

# Diary of a greenkeeper

IN the flaming June of 1976, I arrived at Ipswich Golf Club to take up my new post as course manager. Ipswich GC, or Purdis Heath as it is known locally, is one of the premier clubs in East Anglia—a 27-hole golf course set in heathland that has to be seen to be appreciated.

When I arrived, one of the first things I remember was walking with the club professional across the 18th green. He asked me: "How can people be expected to play good golf on such soft, slow greens?" In fact, the green was so soft that I could see my footprints in the turf behind me and this was in the middle of a severe drought!

Mind you, the members loved the greens. They could hold a ball on them, never mind how it was struck or, for that matter, with what. So, as a newcomer, this was no time to upset the natives! However, I did risk turning the watering system controller down from an application time of 30-40 minutes per green, per night, to six minutes. (Besides, I hadn't yet unpacked my wellies!)

My thoughts on greenkeeping were, at that time, somewhat different to what they are now. I think it fair to say that I was a three times a year NPK man, with the usual higher phosphate feed for the winter applied in late October.

Jim Arthur was, to me, some lunatic who had lost his marbles and had run away from Bingley with the crazy notion that if you starved your lovely greens of all water and fertiliser and slit-tined them as deep as possible once a week, they would be better to play on. Worse still, he was making a living because some people believed it!

No wonder, I thought, some greenkeepers hated having this man inflicted upon them and their courses by committees. How my thoughts have changed!

The next two years were spent trying to show my new employers that I could keep their course in the manner to which they were accustomed and, judging from the comments of members and visitors alike, my staff and I seemed to be doing OK. But, deep down, I felt things were not all they should be. The thatch layer was still there, the greens were not draining as quickly as you would expect of a heathland course and it was still necessary to use frost holes in the winter because of greens holding so

By David Jones

much water. Was I over fertilising? Perhaps I ought to try cutting back on phosphates to see what happened?

Over the next two to three years, we used a phosphate-free fertiliser on the greens and tees and stopped using anything at all on the fairways, except the aerator and gang mowers. The results were remarkable—the deterioration was becoming an embarrassment. I continued with this policy until the autumn of 1981 with no apparent reduction in the thatch levels that was present in the greens. Winter frost holes were still the norm, despite the change in direction.

During the first couple of months of 1982, I attended a lecture given by Jim Arthur, on behalf of the PGA European Tour, at Wentworth. The title was Course Preparation For An Open Championship and I soon realised that this man wasn't a lunatic. He wasn't saying, "don't water, don't use fertiliser." He was saying, "do so in moderation, with the minimum amounts required to sustain the grass species that are required to enable the game to be played 365 days a year."

With regard to phosphate, tests were proving that most golf course greens already had far too much. At last, all the pieces seemed to come together and I realised that I had been going in the right direction, but had been trying to build the jigsaw without all the parts and that I was walking the wrong way, too slowly up the escalator to achieve my goal, which was to return Purdis Heath to the heathland character members had not seen for some 20 years or more.

The first obvious step in getting such a policy adopted by a club is to approach your committee for its support. Without their backing and confidence, make no mistake, you will be out on your proverbial ear! Memories are painfully short and it's no use saying that the course was alright last year. It's now that interests most members. To obtain my committee's support, I decided to put my thoughts down on paper and the finished document was then circulated to the captain and committee. The report—dated March 13, 1982—went as follows:

TO ACHIEVE FINER GREENS AT PURDIS

## *What Is A Good Golf Green?*

It must surely be one that when a ball is struck on it towards the hole, the ball moves quickly across its surface hugging the grass cover, following its contours, finally dropping into the cup with the nice rattle that some people hear in less shots from the tee by one player than others—that is, if the green has been read correctly in the first place. This same fast green must also be capable of allowing a correctly struck ball to pitch and stop on its surface without causing a large crater. On the other hand, it must allow a badly struck shot to remain a bad shot, by letting it skid through the back.

## *Our Present Situation*

Annual meadow grass is in the majority of golf greens throughout the British Isles and is known as a weed grass. On our course, it dominates our greens by some 85 per cent. The remaining 15 per cent is made up of some of the desirable species and other weed grasses such as Yorkshire Fog, etc.

Our other enemy, which goes hand in hand with poa annua, is thatch. Thatch can be briefly described as a layer of dead and living grass stems and roots between the soil and the green surface. The thatch at Purdis is approximately two inches thick. Unfortunately, these two problems have been brought about by a lack of understanding concerning the kind of management required to encourage the right type of grasses. In our experience, if the records are looked into, how often have our fairways been covered with chalk on instruction from well-meaning advisors because the soil ph level had, on analysis, been too acid? Too acid for what? Not too acid to sustain the fescue and agrostis grasses, as they are capable of tolerating wide variations in ph values, but perhaps the intention was to cause the heather to decline, because that was its main achievement.

Getting back to the greens, which I would guess have been given a healthy coat of chalk now and then in the past 20 years, after the testing of soil samples revealed a soil condition unsuitable to grow grass for agricultural

*Continued overleaf...*



The short 10th before bracken removal.

standards, what else has brought about the invasion of meadow grass? Undoubtedly, over generous fertilisation, greater compaction of the surface from an increase of play and, lastly, over enthusiastic watering to give the greens the expected 'green' appearance, which are the three prime ingredients for poa annua to thrive over all-comers and to encourage the accumulation of thatch. The species known as fescue and bent grass provide the best turf for an all-year-round putting surface—their requirements for survival being uncompacted, well-drained soil and poverty with regard to nutritional value.

