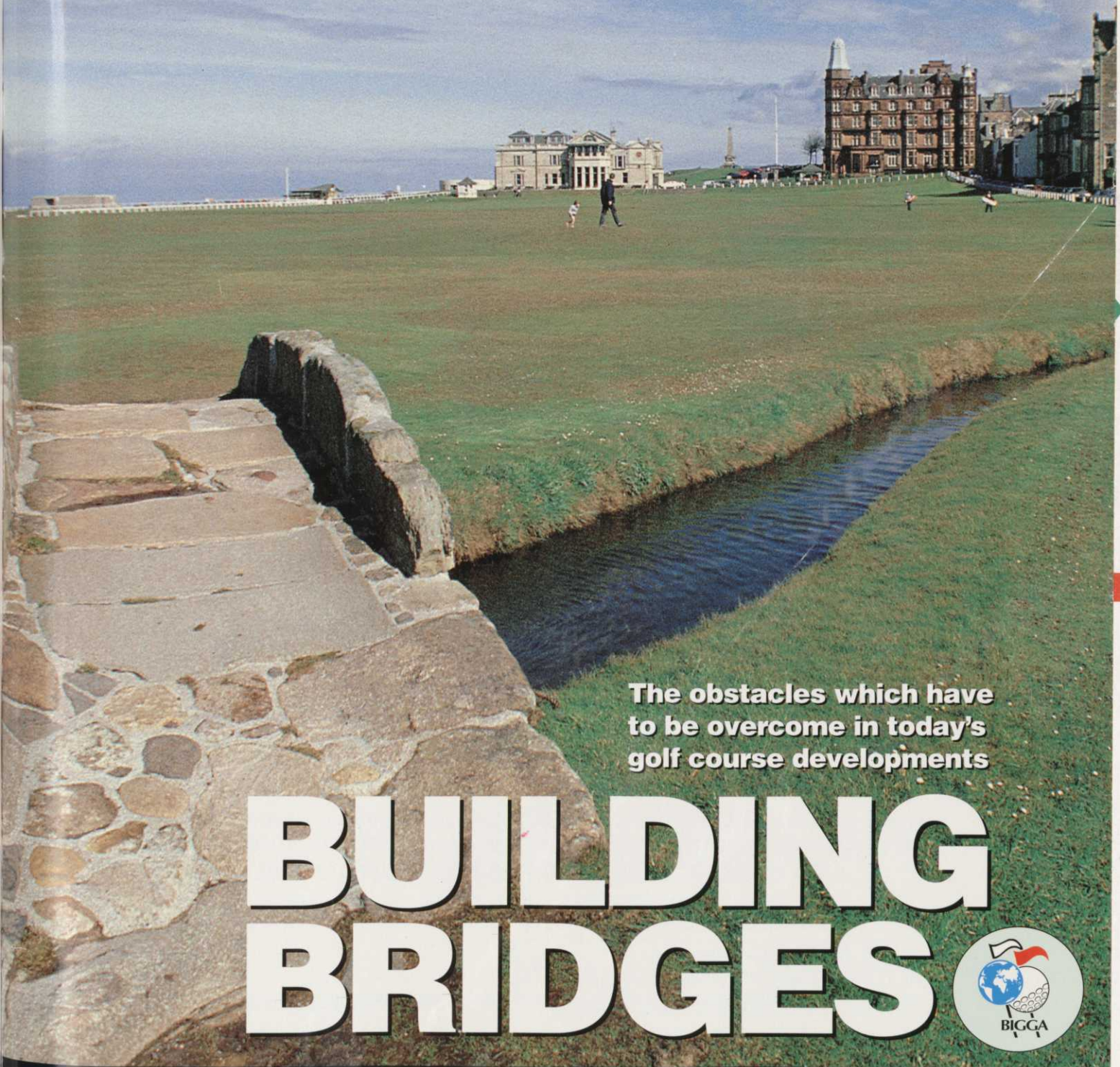


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Golf Greenkeepers Association

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The bridge crossing the Swilcan Burn on the 18th at St Andrews, the Home of Golf



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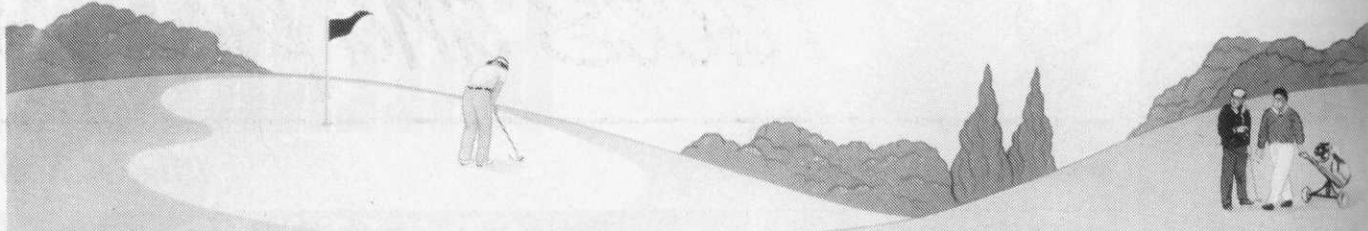
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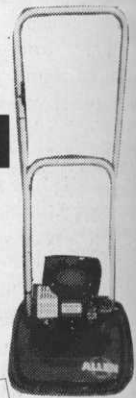
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Faces and places



■ Yet another member of the greenkeeping profession is leaving the fairways to join the growing (some might say overcrowded) ranks of independent golf course consultants. David Jones, currently managing seven courses under the Whitbread (Country Club Hotels) banner, will go independent on 1 May. With some 30 years course management experience behind him, David has prepared playing surfaces for many European tour events and recently played a vital role in the development of the Forest of Arden course, venue for this year's Murphy's English Open. He can be contacted on 0291 629662.



