

# Letters

## ■ Looking forward to UK Spec ■ Success of 'Harrogate Experience'

■ If the vast number of consultants and 'experts' who advertise are as good as they claim, why in the golf course building boom do we see so many courses (and alterations to older courses) undertaken with such poor specifications and elementary errors in design and construction?

In many cases it appears not only to be the clients wish alone to reduce costs, but also a contractors eagerness to maintain a higher profit margin. And who picks up the long term legacy? Well, I think we all know the answer, don't we? One of my main concerns is the amount of money that some are taking from the game and business of golf as a whole, whilst putting nothing back.

This brings me neatly to another related matter brought to my attention recently. A well known design and construction company, perhaps faced with dwindling construction work, is 'diversifying' into contract course management and is touting for business. First they write to all those whose courses they have constructed, offering to report on how a course built to such 'high standards' is in such bad condition, invariably claiming to be due to the incompetence of current maintenance staff and equipment employed, and offering to turn the situation around. This of course, only if they take over the maintenance lock, stock and barrel - rendering the current workforce and machinery redundant!

This very nearly happened at a fellow greenkeeper's course, and having seen it during construction (cutting corners, following doubtful

specs., using dodgy sand and spent mushroom compost for greens and turfing with turves grown on a clay/loam base etc.), taking all things into account the course was coming along quite splendidly after many early teething problems. When the owner saw the report however, he was on the brink of firing everyone and taking the contract. Fortunately, an independent observer took the trouble to examine the course along with the head greenkeeper, the owner, and the report, and was easily able to convince the owner of the folly of any such action. Normality has been restored, but the warning remains and greenkeepers and course owners should be on their guard for unscrupulous sharks.

On a happier note, it is good to note that some results may come from the STRI green construction trials and perhaps one day we shall see a universally agreed UK Spec., taking full note of those pioneers who have successfully constructed hundreds of perfectly specified greens, and hopefully one that will not mean as many different things as the oft misquoted and misunderstood USGA Spec. seems to mean to many constructors. It cannot come a minute too soon.

**PAUL COPSEY** Barnehurst GC  
Kent

■ I was privileged to be the key note speaker at this year's BIGGA Turf Management Exhibition and Conference held in Harrogate. As a speaker who visits many of these events all over the country I thought it appropriate to

write and congratulate all those concerned in its organisation.

It was a very professional event in which all greenkeepers should be proud to be associated. For my part I hope that my presentations, which were designed to help with the sometimes difficult green committee, proved to be helpful and useful.

I wish your readers all the very best in 1992 and the "Harrogate Experience" continued success.

**GRAHAM PHILLIPS** The Marketing Group,  
Warrington, Cheshire

■ As a recently joined associate member of BIGGA I feel I must write following a wonderful week at the BTME at Harrogate, which was a great experience for me. I attended workshops for two days, following these with excellent seminars and a wonderful exhibition - all of which I found very educational.

The education available for greenkeepers is splendid, but how about some for, say, ordinary Club members such as myself, who may not realise the pressures which green staff at all levels have to endure. Would it be possible for a BIGGA 'rep' to organise a 'winters night' at Clubs around the country and thus help us to understand some of those pressures?

Now I am looking forward to the National Education Conference at Cirencester, where I am hopeful of gaining yet more knowledge and perhaps meeting up with other associate members.

**AILSA WADE** Glasgow

# CHEMICAL CALCULATIONS

by G Keith McKee

**When you use a chemical product, do you really know what the accompanying information means?**

As my company expands into Europe, much of my time is now spent visiting golf courses on the continent, which is both enjoyable and challenging. Enjoyable because I visit some beautiful golf courses set in delicious scenery and challenging because I find the European greenkeeper to be knowledgeable and yet demanding of still further knowledge.

Before I started such visits I had the ill conceived opinion that greenkeepers across the Channel were vastly inferior to their counterparts in the UK. In reality I have found their knowledge and quest for knowledge to be far greater than that of the average British greenkeeper.

Quite frankly, my original opinion of the European greenkeeper could be summed up by a headline which appeared in The Times

newspaper some years ago when a thick pea-souper fell over the Channel: "Thick fog in the English Channel - The continent of Europe is isolated". In other words - UK was the most important and best.

I still believe that the UK is the best in the world of golf and that the British greenkeeper still produces the best turf grass playing surfaces in the whole of Europe. However, I am not quite so convinced that they all know how they produce these surfaces, or what they are applying to their turf.

Their confusion may well be aided by the 20 to 30 or more companies producing so-called fine turf fertilisers. In reality, only a handful of these companies will have carried out meaningful trials and consequently be able to pass on useful and accurate information to the greenkeeper. Often the only benefit some of the 'fine turf fertilisers' offer the bemused greenkeeper is a lower cost when compared with another product. However, if the products do not do the job required of

them, low cost is of no benefit at all and cost should be one of the last considerations to influence the greenkeepers decision. The key question the greenkeeper should always ask is 'what product do I need to purchase to obtain the desired end result'.

