

The reclamation of indigenous turf

Eddie Park looks at the problems of removing thatch and *Poa annua* from our golf greens.

I HAVE, on several occasions, been asked why I so frequently quote from old, indeed, antique, books on greenkeeping. Of course, they are interesting, but why not use up-to-date sources? This is an important point for those trying to recapture *Agrostis/Festuca* playing surfaces and needing help with the problems that occur.

I have to be quite frank and reply that, whereas up to about 1940 there was an understanding of the needs of *Agrostis/Festuca* turf, that position no longer obtains. Little has been written on the reclamation and subsequent maintenance of these grasses, while there has been plenty on the recognition and treatment of the problems of *Poa annua* and its ugly sister thatch.

I have listened to several excellent lectures about the problems on golf courses in this last two years, but hardly anything about the problems of maintaining *Agrostis/Festuca* turf. Probably for the good reason that, in my observation, there are few courses with such turf on the greens. I have seen hundreds of greens with *Poa annua/Agrostis* turf and so many of our problems in recent years in reality derived directly from turf of such botanical composition. Hence, we are continuously offered plenty of quick solutions, gimmicks, magic machinery, clever chemicals, etc, but we do seem to have lost the core of knowledge from the past. So, this article on problems will, perhaps, at least be different.

We have previously covered, in some detail, the fundamental problem of being allowed, by members and committees, to do the job required. I will not repeat it all here, but suffice to say that if you have not got a firm and full policy agreed by the majority of

members, you should not be starting.

Perhaps the first problem I should discuss is the cosmetic one. If we are to succeed in getting fine grass back, we cannot go on cheating. That means we cannot use fertiliser and water simply to cover things up. So we cannot any longer disguise the sins of the past and we cannot expect to achieve the appearance of a mono-culture that is so typical of *Poa annua* with a dash of remaining *Agrostis*.

Golfers have become used to this uniform overall green colour and do not want to do without it. They never did, of course. R.B. Dawson, in the first issue of the *Bingley Journal*, wrote: 'Many golfers are possessed of a keen aesthetic sense and the greens in particular should satisfy this. There should be no bands or blotches of darker colour; and grass should form one homogeneous whole'.

Unrealistic

That is almost certainly an unrealistic goal and a doubtful one anyway. We know that in many crops mono-cultures consisting of one species only are high risk plant associations. Diseases or extreme climate can easily decimate them. In the context of a golf green, the story just does not happen that way anyway.

We should be looking for a gradual succession as we improve the good husbandry of the site. Our succession seems to be *Poa annua* giving way to creeping bent (*Agrostis stolonifera*) changing to common bent (*Agrostis tenuis*). If stopped there, I would settle very happily for that but, in fact, on some drier areas, we then find colonies of fescues.

Now there are times, particularly in summer, when there is no way they will all look the same green colour and we have to spend time explaining this - 'never mind the colour, feel the quality!' Much the same argument applies to turf density. The use of plentiful fertiliser and water gives a *Poa annua* sward with a high productivity. So golfers have become used to a dense, lush sward which, unhappily, only lasts for three months of the year and even then with drawbacks that they may not appreciate.

Working up to *Agrostis* from small beginnings is a slow business and, in my experience, gimmicks are counter-productive. Everyone thinks of overseeding and it might be successful if we could close the green or leave all the grass long for some months. In the context of a busy club calendar, that just is not an option - we must mow regularly and this kills off the young seedlings.

Attempts to push the matter along with fertiliser and water take us straight back to the conditions that favour *Poa annua*. So we have to go at nature's speed aided only by our best efforts at aeration and other good husbandry practices, such as top-dressing.

One really valuable trick is to take out full depth hole plugs of good turf and swop them round with plugs from poor areas on the greens. This means having access to a source of good turf in a turf nursery and it is surprising how many patch plugs can be cut from a square yard of turf. It also calls for accurate craftsmanship in fitting the new plugs in the green.

Now we are beginning to see the real crux of our problems. Finance and training. Without a

Continued overleaf....

Eddie Park – Continued...



highly skilled and motivated staff (at least four on 18 holes), it is quite impossible to get all these individual tasks done. Far too many clubs expect high standards, but do not want to pay for them. I would have thought that most people would appreciate that subscriptions of less than £5 per week (and some are a lot lower) will not pay for all the work required.

If they reduce the hand work or take in more members to pay for it, they simply compound their problems. It is at this point that I, for one, hear the warning bells ringing. From many reports around the country, I hear disturbing tales of the shrinking waiting lists and members refusing to pay increased subscriptions or green fees.

Pay more

In many cases, I don't blame them. Why should they pay more for a course in a deplorable state? What I call 'alternative greenkeeping,' using large amounts of fertiliser, water and chemicals plus, only too often, poor craftsmanship (taking too many short cuts), has failed.

The year 1984-85 may just jolt a few more people out of their complacency. A drought followed by heavy autumn rainfall, an intense-

ly cold winter, a late spring and perhaps a wet summer shows us that Old Mother Nature has ceased to be as benevolent as the last few years. Golfers will not go on paying for waterlogged greens or Fusarium in July.

Problems such as weeds, worms and fungi should not be overemphasised. I work on the principle of *minimum* intervention. With a decrease in alkalinity and fertility, worms and weeds such as clover decrease dramatically. As for the other weeds, let us at least stop the practice of spraying overall (even the rough) with wide spectrum herbicides.

Nowadays, it is far too expensive and the great joy of discontinuing is to see the rapid return of all our wild flowers. Springtime with drifts of cowslips, bluebells, any local orchids, anemone, etc, delights even the most unobservant club member.

