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APRIL 1991



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Tel: 0909 568533 • Fax: 0909 568206

Greenkeeper International is the official mag-
azine of the British and International Golf
Greenkeepers Association and is published
monthly at BIGGA Headquarters, Aldwark
Manor, Aldwark, Alne, York YO6 2NF.
Tel: 03473 581/2 • Fax: 03473 8864

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Circulation is by subscription. Subscription
rate: UK £29 per year, Europe and Eire £39.
The magazine is also distributed to BIGGA
members, golf clubs, local authorities, the turf
industry, libraries and central government.

Editorial Offices

All magazine contributions should be sent to:
The Editor, Greenkeeper International, 13
Firle Close, Seaford, East Sussex, BN25 2HL.
Tel: 0323 891291. Fax: 0323 895593.
Although every care will be taken, no respon-
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ISSN 0961 - 6977

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Golf Greenkeepers Association

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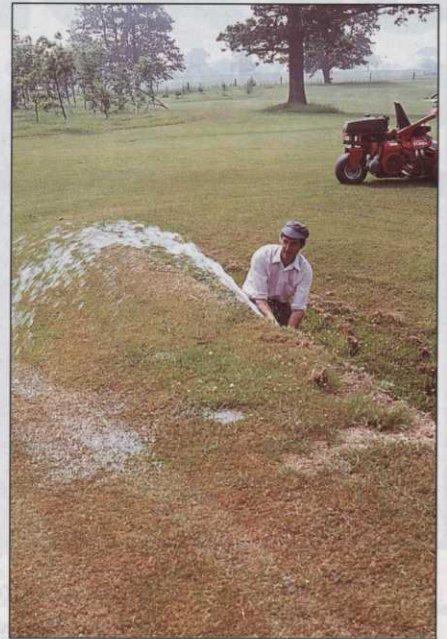
International

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The magazine team with Lord Whitelaw at the official launch of 'Greenkeeper International'

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FACES & PLACES

■ Willie Blair wrote to tell us the good news regarding Gavin Ballantyne, who folks in the Lothians will recall has been first assistant at Craigmillar Park for many years. Gavin has been appointed to the post of Head Greenkeeper – Turnhouse Golf Club. Greenkeeper International joins with his many friends in wishing him good fortune.

■ The North-West section are naturally delighted to announce the acceptance by SISIS Sales Director, Arthur Harrison, of Life Presidency of their section, made vacant by the untimely death of Eric Staniforth MBE, their good friend and loyal President for many years. It is perhaps fitting that Arthur should fill this prestigious position, for he and Eric were close friends and colleagues, perhaps for as long as Eric held office.

■ Philip Swain called to tell us that Colin Murphy, a dear friend of many members in the South West and South Wales, had been in hospital but was now on the mend. Colin was particularly impressed by the overwhelming numbers of 'well-wishers' messages and wanted to thank those who were thinking of him. We join with his colleagues in wishing him a complete and speedy recovery.



■ Peter Wimbush (left), is the new General Manager at Aldwark Manor, having joined Richard Wood's team after a lengthy stint overseas. Talking on the telephone with him, we were pleased to learn that the recent flooding that occurred on the new nine-holes at Aldwark, though causing some damage, is not terminal and the opening date of June '92 is still on schedule. In the meantime, Peter is hoping to brush up on his golfing prowess, which at one time was a useful seven though now is what he described as a 'lapsed fifteen'. Look out for him when you visit BIGGA headquarters.

■ BIGGA member John Nudds, Head Greenkeeper, Gerrards Cross GC, has talents in many directions – including creating advertising slogans – and was first prize winner in the competition staged by Huxleys Grass Machinery recently to name their new turf maintenance vehicle currently being developed at their New Alresford premises. The name HUXTRUC was chosen from an entry of some 200 suggestions and although three greenkeepers chose the same name, the tie-breaking slogan "Huxleys' reputation is enough to sell any machine", was John Nudds alone. John won a specially engraved decanter, with joint runners-up Darren Hoskins of Royal Winchester GC and Alex Macauley of Lochmaben GC both received magnums of champagne. Huxleys tell us that a data sheet on the HUXTRUC can be had by 'phoning 0962 – 733222.

■ The name Charterhouse has a positive ring of quality and longevity about it, yet it is a company that is just eight years old.

In those eight years they have built an enviable reputation for quality of product and service that is reflected in the move taken to develop a completely new and very much up to the minute headquarters in Haslemere. At a press launch on opening day, Managing Director David Jenkins expressed great optimism for their future, feelings that were bolstered by a 'bullish' market which has seen an increase in their turnover by 50% and which is supported still further by encouraging business throughout Britain and Europe.

Jenkins further expressed the view that entry in the European free market was a unique opportunity for them to increase still further and that as a company they based their business plans to mirror the German economy, which Jenkins sees as the most accurate European barometer. European expansion in the sports world is seen by Charterhouse as a golden opportunity to further their market share, with France and Germany in particular looking to Britain for the knowledge we are known to have and a lead in producing machinery to help them with growing and maintaining turf.

The new Charterhouse HQ is at Weydown Ind. Est., Weydown Rd, Haslemere, Surrey. GU27 1DW.



David Jenkins, left and Phillip Threadgold outside Charterhouse new premises at Haslemere

New magazine represents 'a giant step forward' for the industry says Viscount Whitelaw

A President and a gentleman

It is no secret that our President, Viscount William Whitelaw, is no mere figurehead when it comes to representing the Association. It was therefore no great surprise – though indeed an enormous delight – that he took time from his unbelievably busy schedule to pay a visit to Aldwark Manor recently to see for himself the progress we have made. That his arrival should coincide with the publication of the March issue of Greenkeeper International was perhaps too good an opportunity for us not to invite his views, and we were all delighted with his astute observations and acclaim for what he described as 'a giant step forward and a huge improvement in the Association's publishing of information critical to the future education and advancement of the professional greenkeeper.'

As a golfer of no mean skill and a most astute observer of all things pertinent to our profession, Viscount Whitelaw shares the view of all modern greenkeepers that a better future lies in following the path of increased knowledge through education and training, and in setting high standards through exemplary professional conduct. It became clear to us all, as he talked freely of his aspirations for the Association, that preservation of the environment was uppermost in his mind, applauding as he did the great efforts greenkeepers make in upholding the environmental balance and of the responsibility we demonstrate both as professionals and as inhabitants of the universe.

Touring our offices, he was greatly impressed to learn of the steadily increasing numbers joining the Association and was struck by our use of computers in keeping up-to-the-minute records. To prove the point, Debbie keyed in his own member-

ship details, a move that provoked his comment, 'it's a far cry from the old days of biscuit tins and card index boxes – a fine example of moving greenkeeping technology still further into the future.'

Elucidating on advancements observed in golf administration since the publication in 1989 of *The Way Forward*, he opined that in such a relatively short time it was encouraging to see many Golf Clubs taking the contents seriously and acting upon the recommendations. He also hinted that there was an 'imminent' likelihood of further recommendations in the offing – involving important structural changes in administration – the impact of which is likely to advance the further development of our Association – particularly in the sphere of education. On that score we wait with bated breath and hope to report further revelations in our May issue, following Nick Park's report and question and answer session on *The Way Forward* at the BIGGA Education Conference in York.

Before leaving, Lord Whitelaw took further time to chat with board members and magazine staff before posing for the almost obligatory photographs, which in a day blessed with overcast skies and drizzling rain could not have been too comfortable. Looking fit and relaxed and remaining good humoured to the end, he left us with the lasting impression that we are fortunate indeed to have him as our President; and that he will continue to campaign vigorously on our behalf – who could ask for more?

The weather wasn't kind but the welcome was warm for Viscount Whitelaw, pictured outside BIGGA headquarters with Chairman Ivor Scoones, left and Executive Director Neil Thomas. Education Officer David Golding is on the right



Viscount Whitelaw with the magazine team, from left, Tim Moat and David White, and Bill Lynch and Carol Dutton

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COCKLESHELL:
The 'natural' choice for paths

Turning on

With two years of drought conditions still fresh in the mind and the prospect of still further water restrictions in the offing for 1991 and beyond, the subject of irrigation is one that remains uppermost on any priority list. Consultant Agronomists JOHN HACKER and MIKE HARBRIDGE cast a thoughtful eye over problems associated with applying both too little water, and too much...

Too little water

It is taken for granted by most that a lack of water is detrimental to grass growth and quality. Indeed a severe water deficit can lead to a number of changes to grass growth including:

- Increased root depth.
- Increased root/shoot ratio.
- Decreased tillering.
- Decreased leaf number.
- Reduced shoot elongation.
- Decreased size and total area of leaves.
- Thicker cuticle.
- Smaller cells, intercellular spaces and xylem cells.

Not all of these are necessarily bad for the greenkeeper, indeed we would all like to increase the rooting depth of our greens as it enables the roots to exploit a much greater area for water and nutrient reserves. Overall, however, a severe water deficit over a prolonged period is bad for grass growth, wear tolerance and appearance.

Drought – Just what do we mean?

So what do we mean when we talk of drought? Jim Beard, in 'Turfgrass; Science and Culture', identifies two types of drought which he defines as "a prolonged water stress that limits or prevents turfgrass growth." Drought can be divided into two main types:-

Atmospheric Drought – This is where the transpiration rate exceeds the absorption rate even though available soil water is adequate.

Soil Drought – In this instance there is a water deficit causing drought due to a lack of available soil water. This can be due to several reasons including:

- A prolonged period without rain.
- Soil type.
- A high evaporation atmosphere

The only practical way of treating atmospheric drought is by syringing (applying light sprays of water) during periods of high temperature, usually around mid-day. This increases the water vapour near the grass surface and therefore reduces the amount of water drawn out of the grass. Such periods are uncommon in Britain although last summer was probably the exception to the rule. In continental Europe and the USA atmospheric drought is much more likely because of their higher summer temperatures. Drying winds may also induce atmospheric drought although the only real treatment for this is to plant windbreaks, thus reducing wind speed. This is only really an option with greens or other areas which regularly experience such problems.

Soil drought is the usual reason we apply water to greens although physiological drought can also occur. Physiological droughts are caused by high external salt



Dry patch disorder – an increasing problem

concentrations which induce a water deficit within the plant. This can be caused by saline conditions or, in the seedling stage, by large fertiliser applications. Large concentrations of salts on the leaf and stem caused by fertiliser application also causes foliar burn. This is why it is recommended that irrigation be used to wash in certain fertilisers, i.e. Ammonium Sulphate, if rain does not occur within 48 hours.

Dry patch disorder

Dry patch disorder is a soil drought and has been found to occur on sands and sandy soils. A soil exhibiting dry patch is very difficult to wet as the soil becomes hydrophobic and fails to retain moisture. The soil then dries out and the sward wilts. The hydrophobic condition of the soil is thought to be due to either a coating of the sand grains by fungal mycelium or by calcium or magnesium soaps and is found to occur at the sand/thatch interface. Dry patch can be overcome by spiking and applying a wetting agent before thoroughly soaking the affected area.

