focused and believe in what you are doing and the results will follow.



Ian has been pushing the balance of his greens in favour of the finer grasses

I would also like to comment on the issue of green speed. The greens at Rungsted never go below 5mm. Obviously the new generation of A4, L93 Bents are a different story that demand being mown at 3mm and lower. The speed on our greens comes by producing a firm dry surface and the more top dressing you apply the more the surface will give good pace. Add to that as the sward composition changes and the poa starts to be in the minority so there are less seed heads therefore less resistance on the roll of the ball. A fescue green cut at 5mm will give as fast a surface as a poa green mown and groomed at 3mm. If you are attempting to alter the botanical composition of the sward as in our case you have to give the new seedlings chance to mature and compete and they need as much leaf surface area as possible to help with photosynthesis and root development. Attempting to establish fescue and mowing below 5mm will be a waste of time and effort.

While all the work has been going on with the greens we have also been renovating other areas on the course. In my last article I talked about the permission to start the bunker renovation programme. This has been a very satisfying project for my relatively inexperienced team as they learned a great deal about bunkers, drainage and shaping using our new 3.5T excavator with a 4 in 1 bucket. We have tried very hard to put the bunkers back as C.A. MacKenzie designed them back in 1937. The biggest shock was to discover 50cm to 60cm of bunker sand in most bunkers so the members soon commented that the new bunkers were difficult to exit now that they were deeper. Ron Kirby, Golf Architect drew up plans to redesign the 12th green by replacing the two existing green side bunkers which had collapsed by five pot bunkers and adding an extension to the back left side of the green. All this work was carried out in-house by the staff and to date we have rebuilt 30 bunkers with the remainder been tackled this autumn/winter. We are also in the planning stage to redevelop the maintenance facility over a three year period to improve the storage area for the machines, a new Waste2Water washing down facility to comply with environmental laws and a new covered area to store top dressing materials etc. At the time of writing this article we also have contractors working to a Ron Kirby/Paolo Gueltrini design to improve the driving range facility. We are having five target greens, a 75m par 3 hole, a new 375m2 pitching green, 4 covered driving bays and a new practice base for a further 10 golfers built. My staff shall complete the remainder of the design changes to include the landscaping of the whole clubhouse area this autumn.

Thomas Bjorn, Søren Hansen, Anders Hansen, Søren Kjeldsen and Steen Tinning are five Danish golfers now competing with the best on the European Tour with great success. That is creating an enormous influx of keen young golfers wishing to follow in their hero's footsteps. This can only be good for the future game of golf in Denmark and as for us greenkeepers, we shall try to give them natural golf courses maintained by traditional greenkeeping methods for them to perfect their game upon.