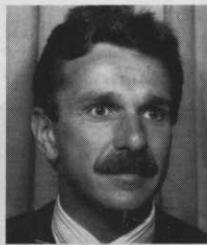


# Taking an axe to the Poa attacks



**Is Poa annua your problem? We asked DAVID STANSFIELD, Senior Agronomist with the Sports Turf Research Institute, to offer advice on ways in which the species might be controlled or eradicated, which he suggests is a matter of managing competition between species**

The range of plants which will grow in any particular situation, whether on a golf course or not, depends upon a range of factors affecting the individual habitat. These factors include soil type and condition, drainage qualities for both surface and ground water, levels of fertility and the climate and micro-climate. When management is added to this range of factors another level of species selection comes into play, selection which can be acute with intensive management techniques – as are applied to greens and allows only a restricted range of species to grow – or can be low intensity with the effect of the growth of many different types of plants, e.g. in deep rough. The balance of maintenance applied then affects the relative proportions of individual species within a population.

On golf courses, user pressure per unit area is also acting as an element of species selection, and is affecting the proportions of the different grass species present, particularly where intensive maintenance is applied, as on greens. The heavier the weight of play – measured in rounds of golf per year and/or usage per unit area of putting surface – the greater is the selection pressure against species that grow and reproduce (and hence recover from damage) relatively slowly, these being replaced by primary colonisers of bare ground.

So what is all this ecological theory leading to? The age-old fight against annual meadow-grass in putting surfaces, how to keep this to a potential minimum, and what is this potential in a variety of circumstances receiving a low input management system.

During the past two summers, ultimate priority has been given to keeping a grass cover on greens, and in extremis any grass will do. Nevertheless, it has been plainly evident that those Clubs who are in the enviable position of having greens turf with a high content of bent grass, or indeed bent grass and fescues, survive the best. It has to be said too that even Clubs with a good, modern watering system working on annual meadow-grass dominated greens got by pretty well. But without good watering, even for just a few days, the meadow-grass greens were a total failure and became unplayable.

This latter situation raises a spectre for the future for many (and in the very near future at that for some), because water is becoming an increasingly valuable commodity and it cannot be automatically assumed that water will always be available for turf irrigation on demand, unless Clubs have the space to construct large lakes or reservoirs for storage of winter water. These lakes will have to be large, for 1 m<sup>3</sup> of water is only 220 gallons and with flat-out watering 205 m<sup>3</sup> will be needed for 18 greens. Hence, even though working towards true links turf has tended to be pushed on to the back-burner for a couple of years in many instances, it is still an important, not to say vital, issue in UK green-keeping. Given the uncertainty of weather for the future,

in no way is this going to diminish, be summers wet or dry.

True links turf provides a surface for play for virtually the whole year barring frost (some of the time) and snow. It will hold together in most droughts (though not without water in 1990) as well as drain well in the wet. However, true links turf will only thrive if management is geared to maintaining the good features of a very specialised habitat at the seaside, growing turf on a very sandy soil which receives lots of wind and salt spray, to maximise the competitive abilities of bent grasses and fescues against annual meadow-grass and to sustain these with a low output of resources. Even then, if there are problems with a green design that allows too few acceptable pin positions, or the level of play outstrips the inherent ability of the turf, enhanced by management, to withstand wear, then indigenous species die back leaving bare ground into which annual meadow-grass can establish.

On seaside links it is still practical to expect to find 80% – 90% of the turf composed of bents and fescues, with Poa and maybe Yorkshire fog making up the remainder. Moving inland though, finding fescues in significant populations on established greens is something of a rarity away from the backs of bunkers. They are most common on neutral to alkaline land (chalk downland or limestone heath) but never to the same level of presence as occurs on seaside greens and varying in proportions according to the weight of play per unit area. On acid soils a course has to be very lightly played for fescues to retain any real presence at all in putting surface turf.

Away from coastal sand bent grass is by far the most important turf grass and, as things stand, this means browntop bent grass rather than creeping bent grass. Can we then expect to find complete stands of bent grass forming

‘There are great disadvantages to maintaining a monoculture anyway, particularly with the risk of disease’

stable populations on greens? The answer is no, and indeed there are great disadvantages to maintaining a monoculture anyway, particularly with the risk of disease (take-all patch in the case of bents) ripping through the whole stand. What we can expect is a mixture of bent grass and Poa annua in varying proportions, according to the nature of the habitat of individual greens (not courses). A bent grass green is a bent grass-dominated green.

The variation in proportion of bent to Poa within green turf can range from 70:30 to 30:70 respectively, with an even mixture of, say, 50:50 being realistically a good average make-up inland for the majority of greens. It must be borne in mind though that the potential level of bent grass content which can be achieved in any one situation is conditioned by factors outside of the control which can be exacted through greenkeeping; for example size, shape and situation of individual greens, the level of play and the local climate. Thus there are limitations as to what can be achieved from green to green

simply by good greenkeeping.

This is not intended to imply that it is not worth aiming to improve Poa dominated greens with a long term strategy to maximise the proportion of bent grass which will grow in any particular situation. Indeed, such strategies must be ongoing even if they are not wholly successful in changing the nature of turf grasses present. The techniques used to this end still create conditions for maximum levels of usability through the year and the best possible reliability of good putting surfaces from month to month. These methods not only help to select for (perennial) bent grasses, but also for the more perennial varieties of Poa annua, remembering that Poa annua is a vastly variable species.