Wilting

How then do we know when drought is occurring? The first sign of drought on most plants is wilt and it is unlikely that anyone reading this article will not be familiar with the flaccid leaves associated with drought, even if only on the house plant that you forget to water whilst away on holiday.

Wilting is increased by high temperatures, wind movement, solar radiation, low active humidity and impaired water absorption. It is the latter factor – impaired water absorption – that many forget or ignore when thinking of drought. For even if water is present in reasonable amounts, the plant may not always be able to take it up. So before you accept that irrigation is necessary after a week of dry weather, check to see if there is any reason why water is not being used by the plant. Water absorption may be impaired by either a lack of available soil moisture or by a limited, non-functioning root system. The latter can be caused by a number of factors, including:

- Lack of aeration.
- Compaction.
- Waterlogged soil.
- Excessive nitrogen fertiliser.
- Severe leaf defoliation.
- High soluble salt levels in the soil.



A sand/soil mix suitable for a golf green – free draining

the taps

Many of these are commonly found on golf greens and relieving compaction or aerating the soil may do wonders for drought resistance by increasing root depth. Swards with high levels of thatch are also more likely to wilt due to shallow rooting. The following maintenance and play practices will therefore greatly effect drought tolerance.

- Amount of play on the area.
- Turf maintenance practices.
i.e. renovation, fertiliser and mowing practices.
- Soil structure and texture.

If your greens are regularly subject to drought perhaps you should take a good look at these aspects. You may not be able to affect the amount of play but you can alter maintenance practices and, if necessary, improve the greens soil by either topdressing or reconstruction.

How grass copes with drought

Drought, of course, is a common natural event and the extensive grasslands of the world often exist because grass is able to withstand prolonged periods without water and can therefore live where other plants cannot. Grasses have developed a number of strategies for surviving drought periods:

- a) Seeds – seeds are very drought resistant and many grasses are able to exploit this by having very short (ephemeral) lives ending in seeding i.e. *Poa annua*.
- b) Dormancy – grasses also have other dormancy strategies. They often produce stolons or rhizomes which lie dormant in times of drought. Grass crowns are also very drought tolerant.
- c) Water absorption capability – Certain grasses are more able to survive drought because of physical characteristics that allow a greater water absorption capability. These include:
 - Greater root depth.
 - Larger number of roots and greater degree of branching.
 - Greater root growth activity.
 - Larger root hair growth.
 - Mycorrhizal associations.

The drought resistant hard fescue is quite deep rooted while the root system of a bentgrass mown sward may be only 50 – 100mm deep.

- d) Xeromorphic features. – In addition to increasing their water absorption capabilities, many turfgrasses also possess inherited structural modifications that reduce water loss by transpiration. These features include:

- 1) Decreased leaf surface area.
- 2) Altered size, spacing, number and location of stomata.
- 3) Increased cuticle thickness.
- 4) Surface hairs.
- 5) Less intercellular spaces.
- 6) Diminutive conducting tissues.
- 7) Rolling or folding of leaves.

- e) Drought Hardiness – Drought injury to turfgrasses has been attributed not to lack of water but to mechanical injury to cells resulting from drying and re-moistening processes. In view of this some grasses have developed ways in which injury can be minimised. These include having small cells which suffer less mechanical injury from drying and re-moistening and having a high carbohydrate content. Factors which reduce drought hardiness include:-

- High nitrogen fertiliser rates.
- Potassium deficiency.
- Shading.
- Intensive traffic.
- Excessive irrigation.

So bad maintenance practices, such as excessive nitrogen or irrigation, can effect the grasses own natural hardiness to drought.

Many of these natural survival techniques are, however, unacceptable to the greenkeeper, as survival may mean a yellow or even

dead surface. This is, of course, not desirable on a golf green and so supplementary water must be applied. Turfgrass species and cultivars are, however, being selected and bred for their drought hardiness and thought should be given to sowing appropriate grasses where drought is likely and irrigation is not possible or prohibitively expensive.

Too much water

While water deficits are often our main concern, water in excess can also bring problems. Standing water on playing surfaces not only disrupts play but can also affect plant growth. Excess water may be due to a number of causes including:

- Poor drainage.
- Excess rainfall.
- Excess irrigation.
- High water tables.
- Flooding from adjacent rivers or sea.

Such excess water can deplete soil oxygen levels within 1 – 2 hours and lead to an increase in carbon dioxide concentrations. This can lead to restricted root growth, thatch accumulation and a decline in turfgrass quality and vigour.

Turf diseases

The activity of many turfgrass diseases are increased by a high atmospheric water vapour content which can be increased by irrigating at the wrong time of day. These include diseases such as brown patch, fusarium, powdery mildew, slime mold, pythium, copper spot, dollar spot, red thread and typhula. Dew on turf can also increase disease incidence by permitting fungal spore growth and spread. While dew can provide as much as 6" – 10" (150 – 254mm) of water per year in a cool humid climate, this benefit is greatly outweighed by its disease promoting properties. As all greenkeepers know, switching is commonly undertaken to remove dew and encourage the surface to dry quickly. Early morning watering which removes dew has been found to substantially reduce brown patch disease on bentgrass.

However, water excess is not always at fault where disease spread and development are concerned. Soil moisture stress (drought) has been shown to increase susceptibility of *Poa pratensis* to dollar spot. In addition, drought has also been shown to favour the crown and root rot phases of *Helminthosporium* disease, although water stress does reduce the leaf spot phase.

Nutrient losses

Excess rainfall or irrigation will, on freely draining soils, lead to nutrient losses by leaching. The prime nutrient lost in this way is Nitrate, which is not held by soil colloids but is freely available in a soluble state in the soil. Such leaching will lead to poor growth and low wear tolerance unless nutrient losses are replenished.

Scald

In hot climates turfgrasses can collapse and turn brown under standing water and intense light. This is known as scald and is, fortunately, not commonly found in Britain.

What's the answer?

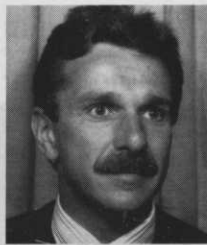
Too much water is bad and yet too little is worse, so what is the answer? How much water do we really need to apply? That is the tricky question we shall investigate in "Estimating Water Needs", which will appear in the June issue of Greenkeeper International.

● **John Hacker and Mike Harbridge provide specialised consulting services in agronomy through Professional Sportsturf Design (NW) Ltd.**



localised drought on a high spot

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 m³ of water is only 220 gallons and with flat-out watering 205 m³ 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!

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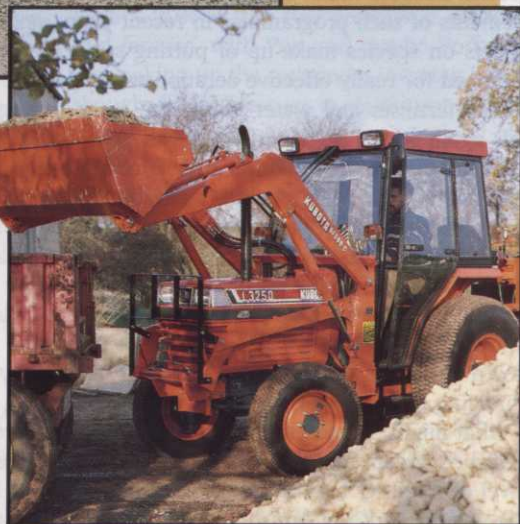
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DIGGING IN

No longer just an engine and wheels, today's tractor is a sophisticated piece of power equipment, with versatility and adaptability the keywords in the salesman's patter. HUGH TILLEY examines how the tractor has evolved and its effects on the greenkeeping industry

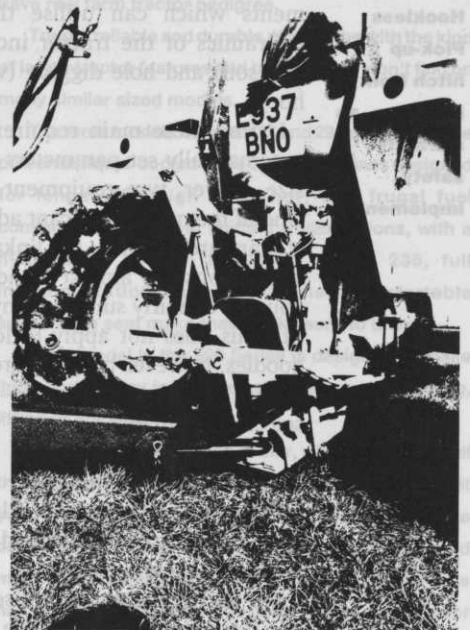
The motive power requirements on the golf course today have changed, with yesterday's agricultural tractor no longer satisfactory. It may still provide engine and wheels, and be suitable for towing basic gang-mowers and trailers, but it lacks the many refinements which enable today's greenkeeper to fully utilise his power equipment.

Today there is a wide range of models available, although the four major manufacturers still hold over three quarters of the market in the 45 hp plus range. Nevertheless, there are many other makes, and one important and overriding criteria in selection must be the ability and credibility of local service support. Options range from East European models, which are normally relatively basic in both specification and price, to (Wes') German machines which are more expensive but can be expected to have virtually double the life expectancy, and a higher specification. In addition

there are several makes of 'compacts,' most of Japanese origin (even if sold by a major multinational), with power in a range up to about 45hp. Then there are several turf maintenance vehicles, (TVM's) such as the Cushman, built specifically for turf work, although generally these are of limited power. Finally, system tractors - whilst never popular in agriculture - would be particularly effective for very mixed work on the golf course, although price may preclude them. These include machines such as the Fendt Tool-carrier, Holder or Aebi, with their principle features being versatility with multiple attachment and power outlet points.

USES:

The starting point of a new tractor selection must therefore be use. The most obvious is mowing, although if mowing were virtually the only use it generally makes sense to buy a self-propelled mower. Most tractors, however, are also used extensively for trailer work and for 'getting around'. Off-green they are effective for aeration, harrowing, spraying and top dressing, using readily available and relatively inexpensive implements - although these functions have been increasingly usurped by TMV's, particularly for greens and fairway work. For heavy work such as cul-





The new Autoguide Hookless Pick-up hitch from Intermec, an attractive safety implement

tion and loader work the tractor remains the best and most economic answer. Less frequent requirements which can utilise the power take off or hydraulics of the tractor include mixing (concrete and soil) and hole digging (with auger and/or back hoe).

Listing these main requirements will usually and automatically set parameters for the tractor, such as size, power, tyre equipment, hydraulics and so on. One of the most significant advantages of the 'tractor' is standardisation - lift linkage, drawbar and PTO dimensions are almost standard on all makes - so you can be fairly sure that any existing machines will fit. This does not apply to loaders or other add-on goodies, however brackets are normally available for re-fits. The other parameter - or constraint - is in the selection of finance.

PURCHASE OPTIONS

In general the majority of Clubs seem to prefer outright purchase, which should be the cheapest option providing there is money in the bank. Nevertheless, there are frequently subsidised low or zero percentage finance options available, which may be as good as getting 'discount' for cash. Where money has to be borrowed there are several options, the more normal being lease or hire. Finance is very much a specialist field in which terms are extremely flexible and usually tailored to individual requirements. One basic difference between lease (or hire purchase) and contract hire is that in the latter the machine is provided at a set figure which normally includes service and maintenance. This means that there is no danger of unexpected breakdowns upsetting the budget.