■ As part of their continuing commitment to providing a first class service for the grass cutting and amenity market, Hayters have recently announced the appointment of Hamish Macfie as a demonstrator. Hamish is no newcomer to Hayters and their range of equipment, having worked on a casual basis with the company since he was 14 years old.

■ T Parker & Sons (Turf Management) Ltd. and Maxwell Hart Ltd. have merged under the name Parker Hart, operating from Worcester Park and Warrington. Neil Stewart of Maxwell Hart is appointed marketing director and Bob Cook of Parkers is appointed sales director.

Both Parkers and Maxwell Hart are long-established names in the market and they will continue to provide strong sales and technical representation, backed by a rapid distribution service throughout the UK. The best of their 'own label' products will be re-launched under the Parker Hart label and the company will continue to distribute branded pesticides, fertilisers and grass seed from the major manufacturers, as well as turf dressings from their sister company, Roffey Brothers. The southern sales office (and administration) will be at Worcester Park and the northern sales office will be at Warrington. Need more details? - call 081 3377791.



■ With a view to further increasing their Toro and Club Car activities, Lely (UK) Ltd have appointed Peter Mansfield to the post of general manager in their turf products division. Peter has been with Lely for 11 years and is fully experienced in all aspects of Toro management, having spent the last four years in control of the parts division.

■ Michel Mulder, marketing director of Barenbrug UK, will be tackling the 26 gruelling miles of his first London Marathon in April. Training hard, Michel is hoping to beat his personal best time of 3hrs. 37min. achieved in the '89 New York Marathon. A strict training programme involves running up to 60 miles each week. In addition to road work, much of Michel's training takes place at the Bury St. Edmunds sportsground which has been sown with a hard-wearing Barenbrug mixture, able to take the pounding of Michel's not insubstantial 6' 5" frame!

Training can be a very lonely job, but during the race Michel is hoping for some company - if not in person, then at least in spirit - in the form of sponsors. Cash raised will go towards Cot Death research and support (FSID). Anyone interested in helping this worthy cause and justifying Michel's blisters should contact Lorraine Lane on 0359 70766.

■ Following the retirement of Doug Walker after 27 years of service with John Deere Ltd., Alec McKee has been appointed as the new managing director for the UK and Ireland. After gaining an NDA from Harper Adams in 1967,

and the NDAgrE from Writtle College in 1968, Alec McKee worked for four years with a John Deere distributor in Zambia. He joined John Deere Ltd in 1972 as a trainee territory manager, becoming a territory manager in 1973, business management adviser in 1974, credit manager in 1975 and commercial manager in 1979. He was subsequently appointed general sales manager in 1991.

A graduate of the Edinburgh School of Agriculture, Doug Walker was closely involved with the establishment of John Deere Ltd in the UK in the mid-1960s, becoming managing director in 1968. The subsequent 25 years under his leadership has seen the development of a strong, dedicated dealer organisation and prominent market position for John Deere Ltd in the UK and the Republic of Ireland.



Doug Walker, left, receives a commemorative pin from Alec McKee

■ Carol Borthwick, senior lecturer in greenkeeping at Elmwood College, has just returned from California where she attended the 64th GCSAA conference. One thrill she will remember for a lifetime was meeting the doyen of American golf course architects, 86 year old Robert Trent Jones. Carol is pictured with Trent Jones who, I am reliably informed, needed no translation of the delectable Scottish accent for which Carol is notably famous. Elmwood, already the biggest greenkeeping centre in the UK with a greenkeeping student population exceeding 250, is primed to increase its numbers substantially and has the European market within its sights.

■ Paul Baxter, deputy secretary of the EGU for the past seven years, has been appointed as secretary in succession to Keith Wright. A former boy and youth international - he won the Carris Trophy in 1960 - Baxter was formerly a club secretary, originally at Chevin GC and from 1977 until joining the EGU in 1985 at Sherwood Forest GC, where he was made an honorary life member.

■ Magistrates ordered that horseman Harvey Smith be remanded on unconditional bail until 30 March. Smith is accused of wounding and causing actual bodily harm, the charges arising from an alleged incident at Baildon GC in February in which two greenkeepers were taken to Bradford Royal Infirmary, one nursing a black eye and another needing five stitches in a head wound.



■ Len Cook, who began his greenkeeping career at Pleasington GC in 1953 on the princely wage of just six pounds a week, has just retired after 40 years service.