The position with fungi is rather different. At least the old mercurics were effective with diseases such as fusarium. Today, the requirements for safety regulation testing mean that agrochemical firms would probably find it too expensive to develop fungicides tailored exclusively for sports turf. So we end up with materials originally developed for much bigger markets, such as tomato and chrysanthemum growers.

Sometimes the price for the turf equivalent of the same chemical is set at a significantly higher level, yet the substances are certainly *not* as effective or persistent as our trusty old mercurics. It is not surprising that many course managers tell me that they prefer sulphate of iron.

The real point is that we should, if at all possible, be avoiding all these things anyway. The research to investigate the side effects on turf is yet to be done, but we know that anything that reduces bacterial or fungal activity also reduces the soil's ability to decompose unwanted organic matter – such as dead root material that will build up into thatch. Getting the soil into better health with good husbandry will be worth more than all the 'cures' in the world. And I need hardly add that diseases such as fusarium are far less of a worry to the man with an *Agrostis/Festuca* sward.

I have said that we can no

longer cover up all the sins of the past and that applies especially to old fairy rings, which were previously camouflaged with ample fertiliser and water. They left, sometimes for many years, soil into which it is difficult to force water in dry periods. These areas must be identified and given special treatment with hand hollow tining and wetting agents.

With the return of fine grasses, I have seen new problems. *Agrostis* (but not *Fescue* or even *Poa annua*) attacked in July. It may be due to local hydrophobic soil associated with dry patch, but this year in particular many of us have had above average rainfall, well spaced through the year. Closer inspection reveals apparent root damage, which may have originated months before. It is now being investigated as part of the new research project at the STRI sponsored by the R&A. I hope the much fuller research required to investigate the environmental requirements of the finer grasses will not be long delayed.

Poa annua

Of course, in the reduction of *Poa annua*, we must look closely at areas where it persists even when we have been doing the right thing for some years. In many cases, careful investigation proves the existence of less permeable soil forming a pan. This may or may not be due to compaction – it may equally be due to unsuitable imported soil. How it came about really doesn't matter. The important thing is to discover it and do something about it. The assessment of the potential of a site in terms of a return in *Agrostis/Festuca* turf is a skilled business.

Other things to take a note of (large topics in their own right) are poor golfing architecture, the presence of shade and the availability of finance if remedial measures are required. Also frequently encountered are ryegrass patches from the use of cheap seed for repair work – these leave a scar that is difficult to erase and the ideal solution is to re-turf.

Yet another problem from past neglect is the failure to remake bunkers when required. Players knock several pounds of sand on to the green when playing out. If this is allowed to accumulate, the maintenance of affected turf

becomes impossible. Layered sand produces a condition inimical to the production of deep rooted grasses.

With a mixture of different species of bents and fescues, we cannot expect precisely the same amount of growth at all seasons. This seems to be a particular problem in spring when bents take on a procumbent habit. Careful management with light verticutting and top dressing is indicated.

Undoubtedly, a season of drought gives the seeker of fine swards both the greatest opportunities and the greatest challenges. He with the steadiest nerves can dry out his greens and get rid of the most *Poa annua*. But if he cannot keep his members fully in the picture, he may also get rid of himself!

The effect of several weeks of drought is a matter of serious concern. Even the most careful balancing act with minimum water will not prevent some thinning of the sward and a degree of reinvasion the following winter and spring by an increase in annual meadowgrass. We can deal with that by a continuation of sensible policies, cutting the *Poa* down steadily in more 'normal' years. The alternative, pumping on more than sufficient water, may seem less worrying, but is far more disastrous.

Too many golfers have been brainwashed into believing that the lush green sward that results is desirable. Those who know better are aware that the combination of hot weather with irrigation will produce a massive

overproduction of meadowgrass and meadowgrass roots. Fine grasses are thus disadvantaged and crowded out and we have to go back to square one and start again. This problem of dry weather and the over-reaction of golfers to it has bedevilled green-keeping for at least a century.

Our worst problems are those of attitudes. Golfers are still being spoonfed with arrogant nonsense about what they can demand from their golf courses. The PGA European Tour, for instance, is still trying to achieve entirely artificial conditions on which to play their target golf - a form of showbusiness with highly paid entertainers.

Thrilling

Certainly, it was thrilling viewing to see Fulford raped on a Sunday afternoon this summer, but there was no mention that only the wet ground conditions and no wind, plus the usual high Fulford standard of presentation, had made the game so ridiculously easy. There was certainly no mention that the year-round pursuit of artificial target golf can lead to lasting damage.

This year, I have seen greens so damaged by bad management leading to thatch that they have abandoned them and constructed replacements. Visits from Japanese and Australian advisors and correspondence from other countries has convinced me that we are looking not at a rare local problem, but one that is worldwide and escalating.

Reconstruction - starting again

- is the word most used by those who come from places where the necessary finance is readily available. If we make our courses unplayable through unwise treatments, who will come to our aid?

Greenkeepers tell me of the need to 'play politics' with committees and individuals in their club structure. I become ever more convinced that the main danger comes from those who offer us easy solutions. We should recognise that nature - especially our climate and our soil - impose many rules that we do not have the ability or the strength to break. It has been our belief that modern chemicals, machinery and irrigation would allow us to impose our will that has led to the widespread loss of our marvellous British *Agrostis/Festuca* swards.

I am not suggesting that we throw away all these aids and go back to nature. We could not keep pace with modern traffic on our courses. I am suggesting that we must use our basic scientific knowledge to reassess all our working practices and be quite certain that we are working with our climate and soil, not against them.

At present, golfers are playing golf too frequently on courses that are, frankly, sub-standard. And watching televised golf from too many courses where top-class presentation does not really disguise bottom of the class husbandry. There are signs of a consumer revolt already and the golf course industry would do well to put its house in order.

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