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Option	Hydro-Drive	-	-
Power Take-off	540 rpm	540/1150 rpm	540/1150 rpm
Type	Transmission	Live	Live
Option	-	Mid mounted 2400 rpm	Mid mounted 2400 rpm
With Hydro-Drive	Mid mounted	-	-
Steering	Manual	Manual	Manual
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Get to know the true power of your tractor

● from Page 14

POWER RANGE

The most popular power range for the golf course is 45-65 hp. There are variations in efficiency between makes and models and it is also essential to be aware of the various computations of horse power. Most figures are theoretical and to compare like with like one should consider only DIN hp figures. These will usually be slightly lower than BS or SAE hp and if you really wish to know the exact power available some dealers have a dynamometer which will provide an accurate reading of the (PTO) output. If buying second hand it is worth asking for a dynamometer test certificate as a warranty.

Tractors are de-tuned to operate safely below maximum output, ensuring that they cannot be 'flogged' to death. However constantly operating at low speed or power is equally undesirable and leads to other problems such as glazed bores and excessive oil use, thus it makes sense to get somewhere near to matching the power requirement for main tasks. Turbo-charging is a simple means of getting more power from a set capacity, however while it is also very effective in improving fuel efficiency a turbo is an added potential problem normally unwarranted on the golf course.

TRACTION

The primary function of the tractor is traction. On the golf course the usual need for maximum traction is when trailing, though there are other occasions when soil and turf damaging slip can occur. Effective weight transfer was Harry Ferguson's answer to traction, however more recently four-wheel drive has become less expensive and reliable, further improving traction for ALL operations. Four-wheel drive has other significant advantages: larger front tyres reduce ground pressure and the stronger axle allows for safer operation with a front loader. 4WD also

means power or hydrostatic steering.

Tyres are a vital component in traction and the lugged agricultural patterns have been extensively researched and proven to maximise grip. However, they can be detrimental to turf and compromises may be needed. Perhaps the best compromise may be a spare set of wheels – not expensive if off a scrap tractor – so that turf or traction tyres can be fitted to specific need. The other major component in traction is likely to be the drawbar. Most modern tractors offer both ring and clevis hitches, with the former being best for two-wheel trailers as it places more of the trailer weight directly under the rear axle. Never hitch above the axle, and particularly never pull from a chain on the link point, for to do so invites a rearward overturn. Most agricultural tractors are built for draught operations such as ploughing, and have two or three modes for the hydraulic lift linkage with the draught mode controlling the implement depth according to pull. Compact tractors – in contrast – usually have only a position or height control, with depth or draught as an option. Whilst most golf courses seldom need this, anyone trying to plough without it will have great difficulty, so perhaps the most simple alternative is to use

a contractor or buy a power cultivator (a non-draught implement).

HYDRAULICS & P.T.O.

The important figures to consider with hydraulics are flow and lift at the end of the links. The former will indicate how fast and efficient the tractor will be with a loader etc., and with hydraulic operations such as tipping a trailer. It may be possible to add an external pump. Many implements, particularly gang-mowers, have an integral closed system driven from the PTO, thus these place no demands on the tractor hydraulics. Tractors can also be used efficiently to power hydraulic power tools, with hydraulics being very flexible and both simple and effective. The lift measurement will indicate what weight of implement the tractor can lift, though it must be remembered that the tractor may not be stable when lifting this weight; and extra counter-weight may have to be added.

The other important power output is the power take-off, commonly known as the PTO. The most common standard is 540 rpm, however many compacts offer a 750 rpm output. The other 'standard' is 1000 rpm, though this is designed more specifically for higher power outputs – typically around 100 hp. Ground speed related PTO is available from a limited number of makers and this is a useful option with top dressers and fertiliser spreaders, where implement speed and output needs to be regulated according to ground speed. The latest generation of tractors exhibit a far more efficient output from the PTO, with perhaps 90% of the engine's total power being available from it. Most, though not all, tractors have the option to take power from the front of

● continued on Page 19

Pictured above:
the Huxley HU84
and HU38 Aerators
are two imple-
ments with univer-
sal fitting for
Trucksters and
Tractors

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*Standard on model 2120. Available at extra cost on models 1720 & 1920 only.



— The Series 20 —
Compact Tractors



● from Page 16

the engine, this being ideal for operating hydraulic pumps and may also be possible for use with mowers etc. Front lifts and PTO's offer interesting options for doubling tractor use and efficiency.

TRANSMISSION

While the most basic tractors only offer a limited number of gear ratios, top spec. machines have so many gears that the operator can often be confused. Gear ratios are more rational on contemporary machines and recent years have seen the advent of the 'shuttle' – one lever to change quickly and easily from forward to reverse. The most obvious use is for loader work, though there are many other manoeuvre intensive operations where shuttle is an advantage.

Drainage, coring and a number of other operations require especially low speeds and many tractors offer an optional creeper gear. On some this is easily installed without dismantling, whilst on others it becomes a factory built job. Forty km/h (25 mph) available on many



The John Deere Cab – luxury personified

new tractors makes for faster travel – although 20 mph remains the maximum legal limit on the road. Hydrostatic drive is readily available on

many compact ranges though very few standard tractors offer other than conventional gearboxes – perhaps because of the cost of larger units. Thus the clutch remains the greatest liability in transmission, though there are some tractors with clutches of greater capacity and longevity. Brakes are now both reliable and effective, a very limited number also having front wheel brakes, while all new machines are now required to have trailer braking.

The operator's platform has an important bearing on work output, and though cabs have become standard on agricultural tractors they still rate as an 'option' on compacts, TVM's and ATV's. Many operators prefer a roll-bar and open air rather than the somewhat claustrophobic atmosphere of the cab, though today's cab is much more comfortable and affords easier access.

If the major use is as personal transport then access must be a prime consideration and certainly all tractors (and cabs) are not equal. But then the tractor is NOT intended for this use – the ATV is.

There are a whole range of other options, some being easily added – such as loaders – and detached when not needed, though others have to be factory fitted. Downswept exhausts are preferred by many who work close to or under trees, and extra spool valves give more external services. Another interesting option – standard on a limited number of models – is reverse drive, which puts the work in front of the driver. With mowers this also avoids wheeling the grass in front of the cutter and reverse drive also works well with fork-lifts.



Fertiliser

What to use, how to use it

In this 11-page feature, KEITH McKEE explains the not-so-obvious elements of turf nutrition: and we take a look at the developing market and its approach to golf green fertilisation in France

Turf on golf courses is, ironically, unnatural. That is, it is an artificially maintained flora which could not survive untended, unlike the stable ecosystem of, say, a sandy heathland. Throughout a playing year, golf course turf will be trampled, kicked, scratched, torn, swiped with clubs and run over by buggies. IT WILL ALSO BE PLAYED UPON WHEN IT SHOULD BE CLOSED. Throughout all of this bombardment it should be presented like a championship course all year round. To ease such stress and produce playable, resilient turf that will keep members happy, today's greenkeeper runs a balanced maintenance programme of mechanical operations, irrigation and nutrition. Whilst this article covers nutrition only, the other elements of good turf management are just as important.

There is no doubt that to grow properly, plants need nutrients. These nutrients are well known: nitrogen, phosphorus, potassium and a whole variety of trace elements. Like general turf management, all these elements are important, with a deficiency of one upsetting the balance essential for turf growth and survival.

The nature of these nutritional elements is critical too. It is widely recognised that agricultural fertilisers are totally unacceptable for golf course grasses, especially fine turf. Certainly they are not easy to apply. Most important, however, is the priority of agricultural fertilisers to produce yield. For sports turf the priority must be quality. If quality is the key objective for the greenkeeper then he must be careful in drawing-up a nutritional programme that is right for his course.

The only common rule that applies here is that one golf course is not the same as the other. Each is as individual as a fingerprint, indeed the seventeenth green on any given course may not be necessarily the same as the eighteenth. Fertiliser

● continued on Page 21

PARKERS INTRODUCE THEIR NEW RANGE OF FERTILISERS WITH SPECIAL ADDED BENEFITS

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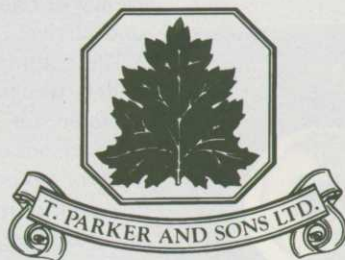
Our range of mini-granular fertilisers includes products which contain seaweed and an organic base to provide trace elements and soil conditioning. Also featured is an economical and dust free mini-granular combined fertiliser and weedkiller.

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Organic sources in focus

● from Page 19
requirements will vary for a number of reasons: weather, soil/substrata type, level of rainfall, frequency of mowing, wear and tear etc. Despite this, the greenkeeper should consider some general principles before devising a tailor-made feeding programme.

STRI specialists, Isaac and Canaway, believe that fine turf requires 200-250 kg N/ha per year, with experiments carried out at Fisons Levington Research Station over many years supporting this view. Certainly the Greenmaster fine turf fertiliser range was developed with this in mind. In his study of pure sand greens, Dawson believes nitrogen should be applied in excess of 250 kg per hectare per year. This is because of the greater leaching effect of such greens.

It should also be remembered that 'natural soil' greens, routinely top dressed with sand, will, over the years, become increasingly similar to greens originally constructed from sand. Nutrition must be adjusted accordingly.

Fine turf grasses can only take up nitrogen in the form of ammonium or nitrate. There are numerous compounds which provide these elements either directly, e.g.: ammonium sulphate and ammonium nitrate, or indirectly, e.g. hoof and horn, dried blood, urea and isobutylidene diurea (IBDU).

Not all sources are suitable for fine turf, but ammonium sulphate has proved to be the most successful form

of 'rapid' release nitrogen, as it encourages good growth, colour, superior texture and uniformity of Agrostis and Fescue species. It also reduces pH.

This can be desirable where a soil is not naturally acidic, but over use can lead to low vigour, poor drought resistant swards which are prone to thatch development, and the ingress of weeds. Ammonium sulphate can also scorch grass. To overcome these problems; products like Greenmaster fertilisers have included some organic or ureic nitrogen in their formulations.

Concerns for the environmental well-being of golf courses have raised the profile of organic sources once again. Hoof and horn in particular can give very good results as a slow-release nitrogen source. However, it is expensive and – in its natural form – difficult to use. Other organic mixes like those based on cow slurry cannot match the N, P, K analysis that turf demands and which inorganics offer, which makes the recent launch of Sportsmaster Organic outfield turf fertilisers all the more interesting. In this case, the Company have formulated organic nutrient sources into an easy-to-use mini pellet that feeds the grass as well as good inorganic equiva-

● continued on Page 22



New Fisons Sportsmaster Organic - the organic fertiliser designed to spread and perform as accurately as the best conventional fertilisers



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Nitrogen versus other nutrients: conflict goes on



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lents. The presentation of organics in such a useful formulation is an important breakthrough for today's greenkeeper; though whether we will be able to provide similar fertilisers for fine turf remains to be seen.