Len was presented with a camcorder by the club and was further honoured by being made a life member. Len will now find time to follow his other great love, that of breeding and judging geese. He is, we understand, an acknowledged expert.

■ John Deere Ltd has announced the appointment of Graham Williams as division manager, lawn & grounds care products, in addition to his managerial responsibility for sales promotion.

At the same time, Kathy Dowling has been appointed sales promotion supervisor, reporting to Graham Williams.

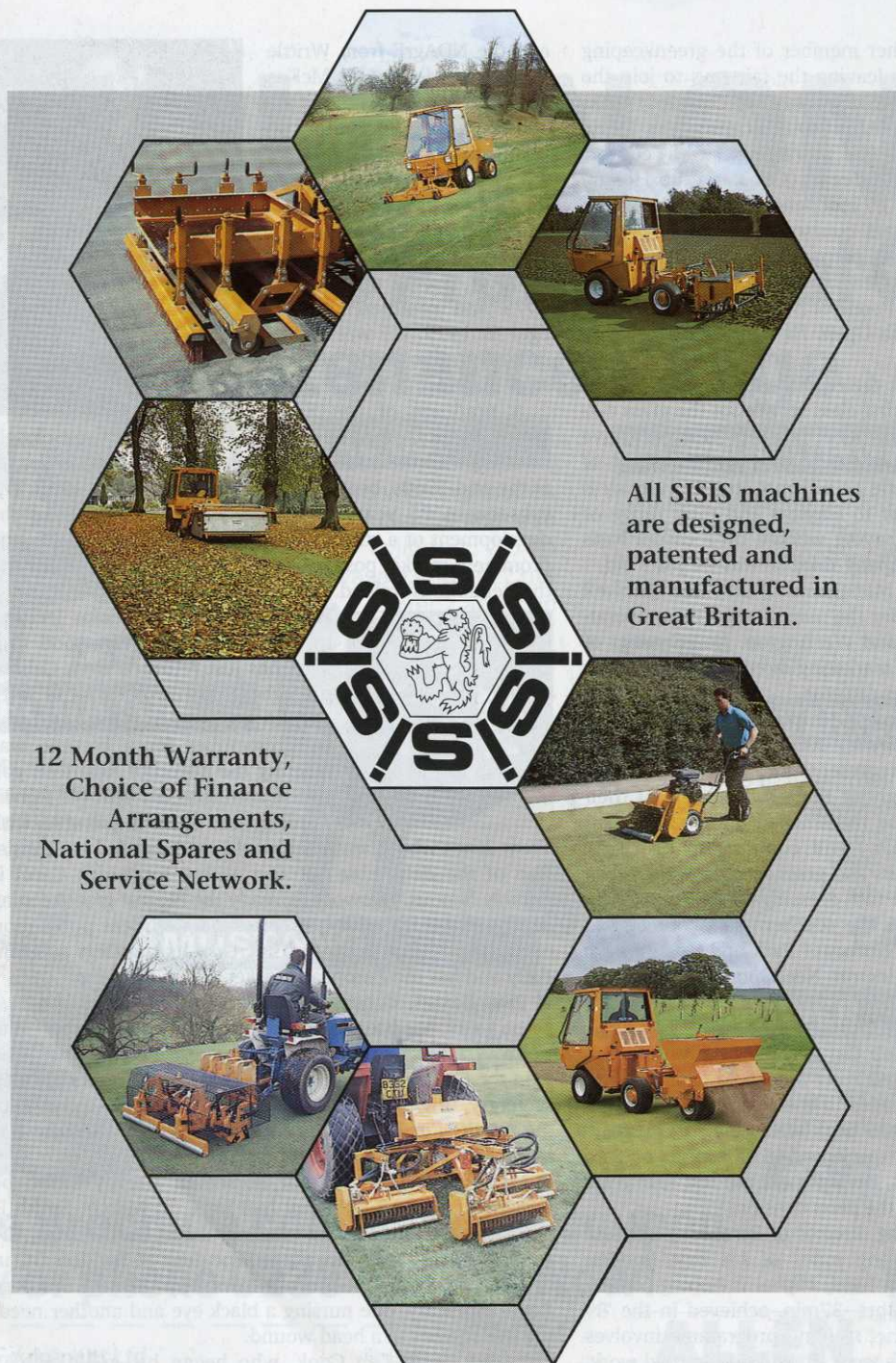


■ **Martyn Jones, senior lecturer in Turf Science at Myerscough College, and Phil Turner, a second year student on the National Diploma in Turf Science and Sportsground Management, have raised over £1000 for charity by bungee jumping. Martyn, never one for convention, went a stage better by jumping both backwards and blindfolded! He's pictured above during one of his leaps.**




Martyn, left and Phil

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Tireless efforts are finally bearing fruit

The issues contained within the Neil Thomas interview (Pages 21/22) throw up a question as to the future role of the Joint Golf Course Committee, as we observe that the GTC will raise its finances through the four Home Unions and the Royal & Ancient, the latter having agreed to match the 6.25p golfer contributions in 1993/94. Will the JGCC, I wonder, remain in being purely to oversee the financing of recommendations that may emanate from the technical panel?