Before going on to explain how the survival of these two species can be encouraged, I think we should examine the reason why poa annua is an undesirable species. Poa has a

short life span, its process of germinating, growing, flowering to seed and dying taking just a few weeks. Poa's shallow root system makes it capable of surviving on compact or fibrous surfaces and survival during drought conditions is assisted by being able to rapidly set down seed, which will germinate when the drought ends. Its colour is normally very good in the summer, as long as it is kept well-supplied with fertiliser and water but, during the winter months, it becomes a sickly yellow, prone to fungal attack. As the dying off and seeding process continues, the putting surface is often bumpy.

The average club golfer wanting, or should I say, expecting, his thin, badly struck shot to stop on impact with the green cries out for the greens to receive more water, the addition of

which helps close any space within the surface, which normally would contain air and bacteria. The bacteria is required to break down cut leaves and dead vegetation just below the surface (thatch). Without aerobic activity, we build up more thatch. This thatch acts like a sponge in wet weather, oozing out water around the feet and causing footprints and deep pitch marks to disturb the surface. When the weather becomes dry, it hardens like cork, leaving a bumpy, uneven surface. The recognised solution? Water to soften it again! This situation has gone on for years, not just at Purdis, but on the majority of golf courses and sports turf all over the country and now people more or less accept it as a cross to be borne.

#### *The Remedy*

Some greenkeepers, like myself, believe this situation need not be. To achieve the goal, which must be to regain fescue and agrostis domination on the greens, we have to replace the correct environment for these species to thrive. One important and encouraging factor in our favour is that we are a heathland course, which favours fine grasses as its indigenous species.

With thatch, introduction of air through deep-slitting at weekly intervals will soon ease water retaining areas and assist with the entry of bacteria to break the layer down, effectively, improving soil structure. This is what would be known as The Initial Period Of Pain!

It would be a pain for the members, because to have a deep-slitting machine pass over their greens on a weekly basis would seem like the end of the world and their golf course as they know it, but this weekly aeration is important to drain the surface, to

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begin and continue to break down the thatch layer and improve the soil structure, as well as stated earlier, to allow bacteria into it. To improve surface levels, frequent top dressings of a suitable mixture will be applied at 2-3lb per sq yard during the growing season—these disappearing very quickly and being fairly light in quantity.

As we are looking for soils that would be classed as impoverished, it will not be necessary to use phosphates in any fertilisers, (phosphates being an encouragement for poa annua) the prime ingredient being nitrogen, which will replace that leached out by rainfall and, if the soil becomes more acid, it will assist in locking up any available phosphate remaining in the soil. The surface of the green will also be improved by regular verticutting on at least a fortnightly basis, the blade being set just to flick through the top growth of the sward. Water should be applied in small amounts, sufficient to keep the grass alive.

It is most important that, if a policy for a return to heathland greens is to succeed, members of the greens committee should be familiar with what is happening and why, as it will have to be explained frequently to many irate members! Once the programme has begun, it *must* be continued and not abandoned in order to follow the wishes of amateurs. After all, if 85 per cent of our putting surface is poa, they have to be told that the intention is to kill off 85 per cent of the grass and replace it with something better over at least a two-year period, possibly longer. I think it fair to say that, after two years, there should be a great improvement in the water-shedding capability.

It is a well-known fact that the request for 'green' greens and soft

pitching surfaces has brought about the situation we are facing today. Soft pitching greens in a dry summer will be bogs in winter. The final result of a determined policy of deep regular aeration, more frequent top dressing and verticutting, with a decrease in water and fertilisation, will lead to finer-grassed greens, which allow a gently tapped putt to roll on and on, as opposed to a hard-hit ball, which bobbles along as if on coconut matting and screeches to a halt two yards short of the hole!

The final point to consider is how the aeration programme could be carried out. With the machinery available within the club at present, to slit all 27 greens once a week would take one man approximately one week and that only being to a depth of two and a half inches—a long way short of the six to eight inches I believe to be necessary to achieve the required results. ●

One thing I have always been fortunate with at Ipswich is a clear-sighted committee open to suggestion. Unlike one of my previous clubs where, during a drought, the captain requested that more water be put on the greens "to fill 'em up" in case a restriction was imposed!

After due consideration, the Purdis Heath committee supported my policy plan and we bought the machinery to make regular top dressing and, most important, regular aeration possible.

In the follow-up article, which will cover the results, trials and tribulations of going through a period of 'Arthiritus' for some two and a half years, I will attempt to give those of you who are thinking of taking The Step some examples of what system we operated at Purdis Heath and what to expect from your turf and, worse still, your dear members!



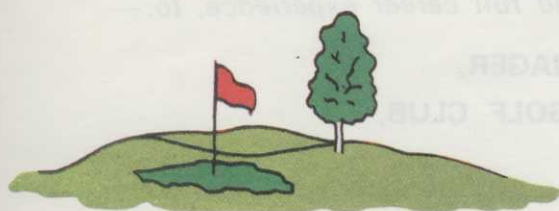
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