Inorganic sources of slow-release nitrogen are very popular in both the United States and Europe, though in the UK a conflict of opinions has stunted their use. If applied properly however, slow release fertilisers can be a valuable, labour saving tool.

Applied on its own, granular IBDU will show a good turf growth and colour response after about five or six weeks, which is then sustained for several weeks. The apparently slow start is no disadvantage because a 50% rapid release nitrogen/50% IBDU fertiliser mix will give a good initial response as well as a sustained response. For example, Greenmaster Super N (24: 0: 0) will show a relatively even response for about twelve weeks. It is important, however, that the mix is 50 : 50 and the declared nitrogen levels are fairly high. Fifty per cent of not very much is a complete waste of money.

Whereas it is widely accepted that nitrogen fertilisation is vital for fine turf, the supply of other nutrients is much more contentious. There is no dispute over the fact that phosphorus is essential, as it assists in storing and transporting energy. Potassium, too, is important in activating enzymes that help increase resistance to fungal infections. All other essential nutrients have similarly well-defined roles. The contentious debate centres not on ingredients, but on the quantities that should be applied.

An application of 47-70 kg of phosphorus per hectare and 85-140 kg of potassium per hectare per year is a satisfactory guide. The vital key, however, lies in soil analysis. Stansfield's STRI report (1985) suggests that many golf and bowling greens contain adequate levels of phosphorus and potassium. In these cases it is wholly appropriate to use a nitrogen only fertiliser. Products with or without P and K are offered to suit individual circumstances but it must be borne in mind that these reserves will run out one day and playable sport turf does need P and K as part of its feeding programme.

Nutritional policy must be balanced. That balance can be achieved by reviewing the quantities of nutrients in the soil and by determining nutrient levels lost through clippings. The formulations that make up the Greenmaster and Sportmaster ranges are designed to make up for the natural imbalances the game of golf creates. They are also designed to complement the other key elements of turf management from pic. to aeration, irrigation to seeding. Getting the balance right will bring success to any greenkeeper.

● Keith McKee is European Technical Adviser, Fisons plc, Ipswich.



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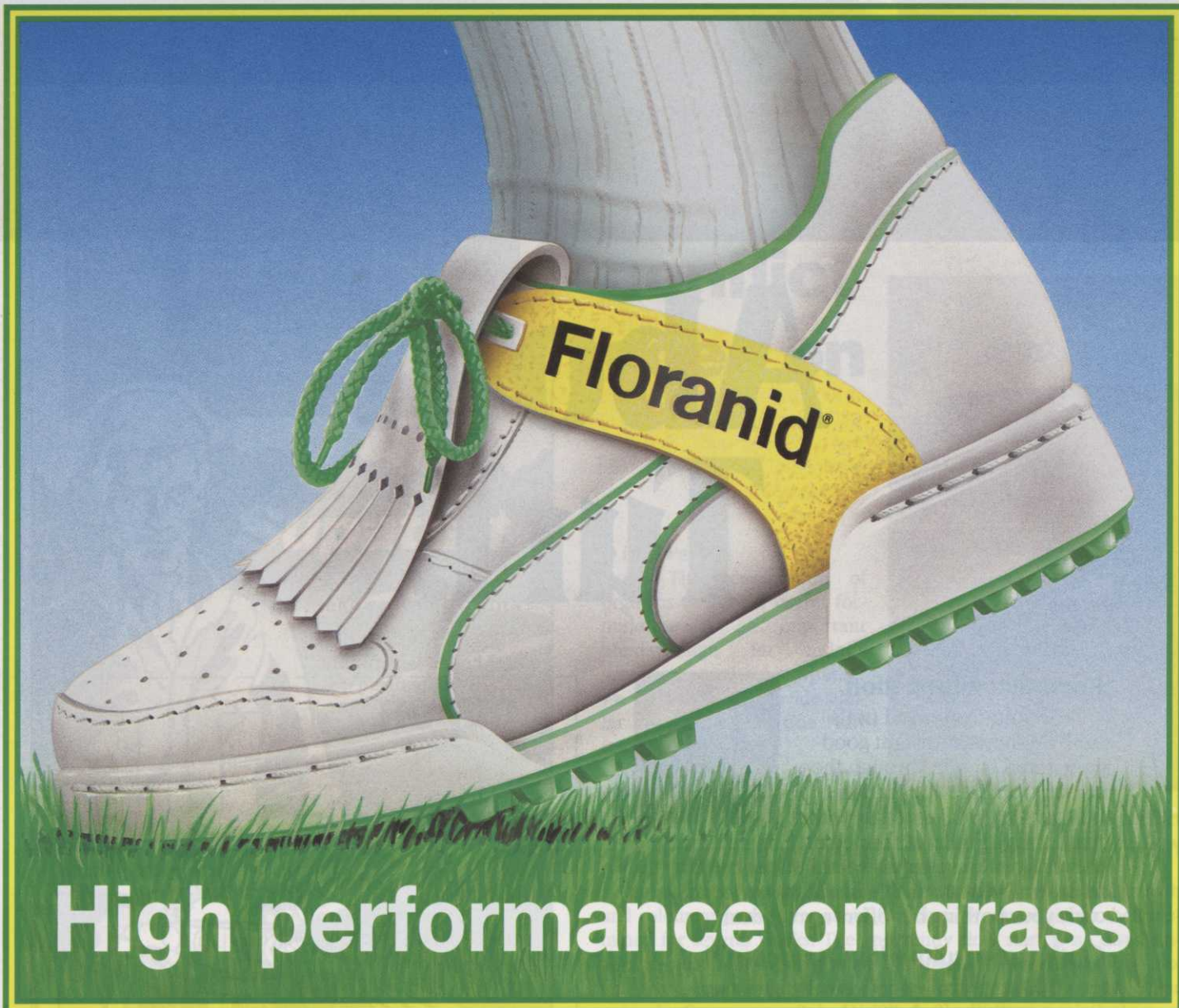


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Fertile FRANCE

France is possibly the fastest growing golf market in Europe. Japanese, American, Middle Eastern and European money is being channeled into new golf course constructions, with greenkeepers being recruited from Great Britain and North America; as well as being trained in France itself. The training of greenkeepers has become a very important subject and one in which all sides of the

The Barbaroux Golf Course is described as 'the ultimate in European golfing'. It comprises 87 hectares for a course length of 6963 yards in wooded landscape interspersed with six extensive lakes

French golf industry have had an influence. Unlike the UK, there is no 'tradition' of golf greenkeeping, so they are immediately addressing the problems posed by modern construction methods and the intensity of play that the rapid growth in golf interest has generated.

With limited practical experience they are tending to follow the scientific path, but this is well tempered by user experience drawn from industry sources, as well as 'imported' greenkeepers. The changes in grasses as well as construction materials has tended to make 'traditional' greenkeeping methods of limited value and this has brought new opportunities in creating new methods to produce what all greenkeepers and golfers are looking for – first class playing surfaces.

● continued on Page 27

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Information for Professionals

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This brief summary indicates which Rigby Taylor Fertilizer might be right for you but for full information and advice on your specific application and ground conditions please phone us free. It costs you nothing to talk directly to a

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Mini-Gran 3.10.5 An Autumn/Winter Fertilizer designed for fine turf areas such as Golf and Bowling Greens.

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Special Organic 'N' 8-0.5-0.5 + Fe Finest materials blended especially for Golf Greens and other fine turf areas.

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Don't forget!

Special fertiliser maintains quality

● from Page 25

A brand new modern construction in France will never be another St. Andrews, but that is the joy of visiting and playing other courses – the challenge of new surroundings. As a test of the golfer's skill French courses are equal to their counterparts in the UK and maintained to an equally high standard, but with a character of their very own, they are different. You will all have seen the postcard of the two young children entitled: "vive le difference"!

At the recent first International Salon of Golf Course Maintenance and Repair (SIERG) organised by the Association of French Greenkeepers (AGRF), this new thinking in respect of golf green fertilisation was introduced to a new product from BASF. The close affiliation between manufacturer and greenkeeper had identified a need and responded to it in an effort to make the 'manipulation of nature' called greenkeeping a little more effective.

Because most constructions in France are new they do not have the reserves of nutrients so often found in older UK greens. They have also been built with irrigation and drainage incorporated from the outset, rather than the 'add-on' situation here. This means a very free draining structure often covered with one of the new creeping bents which have a high nutrient demand, so applying nutrients in the correct balance and in the right quantities and form, enabling the plant to optimise their use, was essential.

The Company drew on all these requirements and their own experience as major fertiliser producers to create for BASF France a special fertiliser – Floranid Master – to assist in maintaining the quality of French golf greens.

The formula is 16:5:10:+5Mgo and Trace elements. It was first researched in response to the demands of the new turf grasses, (stoloniferous agrostis spp in particular), which demand a balance of nutrients at least of 3:1:2., this being determined by the losses incurred in clippings removal. Add to this the fast infiltration rates of USGA specification and pure sand constructions and you will appreciate that ingredients had to be carefully selected.

Nitrogen: with very little nitric nitrogen (2.5%) to reduce leaching and subsequent pollution by nitrates, but with a lot of slow-action nitrogen (two thirds in IBDU form) for reliable, gentle feeding without sudden flushes. Phosphate was added 5% p2o5 in the correct

● continued on Page 28



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An open approach to greenkeeping

● from Page 27
 proportion to maintain plant functions without creating an over-supply.

Potassium: this element is particularly important on free draining constructions, as these do not hold Potassium very well and it is essential in helping disease resistance. It is supplied in sulphate form to reduce the risk of polluting the subsoil with Chlorine, found in other sources of Potash, and the sulphate form reduces the risk



of scorch, (Sulphate has a salinity index of 46, as opposed to Chloride, which has 114). Furthermore, the use of Sulphate avoids the phenomena of phytotoxicity, which the chloride ion can induce, and encourages the formation of dry matter, reducing bruising and wear sensitivity.

Magnesium: this is at a high level to keep the ration with Potassium and to encourage the production of chlorophyll, for plant photosynthesis.

Trace Elements: Iron (0.5%) copper (0.01%) and zinc (0.01%) are the three most important metallic trace elements for turf, as they promote the formation of growth substances and help in chlorophyll synthesis.

The creation of this new product did not stop at the analysis, for the size and distribution of sizes of granules were specially researched for precise and regular spreading over small working areas. Even the colour was not left to chance and after several tests with different colours, carried out by the greenkeepers themselves, a brown colour was chosen. This allows easy checking of the spread pattern but quickly disappears into the sward.

Like the French golf courses it is used upon, Floranid Master is new, but it clearly shows the more open approach to greenkeeping that the lack of traditional conservatism is creating. We all hear a lot about the opportunities within Europe after 1992, but let's remember that on the continent they are all looking toward the UK and saying 'the same thing! Will the next greenkeeper at your course be French or German?