Hearing how BIGGA were frustrated in their attempts (from July '92 onwards) to orchestrate a meeting with the JGCC, and that communication from that body appears to have been notably lacking, I am left to conclude that had such dialogue taken place the issues might have been resolved earlier and in all probability there would have been a better understanding of BIGGA's unique position. It seems to me that BIGGA, having taken the initiative over the past five years, should have been given greater acknowledgment of its views, for at all times BIGGA has sought to communicate and advance greenkeeper education and training. That stated, at this late stage we should be grateful that the employers have at last accepted their responsibilities.

Looking forward to the future, with all the positive vibes that this latest initiative creates, we should not forget those key members, both within BIGGA and in previous old Associations, whose tireless efforts on behalf of greenkeeper education are finally bearing fruit. They were the real pioneers in the field of education and they can look back on a job well done.

In discussing with our chairman, Roy Kates, the matter of David Golding's pending transfer to the GTC, he expressed the opinion that the move by the GTC to take the responsibilities of financing greenkeeper education to the employer was "probably the biggest 'happening' since the inception of BIGGA, something we have long been striving for because everyone thought the game should pay for the training of greenkeepers." He continued,

"It is tremendous for the expansion of greenkeeper education in that it will enable us to spend more time and put valuable resources into other important things like the management training courses held at Aldwark Manor and, of course, the National Education Conference and the seminar programme at BTME. There is no doubt - it is good for BIGGA members and the board of management are totally behind it."

Moving to another matter, I've long held the view that so often it is golf club officials who need educating - or, at least, regularly seem to be in need of a liberal dose of common sense - and now seems as good a time as any to raise the matter of an alarming trend - albeit a mere trickle which could become a flood - for club management to be tempted into saving money by sacking, declaring redundant or otherwise manoeuvring deservedly well paid head greenkeepers - on the grounds that they can do the job themselves, 'with a little help from their friends'.

Some cases have come about by unscrupulous professional advisors suggesting 'we can replace expensive staff by coming at fortnightly intervals', others with the inexcusable reason that the club is in severe financial difficulties - this at a time when there are countless thousands who queue before dawn to pay for the pleasure of a game and thousands more who cannot ever hope to gain entry into a private club. In my view, if cash flow is a problem there is no clearer case for raising funds than by increasing annual dues, which often are little more than the price of three pints of ale per week - utterly, ludicrously low, even in recessionary times!

How on earth does an advisor hope to replace a skilled head man, one whose vigilance, anticipation and experienced eyes are far cheaper and more effective than expensive cures after problems materialise? By coming once a fortnight and relying on unskilled supervision for the other thirteen days! We know the answer to that one, don't we! I

hold the view that these advisors lower the whole professional standing of agronomy, damnable by ethical standards, for no advisor should set himself up as a surrogate greenkeeper and in any case, should a crisis occur shortly after one visit it may go undetected and uncorrected for ten or more days - with disastrous consequences.

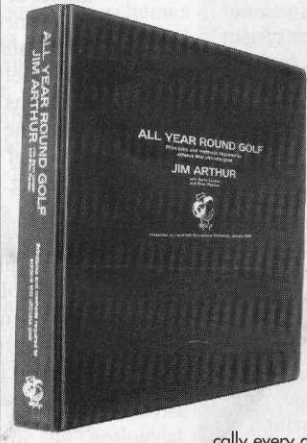
On the club front one such victim of a cash flow crisis, a hugely talented professional of many years standing, has been told that his skills were duplicated on the green committee and they were to replace him with a retired milkman who has sat on the green committee for 20 years, whilst another member, a mechanic, could do the machinery maintenance! The ludicrous nature of such an approach will no doubt show itself as their course suffers and falls into decline and morale plummets, whilst the implications of the Health and Safety at Work

Act will take them into serious legal difficulties if they use unqualified or unsupervised staff for specific operations such as pesticide spraying.

I could continue, but suffice it to say that clubs entering into these dubious transactions are playing with fire. Granted, in this magazine I'm preaching to the converted and these words should be blazoned through the golfing press, nevertheless I hope that somewhere a club official will take this warning on board: "The function of an advisor is to lay down policy, that of the greenkeeper to implement it and that of the green committee to see that it is funded. The latter should never interfere with methods as they cannot be expected to know anything about them". Spoken a decade ago by that doyen of professional advisors, Jim Arthur, and still true today!

DAVID WHITE

'It is tremendous for the expansion of greenkeeper education'



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TO ORDER, COMPLETE THE CARD OPPOSITE PAGE 58

Flying Divots

■ Noting that greenkeepers often have different views on what makes a golf course great, especially when making comparison with those who do no more than play the game, Greenkeeper International invites members to send in their own personal 'top ten', with reasons for their choice. Given sufficient participation, individual listings will be published on a monthly basis, with a final aggregate 'greenkeepers top thirty' listed at the end of 1993.

■ The previous system of fixing abstraction charges, where ten different regions of the National Rivers Authority all used different methods of charging, has been changed with effect from 1 April. Now such charges will be on a national basis, effectively levelling out charges so that some customers may end up paying more and some less. In the end it is declared that the new system will be fairer all round – and easy to understand! In effect, the new charges for 93/94 will see a rise over the 92/93 total of 1.7 per cent.

