

The BIG question

Is there a greenkeeper who does not at some time encounter one problem or another with his greens? Whether it is a disease outbreak at specific times of the year or one of maintaining good drainage properties, the weed grass *Poa annua* is more often than not a dominating factor.

Fertiliser companies advertise their products as being the most suitable for use on fine turf, from slow-release to organic formulations, and naturally enough they are promoting their own materials in a very competitive market. However, it is the golf course manager who has to make the decision when it comes to purchasing. Full order books may bring joy to the supplier, but I find myself wondering, what about the fine grasses?

There are I feel still too many course managers who do not look closely enough at the composition of the fertilisers they use. Questions which should be asked are • What is the source of the main element nitrogen? • What percentage is of inorganic origin compared to organic? • Is there a slow release element and if so, how is it activated? These are just a few that spring to mind, though precluding the obvious but often overlooked critical point • What do the indigenous fine species actually need? In my view they certainly don't need phosphates unless one is dealing with pure sand constructions or if the rootzone shows an analysis figure substantially below 30ppm.

Fertiliser treatment for fine turf requires nitrogen only. This truism, established at the beginning of the century, still holds firm today. It always will, for the requirements of the fine grasses naturally remain the same and are in any case much more to do with physical rather than chemical aspects! The nitrogen form is so critical nowadays, especially with the wide array of products available.

Little and often, has been quoted on numerous occasions in books on greenkeeping since the earliest times, suggesting the use of sulphate of ammonia (21%N) [inorganic] and dried blood (13%N) and hoof and horn (13%N) [organic] as the standard ingredients. Iron sulphate can be added as required.

Mixing your own fertiliser can be very cost effective and gives the satisfaction of knowing exactly what and how much is being applied. The mixed ingredients are bulked up with compost to facilitate spreading, which is done by hand and switched in behind.

Iron sulphate has been used for years in small doses, particularly in autumn and winter to harden the grasses, for disease control and

for lowering or maintaining suitable acidic pH levels. It was also used in the days before selective weedkillers, mixed with ammonium sulphate, for weed control during the growing season. In my opinion, all the modern technology and new fertilisers coming onto the market cannot create fine turf.

There are a wide variety of fertilisers available to the course manager of the 1990s. We have slow release forms and even controlled release. These forms, however, take any control of turf condition away from the manager, are irreversible, and can have variable effects as they are activated by soil temperature, moisture levels and (to a much lesser extent) by bacterial life.

Preparing fine golfing turf for major calendar events and tournaments is impossible with such products, as the requirement is for any previous nutritional effects to have waned prior to the event. It goes without saying that anyone working on a corrective maintenance programme seeking to produce a dominance of fine fescue and/or bent grasses in favour of *Poa annua* will not do so by using slow release or controlled release fertilisers!

I say stick with the old-fashioned style using the materials I have mentioned:

Sulphate of ammonia	- 21%N	- acidifying
Dried blood (10-4%N)	- 13%N	- neutral
Hoof and horn	- 13%N	- neutral

For example, if we want to apply a 1:1:1 mix

50 Kg sulphate of ammonia:	x 21%N =	10.5 Kg N/ha	1.05 g N/m ²
50 Kg dried blood:	x 13%N =	6.5 Kg N/ha	0.65 g N/m ²
50 Kg hoof and horn:	x 13%N =	6.5 Kg N/ha	0.65 g N/m ²
		23.5 Kg N/ha	2.35 g N/m ²

$$\text{Total N Mix in \%} = \frac{21\% + 13\% + 13\%}{3} = 15.6\%N$$

With proprietary mixtures, which contain 50% carrier to assist conditioning and spreading, the analysis becomes 8: 0: 0.

Of course not everyone prefers fine turf because it is not as easy to maintain as annual meadow grass turf. To understand the maintenance and development of fine turf it is worthwhile going back into the history of greenkeeping and the game of golf in order to gain invaluable insight into previous mistakes and misconceptions. Naturally, people will say that you can't apply exactly the same treatments as the answer to every golf course – and they are right. However, the basic principles remain the same: the difference lies only in how they are implemented, if fescue/bent turf is the aim!

But I believe that many golf course man-

agers don't really want to fight against annual meadow grasses, mainly because they have no experience of how to successfully achieve the change over, what the effects on the turf will be; how to promote the fine species; the different stages the turf will go through or an effective overseeding programme, to name but a few. Consequently they are not in a position to prepare a policy document describing the processes, anticipated timings and associated effects on surfaces of the treatments involved, or indeed the advantages in the long term, to put in front of their club management, let alone the full membership.

To save face, avoid the hassle and possibly preserve their job they take the easy option and continue to promote and maintain annual meadow grass turf, often on courses which in earlier times were of vastly superior composition and which even today may show a high percentage of fine perennial grasses on fairways and even green approaches, yet not on the greens themselves!

I have even heard of courses where the members prefer to putt on the winter greens, which are in use regularly through the winter period, cut out of the fairway, rather than on the main greens! The reason is obvious and it brings us back to grass species. There is something fundamentally wrong in this scenario and it is not too uncommon. The final self-incrimination comes when turf managers of

the annual meadow grass school purchase grass seed composed of the same fine perennial grass seeds which they vehemently claim are 'impossible to succeed on my course!'. Why don't they spread the multiplicity of seed collected in the grass boxes each day if they don't have enough of the weed grass already in certain areas, instead of wasting their employer's money on what must be destined to be fertility under their turf management system? Good quality seed does not come cheap!

I sincerely hope we will be maintaining more fine turf on golf courses in 20 or 30 years time, but the present reality indicates a totally different line, (with a few notable exceptions), despite what might be written or said to the contrary.

■ The author, Arne van Amerongen, spent several years working as a course manager in Europe, specifically in Germany.

He trained at a GTC approved college in Great Britain and was nominated for the Toro/PGA European Tour Young Greenkeeper of the Year in 1990. He is currently employed at Carnoustie Golf Links whilst studying for an HNC in Golf Course Management.