Perennial grass types are vital for stable greens but they will not survive poor growing conditions, either in the soil or in the surrounding environment. Also they have to be cultivated by steady management, which provides ongoing continuity. In contrast, if the environment for the turf fluctuates wildly and frequently in any way the more rapidly the turf has to be able to respond either to survive or to preserve the next generation. In general this means that only short-lived species/varieties can survive. Consequently the more evidence of crisis management, with over-reaction to one problem creating a range of others, the more unstable the system and the greater likelihood that putting surfaces will only be good when weather conditions are ideal in summer. Any stress will bring about a high likelihood of die back.

So far no mention has been made of treatment programmes required to produce the best turf make-up on greens. Because much has been written about individual elements of such programmes in recent years, and their effects on species make-up of putting surface turf, e.g. the need for really effective aeration work, delicate control of fertiliser and water input etc., to go through all this again would be superfluous. Nevertheless, it is still vital to stress that a maintenance package needs to be tailored to meet the average basic requirements of a group of greens (so that extra work may be necessary on individual areas). Also no one treatment in a package is less important than the others – they all have to be right for the average on that particular course and it is not unusual to find that a high standard of treatment is let down by simple things such as less than satisfactory hole changing, giving a poor spread of wear damage.

What might be gathered from all this is that a carefully designed greenkeeping package, applied to an effective level of intensity appropriate to the situation, will bring the condition of the turf grasses within greens to a particular level and bring the relative proportions of species within the turf up to the potential dictated by the constraints imposed on individual greens. These constraints include the soil type, the size, siting and aspect of the putting surface, and the level of play throughput. Once this peak performance of individual greens has been reached (assuming it has been accurately assessed) then there is no point in pushing for more. Over stressing Poa annua at times when bent grass cannot spread to replace the Poa annua plants lost has no value either.

In conclusion, even with high inputs of play, often on greens designed at a time when today's level of throughput could never be imagined, management programmes which take account of a comparatively low input of resources and a high level of mechanical work still produce effective results in the UK. With the trend towards even sounder levels of "green" use of pesticides, together with a progressive tightening of the likely availability of water for future turf irrigation purposes, this approach to putting surface management remains "the way forward" for most Clubs.

# Flying Divots

An appreciation of what is not always appreciated

## Developments in north at 'overkill' stage – claim

As everyone connected with golf knows, there is a pressing need for more golf courses in Britain to meet the ever-growing demand, and 'The Way Ahead' document, published in '79 put forward the case for some 700 courses just to meet that demand.

So it seems unthinkable that people who go in for the construction of courses could be in for a shock with talk, in the York area anyway, of 'overkill'.

All long standing clubs within an area of 20 miles report long waiting lists. York GC state that it could take 25 years to get in and Fulford GC suggest at least 10 years as a reasonable time, given that they have just trimmed their list from 250 to 150 by writing to all on their waiting list. Heworth, Selby, Pike Hills, Malton and Norton and Aldwark Manor have similar stories to tell and even Forest Park, some 6 miles from the city and not due to open until 1993 say they have 150 on 'hold'.

There are prospects of seven more courses in the same area, many on farmland, with local farmers wishing to diversify, in various stages of development: some still being talked about, others in the midst of obtaining planning approval and one actually being built.

Presuming that all eight courses are built, each club could take 500 members, but are there really 4000 people waiting to become a member in York and district? There is starting to be a fear that 'overkill', similar to that in squash a couple of decades back with many people losing money, could also apply to golf.

And the reason is that many people are believed to be on more than one waiting list with a successful applicant not telling the other two or three clubs to cross off his name when accepted. A survey has been shown this to be a fact. Truly it seems unthinkable, but the question is raised that if all these course are built, will there be enough golfers to go round? Time alone will tell.

## Tree planting grants available

In conversation with Mr J A Dolwin, an arboricultural consultant in Crowborough, Sussex, I learned that head greenkeepers and green chairmen may be unaware of the various tree planting grants available. For example, the Forestry Commission will provide grants for areas in excess of half an acre, subject to certain species and planting dis-

tances and The Countryside Commission Task Force Trees, through County Councils, will also consider payment of grants up to 50% of overall costs including clearance and fencing, for areas of less than half an acre, where it can be shown there is some benefit to the public.

ADAS will also consider planting grants under the Farm Woodland Scheme, provided the area has been under cultivation for the last ten years, with this grant being paid in addition to the Woodland Grant Scheme payable by the Forestry Commission.

Grants may be available from other sources, such as NCC or LA, depending on circumstances, and there are proposals for a management grant from the Forestry Commission.

Before planting trees is put in hand consideration might be given to what grants are available, especially in the light of the damage caused by hurricane force winds of recent years.

## In praise of sanity

**Returning from the highly successful one day seminar given by the Kent section on Drought – Solutions and Remedies, and marvelling on how this had been staged for 120 people at a cost below £20 including lunch, I was amused to find in my mail a press release from the European Golf Bureau inviting me to attend their first leadership conference on 'The Practical Approach to Planning, Developing and Managing Golf Facilities'. The programme seemed OK, though speakers were listed as 'well-known and respected' rather than being named, and much of the presentation matter was, I felt, readily obtainable from books or publications.**

**What really rankled was the cost: £258.75 for the seminar alone, or £339.25 if I cared to join in a cocktail party, round of golf and an overnight stay at Staverton Park Hotel and Golfing Complex. This is 'overkill' of a different nature, being £50 more than I pay for my annual club subscription. I am left pondering on the thinking behind the European Golf Bureau and the market it aims to influence – clearly not me for one!**