■ Today technical expertise in turf grass maintenance comes from all directions. Yet with the high cost of specialised machinery and materials there is an apparent vital need for a simple and workable system of combining planning, monitoring and recording. With the dynamic nature of turf grass, there is a need for a continued appraisal of response to wear, site limitations and treatments applied.

Consulting agronomist Gordon Jaaback, with the financial support and marketing expertise of Rolawn, has developed a simple visual system that will create interest, spark discussion and pinpoint the full picture in a sports turf maintenance programme. Full details of this free system were not available as we went to press, but will appear in next month's issue.

■ Greenkeepers' ideas are worth pounds! This magazine is eager to promote greater reader participation in its editorial output and is looking for YOUR good ideas. Any feature-length idea will be worth £15*, each picture that is published: £5*. In one or two hundred words tell us what you did, why you did it, how, when, where and the results – including money or time saved and simple guidelines for others to implement such techniques. We'll need to know if the idea conforms to good practice with regard to health and safety, the type of course (links, heathland, parkland), and the prevalent soil structure, natural or otherwise. Finally, if the idea is one that has been passed down over the years, we'd like to know who to credit.

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Farewell to the boom and hello to doom and gloom? Not so, says ecologist DAVID STUBBS, who argues that despite recession and clampdowns, obstacles can be overcome and there are grounds for genuine optimism

The twin perils of economic recession and tighter environmental controls have given the golf development industry much cause for thought. Gone are the heady, optimistic days of the recent boom period but nor is it all doom and gloom. While a few spectacular failures make the headlines, a good number of new courses have come on stream and will doubtless become successful ventures. Evidence of plenty of unmet demand yet to be tapped, coupled with the increasing difficulties faced by rural landowners and continued emphasis on land use diversification, suggests there is life in golf course development for a good few years to come.

What has to change is the methodology. Traditionally the emphasis has been on design and this has led the way on most projects. However this has some fundamental flaws which are being exposed in the new circumstances of the late 20th Century. Crudely put, golf development needs more science and less art. Boring perhaps but the bottom line is that golf projects must pay and this leaves little room for sentiment.

Good design will always be a vital aspect of golf but it is just one component of an increasingly complex process. Environmental and technical deficiencies may ultimately pose more serious and costly problems.

On the environmental side, the combination of public pressure and conservation lobbying has influenced the planning climate to such an extent that projects have to be presented in a much more studied and detailed manner if they are to be at all acceptable. This is no bad thing, it promotes a more responsible and site responsive approach to development which has been lacking in the past. But the golf world has been slow to appreciate the value of using the environment as an indispensable ally rather than a constraint to conquer.

One important effect has been a strong curb on the grandiose projects with associated real estate development. Such schemes are now rarely acceptable on attractive green field sites and market conditions have further put on a brake. This means that golf itself has to pay its way, unsubsidised by houses and hotel profits. Environmentally acceptable golf course sites tend to be concentrated on low grade urban fringe farmland and these are the target sites for pay and play developments. Here the premium is on low development costs and efficient management, not on big name designers and championship style marketing hype.

These dual environmental and economic pressures acting on golf course development in turn impose a rethink on

1 Tougher planning constraints



2 Technically difficult sites



3 Tighter financial margins



technical matters. Low grade urban fringe farmland is not the most suitable land from a pure golfing point of view but it is what we have to work with. Modern technology may have the potential for converting virtually any site to golfing land but this comes at a price.

Capping off a landfill with a golf course is one viable route, since the landfill profits easily cover the golf course construction costs (the site would have to be made good anyway) and golf provides a profitable end use with virtually instant returns. What's more, the design is likely to be less constrained, while site restoration offers long-term environmental benefits. The snag is of course that there is a limited number of such sites suitable and available for golf, while getting a landfill licence on a new site is even harder than getting permission for golf.

In general therefore, the modern golf course developer has to contend with the triple difficulties of tougher planning constraints, technically difficult sites and tighter financial margins. In theory this ought to elevate the importance of course managers and greenkeepers in the development process since it would be insane to press ahead with a project which has serious flaws which would lead to major, costly repairs and/or management difficulties.

However, it has not been fashionable to worry about soils, drainage, irrigation,

3 HURDLES TO GOLF COURSE DEVELOPMENT

agronomy and maintenance systems at the early stages of a development. Yet these are the nuts and bolts of a course which must be correct if it is to succeed on a long-term basis. Rebuilding of greens and tees after three or four years, or upgrading drainage or irrigation systems is not normally included in the business plan forecasts of a project. Often patch and mend is the only available option and for several years one has to make do with less than the best. This is unnecessarily expensive and potentially fatal in a competitive market.

Similar problems confront environmental specialists in convincing developers to plan along the length of a project and not just hop from one crisis point to another. Most calls on ecologists and the like are still largely firefighting exercises, to sort out immediate concerns related to planning difficulties. Only rarely does anyone consider that an environmental strategy could be a sound basis for taking a project forward, which co-ordinated with technical and financial appraisal, would help set the parameters for design and construction. The advantages would be numerous; a development with an intellectual logic based on the quality of the site and matched to appropriate economic criteria, with a clear understanding of the end product, including its operational management.