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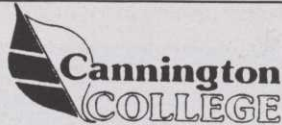
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Education



Lord Whitelaw feels the quality of the Elmwood turf offered to him by third year student, Brian Story of Silloth on Solway

Elmwood award winners honoured

The award winning greenkeepers at Elmwood College, Cupar, were doubly honoured recently when they received their awards from the BIGGA President, Lord Whitelaw.

Lord Whitelaw began the day at Elmwood by meeting and chatting with second and third year greenkeeping students on a National Certificate Block Release course. He met the second year students in one of the Engineering Division's workshops where they were being instructed in a machinery maintenance module, while the third year students met him, appropriately enough, on the College 5-hole golf course where they were constructing bunkers.

Brian Story, a third year student and award winner, was instantly recognised by Lord Whitelaw as a greenkeeper from

his home course at Silloth on Solway in Cumbria. This was a happy event with Lord Whitelaw posing for photographs with the students for the national and local press, laughing and joking at every opportunity.

His lordship then attended an official luncheon in the College's training restaurant before the award ceremony began.



Lord Whitelaw discusses the finer points of greenkeeper education with Neil Thomas



All greenkeeping award winners pose with Lord Whitelaw. Also pictured are Mrs Carol Borthwick, Senior Lecturer in Greenkeeping and Mike Taylor, Head of Horticulture

Greenkeeping education's new PHILOSOPHY

The last few years have seen more changes in British education than in the previous century. Indeed, it will probably be one of the vote winning or losing issues in the next general election. Those of you who are parents of teenagers will be all too well aware of the changes within secondary schools with the change from GCE and CSE to the GCSE. This will be even more significant to you if you have just left school and have had to deal with all the changes. You will know all too well whether the core curriculum and return to the three 'R's has worked or whether the supposed lower standards are just a figment of some politicians imagination. One thing is for sure, change is the only constant thing in today's society and something with which we must come to terms.

Changes in education, however, have not been limited to schools. Colleges have also had to make drastic changes to the way they operate. This has been due to both the change in teaching methods and the rapid decline in school leavers. Who would have dreamt of agricultural colleges advertising their courses in magazines ten years ago?

From about five years ago many of the college courses changed their national validating body. All three year diploma courses are now validated by BTEC (The Business and Technical Education Council) in England and Wales (SCOTVEC in Scotland) and BTEC philosophy has meant a move to more student centred learning. Students are encouraged to be responsible for their own learning and discouraged from the spoon-fed lectures of the past. This generally means that information learnt in this way is better understood and more likely to be retained by the student. However, it also means much more work for the student and, incidentally, for the teaching staff. On the whole this new approach is much better, albeit more demanding, for students, staff and college resources.

As part of this 'student centred' learning strategy BTEC has devised the 'Integrated Assignment' for unit based courses. This is to make sure that courses taught as a number of units (or modules) do not become too compartmentalised. It encourages students to relate different topics such as design, construction, maintenance and machinery to each other as is the case in the real world. After all, you don't build a new tee or green without thinking about what it will look like before you start or how you are going to maintain it after it's put into use. The assignment also provides an opportunity for assessing students, not only on whether they can do the technical skills involved in greenkeeping but also those interpersonal skills necessary if they are to work together as a team.

These 'common skills' as they are known include communication, ability to work with others, problem solving, information handling and data presentation.

The National Diploma in Turf Science and Sportsground Management at Myerscough is now in its fourth year. The integrated assignment for the course last year, and for the next two years, involves the design and construction of a golf green and tee. It is integrated because it involves co-



The Team standing on their new green

operation and input from five separately taught skills – Design, Surveying, Construction, Machinery and Management – over three terms of the second year. Students are able to learn and/or practice a range of skills including surveying, design, drawing, proposal presentation, preparing specifications and bills of quantity, construction techniques – using a range of machines and site management.

The construction of a new green means the college now has seven standard greens built to differing specifications. Golf green construction types include an 'All Sand' Cell System, a USGA specification, a sand/peat system, a sand/soil system mixed off and on site and a native soil green. The featured new green consisted of a 300mm sand/soil rootzone mixed off site and laid in a herringbone drainage system installed at 3m centres. Humell peat was then added and rotovated into the surface prior to the application of a fertiliser and turfing with Rolawn 'Advantage' turf.

Teaching in this way involves a number of new teaching methods and I'm sure that other colleges using integrated assignments have, like us, had to make changes to the way courses are time-tabled and run. While the initial survey and design work was undertaken in the autumn of '89, the construction taking place during two weeks last summer. It is easy to imagine the problems that would occur if those two weeks had been wet, not only with the construction work but also the knock-on effect within the college teaching scheme. Fortunately for us the first week or so was dry, although final clearing work at the end was rained off. The photographs show students building the green and I know that they all enjoyed and gained something from the experience.

Undertaking projects of this nature are, of course, costly in terms of an educational budget and we rely upon the generosity of commercial companies to supply goods either free of charge or at cost. Special thanks are due to: Rolawn, Tarmac Roadstone, Inter Seed Ltd and Kubota.

● **John Hacker, the author of this article was, until last August, the Senior Lecturer and ND Course Manager at the Lancashire College of Agriculture and Horticulture. He is now a director of Professional Sportsturf Design (NW) Ltd, a consulting agronomy practice based in Preston.**



Laying the Rolawn 'Advantage' turf



Ask any greenkeeper which single subject concerns him most and the likely answer will be COSHH. Government regulations are often couched in a language that is hard to understand and it is no secret that greenkeepers and club officials are often puzzled by the predominance of 'technobabble' favoured by those boffins of officialdom. **JON ALLBUTT**, an acknowledged leader in the field of training in safety awareness and pesticide usage, disentangles some of the mysteries...

The Control of Substances Hazardous to Health Regulations 1988 are made under Section 16 of the Health and Safety at Work Act 1974 and require that from January 1st 1990 "An employer shall not carry on any work which is liable to expose any employee to any substance hazardous to health unless he has made a suitable and sufficient assessment of the risks". All very well so far, but what is a substance hazardous to health? The Regulations define it as:

- (a) A substance which is listed in Part 1A of the Approved List as dangerous for supply within the meaning of the Classification, Packaging and Labelling (of Dangerous Goods) Regulations 1984, and for which the general indication of nature of risk is specified as: very toxic, toxic, harmful, corrosive, flammable or irritant.
- (b) A substance for which a maximum exposure limit is specified in Schedule 1 or for which the Health and Safety Commission has approved an occupational exposure hazard.
- (c) A micro-organism which creates a hazard to the health of any person.
- (d) Dust of any kind, when present at a substantial quantity in air.
- (e) A substance, not being a substance mentioned on Sub-Paragraphs (a) to (d) above which is comparable with the hazards created by substances mentioned in those sub-paragraphs.

As definitions go it is very comprehensive, and confusing, but what does it mean? To understand it better we need to look at each section in more detail:

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Life under the

THIS BOOK, WHICH COSTS £10.00 AND IS UPDATED EVERY YEAR! For many of the products we use it may be an individual ingredient in the product that gives it the hazardous classification, making the problem more complicated as some products may not have all the individual ingredients on the label. So, in addition to the label, we need to refer to the product Safety Data Sheet for the additional information. Manufacturers and / or suppliers are required to supply Safety Data Sheets at the time of delivery. The Safety Data Sheet will list any ingredients in the product that are classified as hazardous under these regulations.

(b) The Health and Safety Executive Guidance Note EH40/91 sets out the lists of the substances and their exposure limits. The limits are very technical, being based on short term exposure limits (STEL) or long term exposure limits (LTEL) of concentrations in the air measured in milligrams per cubic metre (mg / m³). These limits become important especially where staff are working in confined spaces with poor ventilation. Where staff are in regular contact with products containing substances listed in EH40/91, it is a good idea to arrange for experts to assess whether the degree of exposure approaches or exceeds the limits. While there is a low risk of such exposure when working outside, there can be problems in workshops using aerosols, some paints, paint strippers etc.

(c) Micro-organisms are a worry, as they can't be seen and easily identified; for example there are risks of infection from Tetanus and also from Weils Disease in rat infested water. The employer is required to be aware of the risks of infection from micro-organism and to take steps to ensure that there is a safe system for working in place to avoid such risks. The employee must also observe strict personal hygiene at work and take care of any personal protective equipment that is issued.

(d) A substantial quantity of dust is classified as a concentration of 10 mg/m³ over an 8 hour time weighted average (LTEL) of total inhalable dust; or 5 mg/m³ of respirable dust in the same period. These are strict limits that require special equipment to assess the concentrations of dust in the atmosphere. Mixing top dressings or handling bags of dusty fertilisers in confined spaces over this period might require that the dust levels be measured.

(e) This is the clever one! "Any substance used at work which does not fit the other categories but is comparable in terms of the hazard it represents". How do you decide? This section of the definition allows for any new substance that comes along or any existing substance that does not fit the other definitions. The label and safety data sheet will probably give enough information to enable the employer to decide if there is a hazard comparable with any of the above sections. It may be necessary to call in an expert if there is ANY doubt.

On top of the difficulty of understanding the definitions, it must also be

C O S H H

remembered that any risk assessments must be "suitable and sufficient". It may only emerge that the assessments are suitable, or not, following a visit from the Inspector. It is essential therefore that a start is made without delay as Inspectors are unlikely to be sympathetic to those who have buried their heads in the sand! So how do we make a start?

- (1) Make a list of all substances on the premises; make sure to note amounts and, if possible, how old they are. Remember that all substances may be subject to the Regulations, including cleaning materials, fuels, lubricants and pesticides.
- (2) Ask all staff to justify their needs for these substances. Are they old stock and no longer required? Sort out the unwanted stock and obtain quotes for safe and proper disposal.
- (3) Contact the suppliers and request Safety Data Sheets for ALL remaining products on the inventory. Inform the suppliers that future deliveries may be refused if they arrive without the Safety Data Sheets; as this is required under Section 6 of the Health and Safety at Work Act.
- (4) Sort out the inventory into classified and unclassified products.

You may be surprised to see, for example, that even some wetting agents are classified as Irritating To Eyes.

(5) Now investigate the use of the classified substances. How frequently are operators exposed to them, how do they actually use them and what training have they received? Some pesticides that are classified as Harmful may only be used twice a year, but diesel fuel, which is also classified as Harmful, is probably used every day.

(6) Write down the risk assessment for each substance. This may involve a decision to change to a less harmful but equally effective alternative; for example, there are non-flammable aerosols available. It may also state that in future a particular substance is to be used in a particular way, or may not be used without prior permission. There may also be a need to write a safe operating procedure for some products, e.g. the use of lavatory de-scalers or drain cleaners.

(7) Identify where there is need for staff training and arrange a training programme. This can be done in the form of a short period of instruction at work or by attendance at a local college. It is important to keep a note of all training carried out for this could become vital documentation should an accident occur at a later date at the workplace.

(8) Finally, make sure all staff are made aware of the risk assessment decisions and make a note of the review date, say in a years time.

