



BIGGA
ESSAY
COMPETITION

Richard Clarke, of Royal Eastbourne Golf Club won the Assistants' Over 25 Category in the 2001 BIGGA Essay Competition with this fine composition.

POA ANNUA FRIEND OR FOE?

Recently, in a greenkeeping article on grasses for greens, a caption on poa annua started with 'poa annua is a serious problem for many greenkeepers; but is this really the case? There have, I'm sure, been many heated discussions throughout the greenkeeping profession surrounding the subject, from messrooms to green committees not only up and down the country but also across the world. What's more, the question has been asked for many years; are we any nearer to knowing the real answer, if indeed there is a definitive one? This article aims to put forward an answer even if it is only my own personal opinion!

It is essential firstly to explain a little about 'poa annua' or 'annual meadow grass' as it is more commonly known. A tufted grass, which thrives in all soil types, poa annua has the ability to set seed nearly all year round. It is the commonest unsown grass species found on British golf courses and is found in two forms; the more common annual plant subspecies 'erecta' which is upright growing and secondly the subspecies 'reptans' which is either an annual, biennial or short-lived perennial creeping plant. The leaves of the plant are soft, often crinkled when young with long, smooth leaf sheaths.

Generally, leaves tend to be of a light green appearance although the creeping perennials can be a much darker green. The leaves are short with visible tramlines and rather blunt at the boat shaped tips, soft and drooping. In mature plants the thin erect stem rises from six to ten inches with a triangular shaped panicle two or three inches long.

The spikelets are all stalked and loosely arranged on the spreading branches. The name is from the Greek 'poa', meaning fodder.

Let us consider now some of poa annua's advantages and disadvan-

tages, as far as today's greenkeeper is concerned.

I am constantly reminded when attending college classes that 'poa annua' is an undesirable weed grass, yet if we took away this grass overnight from our golf course, we would have significantly less coverage and I'm sure a lot more complaints from unimpressed golfers! In an ideal world we would, as professionals, like to work everyday with the very best; the finer bents and fescues. However, this is not always possible. I don't think that we should encourage the spread of poa but we as professional greenkeepers would not be competent at our jobs if we were not always striving for better playing conditions and surfaces.

So, when does "poa annua" become our 'friend'? As already mentioned, one of its main advantages is its ability to spread by seed nearly all year round thus thickening the sward density and aiding an all year round playing surface; this it does rapidly, another bonus to the greenkeeper. We can all relate to this year's late growth due to the heavy rainfall and cool ground conditions; poa annua gives a good early spring injection of growth and this was certainly required this year; the average golf club fixture list does not normally cater for climatic conditions!

Although textbooks show that poa annua is a shallow rooted grass, given the opportunity by using time honoured management practices it can generate a fairly deep root zone, unquestionably an essential requirement for a healthy sward. Wear and tear is an increasingly significant problem for today's greenkeeper and poa has this in its favour, with its ability to re-generate quickly throughout the year. It tolerates close mowing and again, if the correct management practices such as brushing and verticutting are carried out, can provide a

satisfactory putting surface. It may also be argued that the average golfer is only interested in a firm, true, consistent putting surface and not necessarily what type of grasses are present in the sward. Most would certainly not be concerned about the difference between poa annua and creeping bent grass. This required surface can be achieved with poa dominated greens if the correct practices are carried out, these being regular aeration to relieve compaction and aid drainage, brushing to improve sward density, switching to restrict disease and spongy surfaces, verticutting and scarifying to aid air flow and increase tillering.

I remember attending a college class in which the lecturer was astounded to hear that many of today's top golf courses have a heavy percentage of poa annua in their greens!! It has also been known for some courses to attempt to hand weed poa from their greens, but often it is a losing battle, so is this really a cost effective use of resources? The quality of playing surfaces expected at a pay as you play public course will of course differ from that of a championship golf course; this too must be taken into account.

Having looked at reasons why poa annua could be labelled a greenkeepers friend', let us look at the other side of the coin. The underlying factor is that poa hinders us as professional greenkeepers from developing and maintaining swards with the desired fescue and bent species, grasses which in an ideal environment do provide the golfer with the ultimate playing surface. These are the types of grasses which we must strive to encourage and develop.

Poa annua is highly susceptible to fusarium patch disease which is probably our most common and damaging disease, a problem which can be both time consuming, damaging and

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expensive; if untreated, the large areas of playing surfaces can be disrupted, weakened or even, at worst, lost. Annual meadow grass inevitably results in a weakened sward which will also be prone to thatch build-up and compaction; two major problem areas for greenkeepers. This results in spongy, soggy winter surfaces as both water and air fight to enter the sub-soil of the surface. These adverse conditions usually arise because of ongoing inattention to basics such as frequent appropriate aeration and soil amelioration. This can result in a disruption to play, a problem in today's environment as members expect to be able to play all year round.

Another disadvantage is that poa encourages a slower playing surface as well as an inconsistent one; poa peaks at certain times of the year. Because of its generally shallow-rooted structure drought resistance is low. This in turn results in more water having to be produced for the surface, which only encourages more poa; it can be a vicious cycle.

It is such an opportunist grass that even if approved management practices are regularly carried out poa still finds a way into the sward. Its ability to seed nearly all year round results in an on-going battle to eliminate its establishment; moreover, it has been suggested that poa seeds can remain in the sub-soil for up to ten years!

In my opinion much of the answer to the underlying question of "Poa annua - friend or foe?" lies in what type of golf club one works at. How a greenkeeper views poa annua will surely relate to the mechanical and manual resources available to him. Sadly, like many things in this life, money comes into the equation! A golf course with a limited budget will find it much harder to eliminate poa than a top class establishment which has more machinery and staff; for example, as mentioned previously, hand-weeding poa annua from greens is generally not a task most greenkeeping teams would have time to carry out.

Perhaps it is a question of working with what nature gives us and making the best out of what we have available. I am certainly not encouraging the development of poa annua, it is I feel more realistic to take a long-term approach. All efforts to encourage the finer grasses should be carried out by approved management practices, resulting in an environment where they can compete against poa annua. This would involve regular aeration, grooming, verti-cutting, scarification, careful use of water and fertilisers (especially phosphates which tend to encourage poa). In the meantime, if swards are poa dominated then a good playing surface can be achieved through regular brushing and light top dressings, together with the above practices.

Resources can be used much more efficiently getting the most out of what surfaces one already has in place rather than constantly fighting against nature.

Many greenkeepers have experienced how plant breeding has seen the emergence of dwarf rye grasses and how their qualities differ to that of the rye grasses available 30 years ago; could it be that in the future the results of genetic engineering will see greenkeepers using poa strains resistant to disease and low drought tolerance?

To summarise, it looks as if poa annua is very much here to stay, for the meantime anyway; so why not work with it rather than against it? Surely a grass that has as many attributes as discussed cannot be dismissed so harshly? Golf courses throughout the country would certainly suffer aesthetically and from a playability point of view without poa annua. It can be in many ways our friend. However, it must always be treated as an undesirable grass and we as professionals should only be interested in encouraging the finer fescue and bent grasses, after all, we would not be very competent at our jobs if we didn't!

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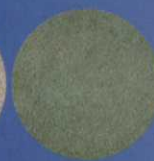
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