This would give golf projects a more credible image which in turn would enhance their acceptability in environmental and planning terms. Delays in dealing with objectors and resubmitting details could be reduced, planning conditions would be less onerous since

appropriate conservation measures would have been built into the scheme rather than imposed from outside and expenditure on construction and establishment could be more effectively targeted and controlled. Investors these days will be more impressed with schemes demonstrating sound technical appreciation coupled with environmental awareness. The logic of this is to make development a shorter and smoother process, bringing forward the revenue side when the course opens, with every prospect that it is going to last for many years.

To get to this happy state the direct way necessitates getting the right advice at day one. A three part appraisal is essential – your golf technical adviser will assess whether the site is right for golf (sufficient space, appropriate soils and terrain, water requirements, potential construction and management snags); the environmental expert will advise on whether golf is right for the site (ecological, landscape and historical constraints); and the financial consultant will say whether it will pay. The three are interlinked and one cannot effectively conclude an individual section without reference to the others. Together they provide the foundation for taking the project forward through planning and design, or an early and relatively inexpensive exit.

This appraisal-led methodology is steadily gaining credence in the industry. However, few have really grasped the crucial interdependence between financial performance and environmental and course management aspects.

More and more planning and environment related guide-lines, directives and regulations are coming forward and these will increasingly impinge on existing as well as new golf courses. Pollution control legislation, the introduction of environmental management systems (BS7750), eco-audit schemes and

environmental assessment regulations are all going to have a strong effect on golf over the years to come. They need to be understood by all concerned and this goes throughout the golfing industry. A number of important initiatives are taking place. The European Golf Association in collaboration with the R&A has been taking a pro-active approach in preparing "Environmental Guide-lines for Golf Development in Europe". It is hoped that this project will set the framework for treating environmental issues in golf development throughout the EC, with the blessing of the EC Commission and leading environmental organisations – better to get your own house in order before others do it for you.

In the USA the United States Golf Association has spent some \$5m over the last three years on environmental research and campaigns, and other major golfing bodies over there are actively pushing their own claims for environmental probity. Over here such activity is not so apparent and while it is unlikely ever to match the scale of American investment, the golf industry will soon have to pull together to address environmental issues in a co-ordinated manner. Identifying the lead body make take some time but it will have to happen.

For the greenkeeping community here is an excellent opportunity to play a key and influential role in the debate. It is greenkeepers who ultimately have closest involvement with environmental management, so it is only right they should be principals in any related initiative. BIGGA has for some time included conservation within its education programme. But this is only a start. As a profession greenkeepers will need to be much more aware and knowledgeable of environmental trends and issues to be able to make effective representations on policy matters and to ensure that guide-lines and regulations are meaningful and realistic. Ultimately it is all about raising standards across a broad range of issues.

■ The author, David Stubbs BSc., MIEEM, is the managing director of Environmental Golf Services.

'Main man' Roy makes his mark



Even before he began his term as national chairman we were calling Roy Kates the 'main man' – for having been schooled by the ebullient George Malcolm during his run-up to office it was abundantly clear that this 'main man' was stuffed full of bright ideas – like an exceptional club captain, we knew he was going to leave his mark.

Twelve months of exposure at the sharp end has done nothing to dampen his enthusiasm, and many of his personal aspirations, voiced in an interview conducted in early '92, have indeed become reality. Yes, it can be said that Roy Kates has left a very firm footprint in the cement of BIGGA's short but illustrious history!

Remembering his comments at that time – to follow the well-worn path of promoting further education for his fellow greenkeepers and to cultivate Golden Key participation – I prompted Roy to talk me through his year. He began in reverse time order by commenting on the up-to-the-minute revelations concerning the formation of a new industry-led GTC education committee.

"Recent developments have seen education pushed well to the fore, the career video being one such positive advance which is now far beyond the embryo stage and in the throes of becoming reality – and the initiative from the Greenkeepers Training Committee is something really quite exceptional. The board of management don't necessarily feel that we're getting everything we ever wanted, but see we must 'go with the flow' for the greater good. It is not as if we can expect to hold onto our baby forever, even though we gave it life and brought it through to young adulthood, so to speak. An organisation of our size cannot realistically hope to stand against the establishment and my personal view was always to 'go for it' anyway. Naturally there was some opposition, but I saw it as unfounded – you can't expect to start something and hold on to it for ever and ever – we had to see the wider aspects of the initiative and the decisions that have been made are widely viewed as being good for BIGGA and for the greenkeeper – the new GTC concept is very good news indeed in that it will allow the Association

to devote its time whole-heartedly to promoting other educational initiatives, and as you know we've certainly got a lot going on that score, all of them equally important."

Setting out into the relative unknown 12 months ago, Roy freely acknowledges the support given to him by his fellow board members, support that enabled him to spread himself around and be recognised – he grinned as he told me how his plan became something of an 'in' joke with friends: "It was to be one of exposure, of being recognised within the Association – I wasn't going to end up being Roy Who, I wanted to be remembered. I got a great buzz out of attending major functions, like BTME and regional seminars, and having people I'd never met grasp me by the hand and say 'Roy Kates, glad to know you, you're doing a good job.' Obviously they had seen my face in the magazine – almost every issue it seemed – and the plan worked. I think it something the job requires, I wanted people to relate to me and I feel that they have."