It will never be possible to be completely up to date, for there will be changes of product and work practices throughout the year and this fact is accepted. However there is no excuse for being unaware of what is in use and how it is being used.

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TRADE TOPICS

Rolawn double up



Europe's largest turf grower, Rolawn Ltd of Elvington, York, have announced a doubling of production acreage by the end of 1991. Around 3,000 acres will be under cultivation in the UK and turnover is expected to be in the region of £6 million, further increasing their market share. Twenty two Rolawn-run depots serve the needs of greenkeepers throughout the country and according to founder and Managing Director Kenneth Dawson, "the future still looks good, both here and in Europe. Our economies of scale, sophisticated production and network of depots are, we believe, helping us ride the worst of the recession and two years of drought conditions". Ahead of 1992, Rolawn has a partnership agreement with French company Darbonne-Sitoflor, serving the rest of Europe.

Seed houses offer some 'green' alternatives

Sleaford based Booker Seeds Ltd, which recently became a member of the Royal van der Have Group BV of the Netherlands, has just issued a new brochure which covers the full range of top quality seeds for amenity turf areas. Copies of "GRASS SEED MIXTURES FOR AMENITY TURF AREAS 1991" are available from Booker Seeds, Boston Rd, Sleaford.

■ Staying with seeds, British Seed Houses Ltd. tell us of the

encouraging numbers of enquiries received from Golf Clubs interested in introducing wild flora conservation mixtures in areas such as roughs and copses.

A comprehensive brochure is available on request, giving details of 15 different wild flora mixtures, together with sowing and maintenance instructions. British Seed Houses are at Pitt St, Warrington, Cheshire WA5 5LE.

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Event is a part of the landscape

Now in its fourth year, the Landscape Industries event keeps on growing. The 1991 event will be held at the National Agricultural Centre, Stoneleigh Park, Warwickshire on June 5th and 6th, and will provide a focus for the diverse landscaping and related leisure sectors.



The event is organised by RASE, BALI and ILAM, and will feature working demonstrations including grass maintenance, ground construction, cultivations, and woodland/brushwood control.

See you at Westurf

May 1st is approaching fast, the day for WESTURF '91, the Turf Care Trade Exhibition at Long Ashton Golf Club in Bristol. This regional event, represented by local and national companies, is an opportunity outside of the mainstream to see new products launched and demonstrated. New machinery, such as a revolutionary water injection cultivator will be demonstrated for the first time, together with a wide range of tractors, grass cutting equipment, sprayers, top dressers, scarifiers, drainage equipment, brush cutters and power saws,



stump cutters and chippers, line markers and stimpeters, with qualified personnel on hand to answer your questions.

A full range of irrigation systems will be displayed, along with turf cultivation specialists, pesticide and fertiliser manufacturers, top dressing, sand and seed merchants. Training colleges, BIGGA and IOG will also be on parade and all the needs of the industry will be well catered for.

● Gibson Brothers, who have served greenkeepers for over a century, have constructed a new 8,000 sq.ft. machinery centre at Highgate, Kirkham, to extend their area of activity well into the Fylde and West Lancashire and the establishment of a fleet of mobile service units to service machinery requirements. By spring, Gibson Brothers will have extended their sphere of operations to cover the county and beyond.

Spreading it around

Supaturf Products Ltd of Narborough, Leicester, have advised Greenkeeper International of a new colour brochure which describes the full range of their rather clever Even Spred commercial fertiliser spreaders. As the name implies, Even Spred has a smooth efficient broadcast pattern, from seven to thirteen feet, which helps to eliminate the possibility of burning from overlap.



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Letters

Send your letters to David White, The Editor, Greenkeeper International, 13 Firle Close, Seaford, East Sussex BN25 2HL

To the Editor

May I be permitted to use your excellent magazine to widen the search I am making for a now obsolete but still fine piece of turf machinery, namely the Ransome Certes Mk XII hand mower. I am not a greenkeeper, but have an expanse of turf which is my pride and joy and which I try to maintain in a way that emulates the best of greenkeeping practices. The Certes Mk XII would complete the picture.

STUART CRANE

12 Sycamore Close, Tidworth. Hants. SP9 7PH

To the Editor

In response to Mr Carr (Jan issue) I would remind him that not all greenkeepers are as fortunate as himself. After 13 years of persuasion we have just managed to get our committee to install a flushing lavatory and we STILL wash our hands in cold water!

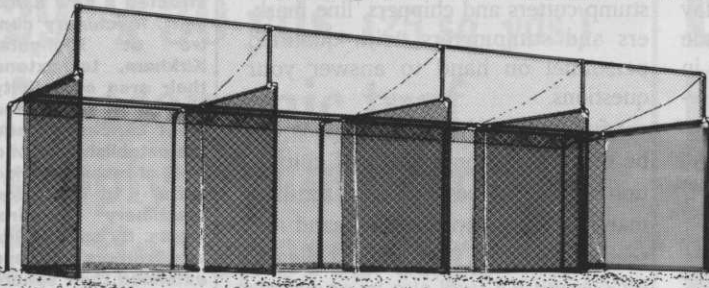
Many BIGGA members would really enjoy attending lectures, seminars and demonstrations but the three drawbacks we experience are; a) we can never get the time off because there is always a job that must be completed yesterday. b) nobody is prepared to help with travelling costs. c) many members live in remote areas. (On this point, thank heavens for the new magazine.)

Mr Carr is fortunate in having a committee or local authority that has moved out of the dark ages and I wish that all others would follow suit. At my club there is always money available for house expenditure and machinery, but the welfare of the greenkeeper is last on any priority list.

I wonder how many players would cry 'wolf' if even basic facilities were unavailable following a round, or if the greens were too slow on any given day?

My plea to secretaries, green conveners and course managers is this: are you sure YOUR greenkeeper didn't write this? We

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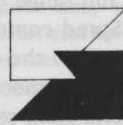
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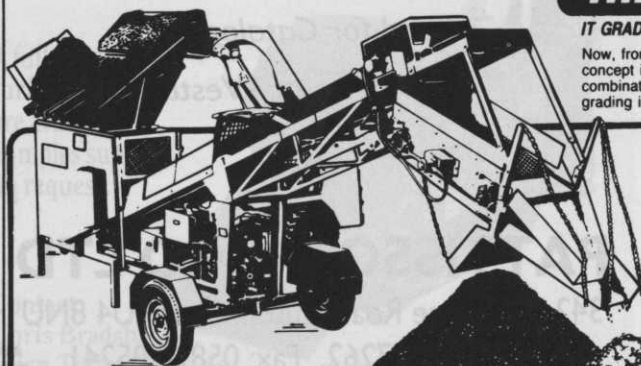


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● **The writer prefers to remain anonymous, stating that he is already regarded as something of an Arthur Scargill locally!**

To the Editor

Having just returned from an extremely entertaining and informative day spent with fellow BIGGA members at the Ransomes factory at Ipswich, I would like to express my thanks to them and say how grand it was to see the progress of cold steel entering at one end and finished products rolling off the line at the other! Our trip was organised by Paice's of Maidstone and we thank both them and the coach driver who battled through blizzard conditions to return us safely. Should other members be afforded the opportunity to visit Ransomes they may be assured of its excellence.

NIGEL STAPLEY

Head Greenkeeper, Darenth Valley G.C.

● **Having also enjoyed a similar tour, I can endorse Nigel's comments. My understanding is that such visits form a regular part of Ransomes programme, one where an exchange of ideas brings benefits to both parties. - D.W.**

To Neil Thomas

I write to thank you and the BIGGA staff for an enjoyable week at BTME and to opine that the hard work was well worth while. This is not just my view, but one shared by all from the Mid-Anglia section who attended. I have two suggestions to make: 1) I would like to see the presentation of the TORO Young Greenkeeper, the ICI Premier Greenkeeper and any Master Greenkeeper or National Tournament and ISEKI award winners being presented and properly feted by their fellow members in front of a gathered audience at, say, the end of one of the seminars. 2) I feel that with two consecutive drought years having passed, a paper covering this subject should have been included.

On the subject of Master Greenkeeper certification, I hope in time that all greenkeepers will seek to gain this qualification, thus enabling them to be on par with their American counterparts. One year ago I was quite content. I had 10 years experience as a head greenkeeper and some qualifications, but when MGC was introduced I soon realised that I was under qualified. Since then I have been to a National Conference, entered the ICI Premier Greenkeeper competition, attended workshops and seminars at Harrogate, spent nights at college sitting C. and G. Phase IV and am about to take the Pesticide Spraying Course.

In my case, education has clearly helped me to learn more about greenkeeping and management and to gain more qualifications. I will encourage fellow greenkeepers in Mid-Anglia to follow the M.G.C. route and hope that all greenkeepers throughout the land will follow suit. Perhaps this will eventually see an end to talk about what is due to the poor old greenkeeper, for we do so much NEED to be better qualified.

JOHN WELLS

Head Greenkeeper, Welwyn Garden City G.C.

To the Editor

Congratulations on the new magazine, which has obviously had great thought and a deal of hard work put into it and is real winner! Visually it is excellent and the photographs are first class, as is the 'readability' and size. I have to say even the adverts look better and result in them being better observed and acted upon. I realise more than most about funding such an enterprise and am fully aware of the need for trade advertising, but in retrospect our old mag. had the look of a trade advertising only paper about it and it was hard to find real 'greenkeeping issues'. My wish now is that you continue to give a good 'mix' and place firm emphasis on technical articles. Also please give greater exposure to highlighting individual premier greenkeepers and their trials and tribulations. I'll end by saying 'well done' and keep up the good work.

CHRISTOPHER BROWN

Head Greenkeeper, Tidworth Garrison G.C.

BIGGA flies the flag in the United States

A visit to the GCSAA conference, held this year in the desert city of Las Vegas, was taken by a group of some 40 greenkeepers and officials from BIGGA and the IOG and proved to be an enlightening experience for all concerned, being in the words of Kevin Munt "ten days of culture shock."

Reasons for making this long air flight are many and varied, with an official BIGGA stand engendering interest world-wide in our own BTME exhibition, creating an open market place for the promotion of our Association and the enrolment of many new members, together with the generation of valuable magazine advertising and affording an opportunity to learn from the style and intensity of American educational seminars. Others, such as Anthony Davies, were there as part of the winning ICI premier Greenkeeper Award and still more had elected to make this a holiday with a difference. What a difference it was became apparent just as soon as Las Vegas loomed in sight, with illuminations on the 'strip' making Blackpool seem like a back garden firework display and the 24 hour gambling casinos awash with punters eager to win - or lose - a fortune. Flying in a Cessna light aircraft over the Hoover Dam and the north rim of the Grand Canyon was a decided highlight from the tourist angle, and a visit to a University arboretum an enlightenment, briefed on the problems of growing grass, trees and shrubs in a desert climate.

