

# 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 Rungsted's 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 What was once thatch has now been replaced by a layer of top dressing 7cm deep.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.

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.



▲ Ian has worked hard on his greens at Rungsted

▲ A core sample from the year 2000 with 5-6cm of thatch 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 where 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 375m<sup>2</sup> 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.