"The highlight of my year had to be Harrogate, the meeting with Prince Andrew. All the organisation behind the scenes to make this such a success needs to be shouted from the roof tops – these things don't just happen. I think the day before BTME my emotions went full circle – I had the build up, the elation of knowing I would be meeting Prince Andrew for maybe an hour or so, the sudden let-down when I discovered that Viscount Whitelaw was to be his official escort, and the joy again when Viscount Whitelaw almost casually passed the mantle back with his classic understatement – "Well Roy, I'll just leave Prince Andrew with you, you can do what you want now". "And that's exactly what I did, I spent nearly three hours with him – it was pure magic."

And what, I asked Roy, did Prince Andrew have to say? "All he wanted to talk about was his lawn." And how were you able to help him? A huge grin now, a joke: "Well, I gave him my business card! He was so genuine and sincere and demonstrated such real interest in everything he was shown – boy, it's something to be in the deep end like that with the national press, radio, television, all bustling for coverage – granted, it wasn't me they were focusing on but I was there in the limelight and it felt wonderful."

Roy has Gordon Hepson, his boss at Wexham Park, to thank for being supportive during this busy year. In truth Gordon Hepson was not simply supportive, he was downright encouraging in what was for Roy a very busy engagement, and it was perhaps fitting that 'the boss' shared in Roy's moment of glory at Harrogate, revelling equally in sharing personal moments with Viscount Whitelaw and our royal visitor. "Without him my year in office would not have been possible," Roy declared, "he has been my stoutest supporter, a very generous man." Praise indeed for a munificent character.

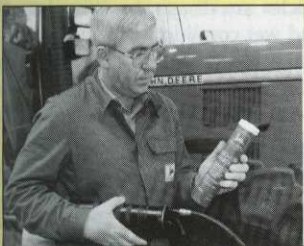
Everyone who knows Roy will tell you that he is great 'persuader' – he can sell ideas. Thus to round off this whistlestop tour of one man's year as national chairman, let me touch on his Golden Key connection. Roy was perhaps being modest in not mentioning the part he played in raising this initiative to even greater heights – suffice to say he lived up to his 1992 aspirations – to raise the profile still higher. As a result, BIGGA can count on two more Golden Key members – Risboro' Turf and Jacobsen's – both with us for altruistic reasons, thanks to the persuasive tongue of Roy Kates. There's no doubt about it, he's the main man!

DAVID WHITE

◆ Jacobsen has become one of the first to meet new EC Directive noise tests with their comprehensive mower range. Introduced to the statute books earlier this year, the directive calls for sound levels of 100dB(A) maximum at 4 metres for machines with cutting widths of 0.5 to 1.2 metres and a 105dB(A) maximum at 10 metres for wider machines. The maximum permissible sound pressure level at the operator's ear is 90dB(A) for all ride-on machines.

The range of Jacobsen machines that have undergone tests include machines as small as their Commercial 20 Pedestrian Rotary, through their range of Greens King, Fairway and Turfcat mowers to the recently announced HR and ST5111 rotary and reel machines. Details - tel: 0536 417777.

◆ The latest liquid fertiliser to hit the market is 'Tournament', the result of extensive research by Agriland Ltd to formulate a reliable rapid response treatment for amenity turf. Agriland's Roger West believes "there is a place for a 'total turf feed' that combines conditioning, nutrition and colour enhancement in one easy-to-use package. There can't be a greenkeeper who hasn't at some time felt apprehensive about getting his turf into peak condition for the big day - and that's where 'Tournament' comes in". One 20 litre container will treat 1500m², equal to 3 x 500m² golf greens. It will not be promoted as an everyday fertiliser but as a premium product for special events and badly worn patches. Details - tel: 0202 532291.



◆ Produced from rapeseed oil, John Deere's new Bio-Grease-Gard is a biodegradable grease for use as a lubricant in tractors and other grounds care machinery. In addition to being kind to the environment, it offers optimum lubrication performance and protection against wear and corrosion. It is also water-resistant and highly stable.

This new biodegradable grease is mainly used to lubricate axles and wheels, gear casings and drive shafts, and three-point hitches or front PTOs. First-time users are advised to contact a service specialist to ensure the lubricant is approved for the proposed application.

Bio-Grease-Gard is available in 400g cartridges, price £1.65. Details - tel: 0949 60491.

◆ Rhone Poulenc's DATACHEM Version 2 is now available. The computer software programme designed to assist the amenity spray operator with the safe accurate and efficient use of pesticides was initially launched in 1991. In addition

◆ A new organic based fertiliser for use on fairways has been launched by Humber Fertilisers Ltd. The new fertiliser, named 'Humber Fairway', is in granular form and is supplied in distinctive 25 Kg bags delivered direct from the factory to the golf course. 'Humber Fairway' is available in two mixes - a spring/summer 12:6:6 and an autumn/winter 3:14:14, both are claimed to offer the benefits of steady release of nutrients which ensures steady growth of quality grass and good strong root establishment. Details - tel: 0482 20458.

to the features of the original package, DATACHEM Version 2 has the facility to add details on any manufacturers' products for use within the system. Also new is a Spray Operator Record System, allowing the user to store spray application details electronically. DATACHEM Version 2 reduces paperwork and administrative time whilst increasing accuracy, efficiency and safety in the use of pesticides. Details and a free demo disk - tel: Mr Sion Price on 0277 301115.