But to return to the conference and show

proper this was, in everyone's view, an 'eye-popper'. Imagine if you will the prospect of 16400 people attending the show and over 2500 attending seminars, with many of the popular ones 'sold-out' months in advance. Imagine too the prospect of an exhibition hall the size of Wembley Stadium - officially quoted as 175,000 square feet - packed to capacity with 591 exhibitors demonstrating every con-

ment for some 400 years". After listening to an overview of the current US environmental situation, and being 'treated' to a number of controversial papers, one of which was entitled 'United States Sets Standards for Design Considerations World Wide', Munt was left making the plea that all conference organisers should ensure ample time be given so that speakers cannot escape such pontificating without having to field questions. A valid point.

Few could have failed to be impressed by the overall size and grandeur of this 62nd GCSAA Show, though a comment heard from more than one source suggested that speech-making during a meal attended by many hundreds is not conducive with grabbing attention. As a learning experience it was eminently worthwhile, for in taking from the good, and rejecting the not so good, our Association thrusts still further forward into the nineties in a mood of great optimism.

In conclusion, the highlights outweighed any minor disenchantment that may exist with the views often expressed, that everything in the land of Stars and Stripes is bigger - and therefore better - than on our side of the 'pond'.

A grand time was had by all and the vast amount of work and organisation put in by Brian Robinson and Elaine Jackson of the IOG was rewarded with very many happy folks indeed, all of whom expressed a wish that they might return again in '92, when the 63rd Show will be staged in New Orleans, Louisiana.



At the BIGGA stand: ICI Premier Greenkeeper Award winner Anthony Davis, left, BIGGA Chairman Ivor Scoones and David Norton, Toro Scholarship Award winner

ceivable form of green management equipment - plus the full quota of gimmicks - and you'll know why three days is necessary in order to take everything in.

One particular session, given by the American Society of Golf Course Architects, especially caught Kevin Munt's attention, entitled: "Can we co-exist with the environment?" "rather a strange question to pose" he said, "considering that golf has been co-existing with the environ-

AROUND THE GREEN

Keeping in touch with news and comment from the regions

KENT

The Kent section seminar held in February at The Woodlands was an outstanding success on all counts, with 120 delegates in attendance addressed on the vitally important subject of DROUGHT - SOLUTIONS AND REMEDIES. Outlining the current and near future situation regarding actual water supply, Steven Oakes of the National Rivers Authority expressed the view that if predicted trends are taken as an accurate barometer the greenkeeper might do well to consider either installing storage ponds or sinking bore wells, this to avoid any restrictions or bans that are likely to be imposed.

Graeme Francis presented what many saw as a very technical presentation into the efficient use of water, using modern irrigation systems. In this he highlighted the need for correct installation, maintenance and usage, in order to achieve the best results. That entertaining character Danny Godfrey followed with his "Grass under stress" presentation, outlining the many factors that can contribute to poor turf performance during drought and how the use of some varieties of seed mixtures can perhaps give better resistance. A touch of controversy crept in as the subject of Poa annua and Rye grass were introduced.

Lunch was followed with an address by Derek Green of Royal Liverpool, who discussed the experiences he has at Hoylake with a severe Dry Patch problem and the management undertaken. Currently it seems to be the case of pursuing varying manage-

ment techniques in an effort to mount an attempted control. This is a problem known to us all and, as pointed out by Derek, one which requires still further research if a lasting solution is to be found. Rounding off the lectures, Steve Auckland from the East Sussex National gave a presentation on the practical aspects of overseeding and the correct usage of overseeding equipment.

A question and answer session rounded off the day, with that old argument of Poa annua and Rye grass on golf courses coming to the fore in spirited fashion, with one speaker describing Poa as "rubbish" grass and another suggesting that it had a rightful place. Our thanks as usual go to the speakers who entertained and educated us so well, to the traders who set up mini exhibition areas and to those who support us in these ventures.

Without wishing to over simplify the summary of the lessons learned, we should perhaps be praying for rain, digging a pond or bore hole, hoping that a miracle cure for dry-patch is marketed one day, look for a watering system that covers perfectly, requires zero maintenance and never breaks down, and that a plant breeder discovers a very fine leaved grass that withstands wear, gives good year round performance and has roots that go down six feet! The name of this species shall NOT contain the words Rye, Meadow or Annual. Grass may be acceptable.

On a different note, our Spring Tournament and ISEKI qualifier is at Sittingbourne on May 14th. Successful players will progress to the Regional Final at Ham Manor on July 3rd and possibly continue to the final at Hillside, near Southport.

Finally, congratulations to Anthony Davies on receiving the ICI Premier Greenkeeper of The Year Award. Many will remember Tony as a section member when he was at Cobtree Manor a couple or so years ago.

PAUL COPSEY

BUCKS, BERKS and OXON

The Spring Tournament will be held at Goring and Streatley on May 22nd, the format being medal play over 36 holes. Please have your entries in by May 1st otherwise we cannot guarantee a place. The Rigby Taylor Fourball Matchplay Trophy will again be held this year and again we urge that you send your entry in without delay. A social night will be held on August 15th and will include such delights as skittles, snooker, pool and some good food. More details will appear later.

NEW COMMITTEE: Chairman - D Heads. Vice-Chairman and Treasurer - D Childs. Assistant Treasurer - S Edward. Golf Admin. - L Morrison. Secretary - B Woodward. Assistant Secretary and newsletter - R Clark. Handicap Secretary - B Holt. Lectures and Education - A Collis. Magazine contributions - N Fenwick. Advisers - B Paterson and R Kates.

NORMAN FENWICK

EAST SCOTLAND

The skittles match was held on February 22nd at the 'Silver Wing', with some 30 or more members and trade guests enjoying another great night. This is the second year of the the event and it was encouraging to see so many ladies present. The winning lady was Val Neilson with Anne Ormiston as runner-up. Our Vice-Chairman, Chris Yeaman, took honours for the best male performance. Some three days later a group of 30 members enjoyed a lecture and machinery demonstration given by Sports Turf Services. Our thanks go to Mike Eddington, Mike Dennis and his staff and to those who spoke on such an interesting subject. We must not forget the kind provision of soup and rolls at Ratho Park G. C.

The first tournament of our year takes place on April 9th at

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Baberton G.C., which will also be a qualifier for the ISEKI championship. Forms are already out and if you find yourself without one, first check to see if your subscription is fully paid. As we all should know, these tournaments – indeed all BIGGA Section events – are open only to paid-up members and if you wish to enter this tournament – pay the subscription! Failure to do so will mean a loss of benefits of BIGGA membership.

WILLIE BLAIR

AROUND THE GREEN

MIDLANDS

Our Spring Tournament will take place at Kings Norton Golf Club on April 8th and will be the qualifying event for the ISEKI Championship. We will make the draw for the Rigby Taylor Pairs event and our new Singles Knockout, based on the first four placed competitors in each event from 1990.

Members should note that it is essential when attending lectures or Golf Clubs during golf events that a high standard of dress be maintained. This means that you should ALWAYS wear a jacket and necktie and be aware that jeans are best left for work. Indeed, many Golf Clubs now quite rightly ban jeans, both on and off the course.

DEAN CLEAVER

NORTHERN

All section members should by now have received details of golf fixtures for 1991. If by some chance you have been missed, please let me know and I'll put matters right. You should also note that a deposit is NOT required for the Roses Match or Presidents Day and would-be entrants should contact Mountains of Morley, who are responsible for invitations. Indeed, most of the tournaments are filling up fast and you would do well to get your entry in with some haste.

I am sorry that it is now considered necessary to impose a £10.00 deposit on booking but many people have failed to turn up after making reservations – leaving the section with a deficit when it comes to settle for clubhouse meal dues.

A date for your diary is the AGM, which will be held at The Royal York Hotel, York, on April 25th at 2.30 pm. Finally may I remind any member wishing to join the BIGGA team at Royal Birkdale for The Open support team to please contact me for further details.

BOB LUPTON

AYRSHIRE

Contrary to what may have been announced elsewhere, the Spring section outing will be held at Irving Bogside on Monday May 20th, beginning at 8.30.am. Entry forms will be issued shortly and a prompt reply will be essential. Please remember, this event is an ISEKI qualifier.

At the February committee meeting a decision was made to form a Dumfries and Galloway sub-section, to keep members in closer touch. More details in the next issue.

DUNCAN GRAY

SHEFFIELD

Peter Jefford of Rufford Top Dress was the guest speaker at our winter lecture and gave what proved to be an entertaining and informative talk which was much appreciated by the less than normal numbers usual at such a gathering – victims as we all were of the snowy conditions. Photocopies of the slides used by Peter in his lecture are obtainable from him at Rufford's offices.

Our spring tournament is now finally confirmed for April 3rd at Coxmoor. Please note that in order to play in this and other BIGGA events it will be necessary to produce your paid-up 1991 membership cards. On April 4th we shall have a lecture given by Ian Misselbrook of Tillers Turf Co Ltd. and I would urge you to support this and other educational events in the same way as you do our golf competitions.

Finally our thanks to Henton and Chattell and especially James Robson for arranging the trip to Ransomes in February. The staff at Ransomes made us feel most welcome, especially



David Royle, and we were most impressed by the hospitality and the excellent evening meal on the first evening at Ipswich. The tour of the factory was itself most enlightening and is to be heartily recommended. Andrew Roscoe cannot escape mention, for he managed to by-pass some 33 pubs on the forward and return journeys – thanks Andrew!

IAN COLLETT

SURREY

The lecture given by Mark Hunt of Sierra UK Ltd on slow release and controlled release fertilizers proved to be a most entertaining and informative evening and we are most thankful to Mark for his presentation, and Sierra for providing the excellent buffet. The buffet was prepared with Marilyn Johnson's usual panache and her efforts were once again delivered out of the kindness of her heart – thanks Marilyn, it is much appreciated.

Our March scheduled Dinner-Dance was unfortunately cancelled due to lack of support. Whether this can be blamed on the current economic climate I'm not sure, but in any event the cancellation cost the section £200, being the non-refundable deposit paid. Whilst we will look favourably at any similar future events that may be mooted, consideration would need to be taken as to the degree of genuine commitment for quite clearly we cannot afford to lose money in this fashion.

On a brighter note, we hope to run a full winter lecture programme with subjects already proposed being: Health and Safety. Chainsaw use and maintenance. Conservation and Rights of Way through Golf Courses. First Aid. On this topic, would members care to indicate if these are the sort of subjects which appeal, or perhaps make other suggestions.

We've been offered the opportunity to visit Jacobsen UK at their Kettering location, however numbers are limited to a maximum of 25. Interested? Let me know and if we go over the 25 mark we'll select by ballot. The trip is proposed for June /July.

PHIL BALDOCK

NORTH WEST

A Greenkeeper Training Forum was presented at the Lancashire College of Agriculture and Horticulture, Myerscough, on February 21st, this being a joint venture between BIGGA North West section and the Lancashire Union of Golf Clubs. Some 70 people attended, made up of a cross section of greenkeepers, club secretaries and green chairmen. Opening the proceedings was the President of The LUGC, Mr Caton, who gave a brief introduction before Nick Hardman (Secretary of the LUGC) discussed "The

Members of the Sheffield section seen here at Ransomes headquarters in Ipswich

AROUND THE GREEN



Jim Fry - President of the South Coast section - who has presented a new trophy for their Spring Tournament.