On the continent, educational standards are such that greenkeepers are given the knowledge and expertise to quickly identify which product they need and, of equal importance, which products are not suitable for their course. Greenkeepers in Italy begin work on the course with this type of information - for they are not allowed to be classed as a 'greenkeeper' until they have attended the Italian Golf Federation School for Greenkeepers. I am regularly asked, for instance, for the full breakdown of my company's products (a question I cannot ever recall having been asked in the UK), including how much of each of the following are present:

- ammoniacal nitrogen
- ureic nitrogen

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# CHEMICAL CALCULATIONS

- nitrate nitrogen
- slow release fertiliser
- organic matter.

From this type of information the greenkeeper can start to decide on precise fertiliser requirements: remember a mixture of ammoniacal and ureic nitrogen are considered to be less encouraging to *poa annua* than nitrate nitrogen. Slow release fertiliser content is another common discussion point, in particular the question is asked: what percentage of the nitrogen content is in the form of slow release? At least 40% of the nitrogen in a slow release fertiliser should be in the form of slow release for the full value to be achieved. If it is less than that, it is hardly worth paying for!

Organic fertiliser is another case in point. Ask if a product is really 100% organic, or find out if it is just malingering under a "green" umbrella. A sales person should be able to supply all this type of information - and if not, they should be able to obtain it very quickly. If they cannot supply the information - don't buy from them!

Having gathered all the essential information, the greenkeeper can begin to establish his programme for the year using kg/units of nitrogen, phosphate and potash etc. Research has shown that turf requires:

Nitrogen: 100-250 Kg/ha (10-25 gms/m<sup>2</sup>) per annum;

Phosphate P<sub>2</sub>O<sub>5</sub>: 20-50 Kg/ha (2-5 gms/m<sup>2</sup>) per annum;

Potash K<sub>2</sub>O: 80-150 Kg/ha (8-15 gms/m<sup>2</sup>) per annum.

Sand greens will require higher rates of nitrogen (approx 300 Kg/ha) and potassium will be at the higher end of the recommendations. In both sand and soil greens, phosphates and potassium requirements should be dependent upon soil analysis.

So when you are presented with a compound bag of fertiliser, how do you work out what its nitrogen, phosphate and potash values are in kg/units per hectare? On the back of the bag you will find a panel with

the declaration contained thereupon, for example:

Nitrogen .....14%  
Phosphorus Pentoxide P<sub>2</sub>O<sub>5</sub>  
.....2% (0.9%P)  
Potassium Oxide K<sub>2</sub>O

.....4% (3.3%K)  
Application rate.....35 gms/m<sup>2</sup>  
(My company always double mark the fertiliser, eg. 2% P<sub>2</sub>O<sub>5</sub> [0.9%P])

If there is a requirement to convert P<sub>2</sub>O<sub>5</sub> - P or P - P<sub>2</sub>O<sub>5</sub> the equation is quite easy:

$$P \times 2.9 = P_{2}O_{5} ; P_{2}O_{5} \times 0.44 = P$$

$$K \times 1.12 = K_{2}O ; K_{2}O \times 0.83 = K$$

As a further example let us take a spring and summer fertiliser 14-2-4 applied at 35gms/m<sup>2</sup>:

35gms/m<sup>2</sup> = 350Kg/ha of total product (35gms x 10 = 350 Kg/ha.

To find the nitrogen take 350Kg/ha ÷ 14% = 49 units of N per ha.

To find the P<sub>2</sub>O<sub>5</sub> take 350Kg/ha ÷ 2% = 7 units of P<sub>2</sub>O<sub>5</sub> per ha.

To find the K<sub>2</sub>O take 350Kg/ha ÷ 4% = 14 units of K<sub>2</sub>O per ha.

Look at a complete range of fertilisers and select the products that fulfil your requirements, remembering that fertilisers may be mixed and matched to give you exactly what you require for an annual treatment. For instance, there is no reason why an autumn fertiliser should not be used in summer time if this achieves the desired goal.

To give an idea of unit figures from a complete range, see the examples at the foot of this page.

Many greenkeepers in the UK are already using the kg/unit method of assessment, though many are not. In continental Europe it is the norm. If we are to raise our technical standards then we must ask questions and demand answers. Let us again prove that here in the UK we have the best golf courses run by the best greenkeepers, that we lead the way in the golf world in Europe and beyond and can show that 'fog in the English Channel' is not a problem.

● The author, G Keith McKee, is European Turf Advisor, Fisons plc, Horticulture Division.

### Example of unit figures from a complete range

(figures in brackets are kg/units of N, P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O per hectare).

	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Spring and summer	14 (49)	2 (7)	4 (14)
Mosskiller	14 (49)	0 (0)	0 (0)
Turf tonic	7 (25)	0 (0)	0 (0)
Super N	24 (84)	0 (0)	0 (0)
Zero phosphate	14 (49)	0 (0)	7 (25)
Autumn	6 (21)	4 (14)	12 (42)

A typical feed programme could be:

	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Two dressings turf tonic	49	0	0
Two dressings super N	168	0	0
One dressing autumn	21	14	42
<b>TOTAL UNITS</b>	<b>238</b>	<b>14</b>	<b>42</b>

As can be seen there are numerous combinations to fulfil your requirements.