Way Forward". This was followed in turn by Dr Richard Gibbs, representing the college, who spoke of greenkeeper training at Myerscough and of the encouraging increase in figures of those being recruited to the ranks of college life, well up on previous years.

A subject dear to our hearts - COSHH regulations - was dealt with by another college representative, Brian King, and touched upon the subject of safety in the work environment - prompting many audience questions. The final speaker, North West BIGGA Chairman David Berry, presented a talk on the Master Greenkeeper certification plan and green-keeping policy in general.

We now have a date and venue for the North West v North Wales Golf Tourna-

ment, this being Tuesday 23rd April at Llangollen Golf Club, with a tee-time of 2.00 pm. A team of 16 is required and anyone interested in playing should call me on 051 -724 -5412. The Spring Tournament will be played this year at Saddleworth on Wednesday May 15th, with a tee-time of 1.30 pm. This is also our ISEKI qualifier and prospective players should note the closing date, which is May 8th, due in part to a need for advanced catering arrangements.

BERT CROSS

SOUTH COAST

Even with temperatures dropping to minus 9 degrees C, a good speaker and topic can encourage members to attend a winter lecture. Section member Kerran Daly, Course Manager Salisbury and South Wilts GC, was the speaker and his topic was 'The use of computers in greenkeeping management'. Over thirty members were in attendance and heard how Kerran was using his home computer and word processor in assisting him as a course manager.

Members were delighted with Kerran's address and I am sure that a few more greenkeepers will now also be considering the use of a computer to assist them in their work.

Congratulations are also in order to Kerran on coming third in the BIGGA / ICI Premier Greenkeeper of The Year Competition.

Details for our first section tournament are as follows:

Venue - Blackmoor GC. Date - Wednesday 29th May. Competition - 36 hole medal. Entry fee - £15.50. Members wishing to play only 18 holes will be entered for an 18 hole medal and members over 50 years can compete for the Nita Stimson Trophy. There is a new trophy to be played for, presented by our President, Jim Fry, and this will be awarded at the Spring Tournament for the best nett over 36 holes by a competitor under the age of 25. Closing date for entries will be May 19th. Written

entries giving name, handicap, age and including the correct fee should be sent to Joe Burdett, 948 Castle Lane East, Bournemouth, BH7 6SP. Tel: 0202 483017

Finally a reminder that WESTURF 91 will be held at Long Ashton on Wednesday May 1st and I would urge you to support this regional event. Offers of assistance before the event will also be most welcome and I would also like to hear from those planning to attend in order that I can co-ordinate travelling.

BOB DENNIS

NORTH SCOTLAND

All members will be saddened by the death of Ed. Stuart, one of our Honorary Life members, who died on Feb 7th after a lengthy illness, aged 82. Ed was an enthusiastic and keen member who joined the old North and Midlands section of SIGGA in 1964 attending practically every event - even after his retirement in 1974 - until failing health caused his absence.

For close on 50 years he worked on the Golf Course and within the gardens of Balmoral on Royal Deeside, many as the head gardener, a position he took after his brother died. A past Captain of the Royal Household Golf Club at Balmoral, he was held in high regard, with both The Queen and Prince Philip being regular visitors to his cottage. Following retirement, golf continued to play a large part in his life and he was a member at both Ballater and Braemar as well as Balmoral. Despite all this he still maintained an active interest in gardening - his other love - and also made several visits to Bermuda where he assisted a friend in building and landscaping a golf course.

Ed. tried extremely hard to get the section to arrange a golf outing to Balmoral, an offer we unfortunately never took up. His friendliness, kindness and great enthusiasm will be missed by all who were fortunate to have known him and we extend our sympathy and kind thoughts to his wife Edith at this sad time.

The Spring outing is to be held at Nairn on May 16th and I take this opportunity of reminding members that Mr Howard Evans, BIGGA's pensions and financial expert, will be in attendance and available to discuss matters in private consultation from 12.30 pm onwards until he addresses the group for 15 minutes before the evening prize presentations. The cost for the day is £12 and a limited number of guests can be accommodated at £14. Those in greenkeeping who have attended as guests in the past should note that if they wish to continue to enjoy our promotions they will be expected to join our association.

Although this year's AGM has been arranged to follow a golf match at Letham Grange in November, it is being considered that in future we will hold it in conjunction with a 'gentlemen's' dinner. The committee will be pleased to hear your views on this matter and an indication of support for the evening.

To finish on a happy note, we offer congratulations to Bob Hardie, head greenkeeper at Strathpeffer, who got married in early February.

GORDON MOIR

MID-ANGLIA

This month I would like on behalf of the section members who attended BTME at Harrogate to thank those at HQ for all the fine work and effort put in to make the week such a success. We are all proud to be members of the Association.

February 20th saw us once again attend Beadlow Manor as their guests, this time to listen to Danny Godfrey of Inter Seeds Ltd and be entertained by his topic of golf course design. As on previous visits, Danny manages to both inform and amuse and we find learning is fun, though how many budding architects he may have made of us is something of which I am unsure. Thank you Danny, for all the time and effort you put into helping greenkeepers.

The Summer Tournament will be held at Letchworth GC on July 17th, the cost being £16.50 and the entries to be in Ken Bunting's hands by June 30th. There is a change of venue for the Autumn Tournament from that published in the fixture list, as Woburn G and CC, in the person of Mr Alex Hay, invites us to return this year. In his letter of invitation he states "I feel that our Club gives greenkeepers the opportunity of playing golf in convivial surroundings where they can discuss various aspects of these courses compared with their own, at which time the offering of ideas is beneficial to everyone concerned with the game

● Continued on Page 46

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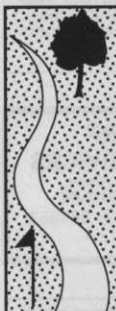
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AROUND THE GREEN

● From Page 40

of golf'. This is, I'm sure you will agree, a generous invitation from a busy club and one we are happy to accept.

GEOFF SMITH

DEVON and CORNWALL

Our February meeting was held on the 13th at Royal North Devon Golf Club, the event being a Stableford for the Stanley West Trophy. Whilst our golfers were golfing the rest were treated to an interesting 'course walk' with Dr Stewart. Following play we were well fed and watered before Keith Stewart of Stanley West Ltd presented prizes to the following: 1st K Piper - Holsworthy GC 39 points. 2nd T Gooch - Torrington GC 35 points. 3rd J Parr - Exeter GC 35 points. Thanks to Keith for both donating and presenting the awards.

Our afternoon speaker was Dr Stewart, who gave us an in-depth look at his research findings relating to salt affected turf. Whilst appreciating all that Dr Stewart had to say, we equally appreciated that he had travelled some considerable distance to attend and are truly grateful to him on all counts. And in giving due acknowledgements, we must also thank RNDGC for allowing us the use of their splendid historic links and Ted New for preparing them in such fine fashion.

Members should note that the section is hoping to run a coach to the WESTURF exhibition and trade show at Long Ashton, Bristol, on May 1st. Those interested PLEASE contact me as soon as possible on 0288 35438, and may I urge you all to make every effort to attend.

RICHARD WHYMAN

NORTH EAST

The Spring Competition is to be held at Bamburgh GC on April 25th, this also being the ISEKI qualifying event for 1991. I would like to welcome the following new members to the North East section: C Bamford - Bolden GC. G Baxter - South Shields. R Bell, S Cram and G Lauder - Slaley G and CC. R Griffiths and L Wilkinson - Whitley Bay GC. C Irvine - Gosforth GC. G Rycroft - Wallsend GC. C Thompson - Haltwhistle GC. R White - Stocksfield GC. Finally congratulations to M Lathan on his new job, moving from Tyneside GC to Hexham GC.

JIMMY RICHARDSON

NORTH WALES

The North Wales section has got off to a flying start since the inaugural meeting at Prestatyn GC. At this event the prizes were donated by Gem and Terry Adamson and made us feel most proud.

Our first section lecture was given by Derek Green of Royal Liverpool GC., and was held at the Welsh College of Horticulture at Northop. Apart from greenkeepers, we were pleased to see a representative of the Welsh Golfing Union in attendance and we all enjoyed Derek's enlightening revelations of life as Course Manager, Royal Liverpool GC. On behalf of the section I thank Derek and also Graham Wright, who arranged the college venue.

A golfing day has been arranged by Terry Adamson at Abergele and Pensarn GC on May 23rd. Qualifiers from this event will then travel to Tredegar Park, South Wales, to compete in the ISEKI regional finals. Cost for Abergele is £10 for BIGGA members, £11 for non-members and it should be noted that only members may qualify. Good luck to you all. May I make a plea that you support this to the full and make this, our first ISEKI competition, a great success. Incidentally, Brian Anderson has arranged the venue for us at his home course and this seems a good opportunity to both thank him and welcome him to North Wales. He has already been elected to our committee and I am looking forward to sharing time in his company in the near future - Croeso i Cymru, Brian.

A match is arranged between North Wales and the North West, scheduled for April 23rd at Llangollen. This in response to the challenge thrown down by Bert Cross when he last attended a North Wales meeting. We know the dragon is down in the nation's first game at the moment, but I'm sure it will be breathing fire once more during this match.

Finally may I convey our thanks to PROTURF from S. Wales for donating liquid gold - whisky - as prizes for future meetings - cheers!

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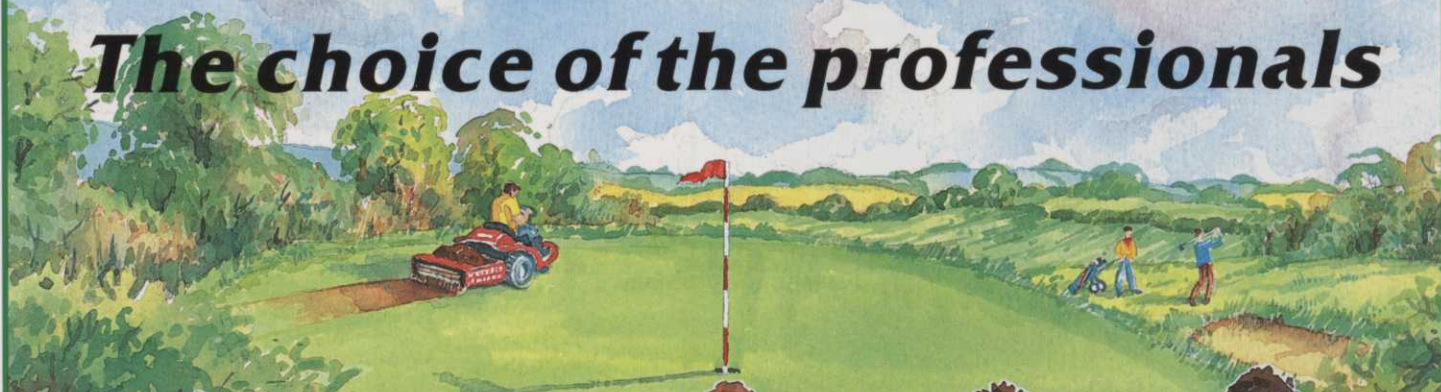
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