◆ On the 10th anniversary of the launch of their trenching machine Shelton have announced the Shelton Supertrencher Mk Va. With a number of design changes, the discharge conveyor has been lengthened to enable bigger trailers to be loaded and a new belt with moulded chevrons is now fitted to enhance soil flow. Primary drive is by hydraulic motor with secondary drive by chain, enabling the belt speed to be altered. Made as a self-contained unit, it may be carried in the vertical position on the machine or may be slid off its retaining lugs and carried separately.

A bigger discharge port incorporates a deflecting plate of stainless steel and the conveyor fits more closely to the base to reduce the chance of soil spillage. The redesigned crumbler follows the arc of the cutting wheel with minimum gap and is protected with a shear pin. The bottom shoe is quickly changed to cater for differing trench widths. Pipe laying crumblers for laying pipes from 35-110mm diam. are available. The mini gravel hopper (optional) allows simultaneous placing of permeable fill. Details - tel: 0507 578288.

◆ Following extensive research Farmura Environmental Products are launching Foresight Flowable Wetting Agent - specially formulated and developed for use on turf. Foresight has been tested at the STRI for safety in use and the product is packed in award winning recycled plastic containers with an integrated easy-view measuring strip and pouring device for accurate measurement and dispensing. Half a litre to 500m² makes the product economical in use. Each 2x5 litre pack contains a free litre of Blazon Spray Pattern Indicator. Details - tel: 023376 241/581

◆ More proud possessors of BS5750 quality assurance certificates include Hayter Beaver, Fisons Horticulture UK (part 1), Rhone Poulenc Agriculture Ltd., D&E Turf Maintenance Ltd., and Elsons Seeds.

◆ Sports Turf Services of Newbridge, Midlothian have announced an agreement with Neptune Scotland Ltd to become sole distributors for the entire Neptune range. The manufacturers are able to tailor make batches of conditioner to meet specific soil problems. Details - tel: 031 3332345.

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Roll

Check the soil and check the sward when picking turf suitable for the golf course, recommends TIM FELL

Of the many factors that are used to describe quality in cultivated turf for greens, two are by far and away the most important; soil type and cultivar.

The main advantage of using turf instead of seed is to get the greens open for play earlier. Why, then, jeopardise the continuous use of those greens by laying turf grown on unsuitable soil? I was on a golf course the other day to look at some problem greens. They had been turfed exactly 12 months before, but I could lift any turf cleanly from the surface. With a resemblance closer to slabs of butter than turf, it's not surprising that the grass was struggling. Although this was an extreme case it does highlight the need to buy turf that is grown on soil that comes as close as possible to the specification used for the underlying rootzone. This means growing turf on sandy soils with very low levels of silt and clay.

The consequences of using turf grown on soil containing a high percentage of fine particles are disastrous. What happens is that, under heavy wear and wet conditions, the fine particles migrate into the air spaces and block off the natural drainage channels. Rain and irrigation water cannot get down to the underlying drains, and the turf stays wet and spongy. In dry conditions the soil sets hard, making it virtually impossible to hold an approach shot on the green. The only recourse is this case is a prolonged period of intense aeration, hollow coring, and top dressing with the proper rootzone mixture.

The maxim 'You get what you pay for' is pretty accurate when it comes to cultivated sportsturf. But one exception that proves the rule is the considerably higher price for one particular greens turf on the market today. Particularly when that turf includes a cultivar of chewings fescue (80% of the seeds mixture) that was dropped from the STRI Merit Lists years ago. Why, you may ask, does the grower use this cultivar? The answer is that it is tolerant of a total herbicide that knocks out annual meadow grass. This is meant to be the justification for the high price.

My feeling is that growing turf for greens should be approached in a different way. First, choose the cultivars that are most likely to meet the demands required of them on golf greens. One of the ways of doing this is by selecting from the STRI Merit Lists. The STRI cultivar trials, despite some criticism, do compare all the new and improved varieties coming from the breeders, and provide an invaluable reference. Many cultivars on the lists today are huge improvements on those appearing ten years ago, and are likely to perform better in today's golf greens. Second, control annual meadow grass by a planned programme of selective herbicide applications at reduced rates. This is very effective if you know what you're doing.

The question of which type of turf to use for tees is an interesting one. In my view there is little doubt that the use of dwarf perennial ryegrass in the mixture adds enormously to its wear tolerance. As such, I would recommend it for use on pay-as-you-play courses, or any course with heavy usage. Some of the newer cultivars of amenity ryegrass coming from the Dutch breeders look very exciting. With finer and finer leaves, and compact growth habits capable of thriving under lower mowing heights, they are going to be difficult to beat.

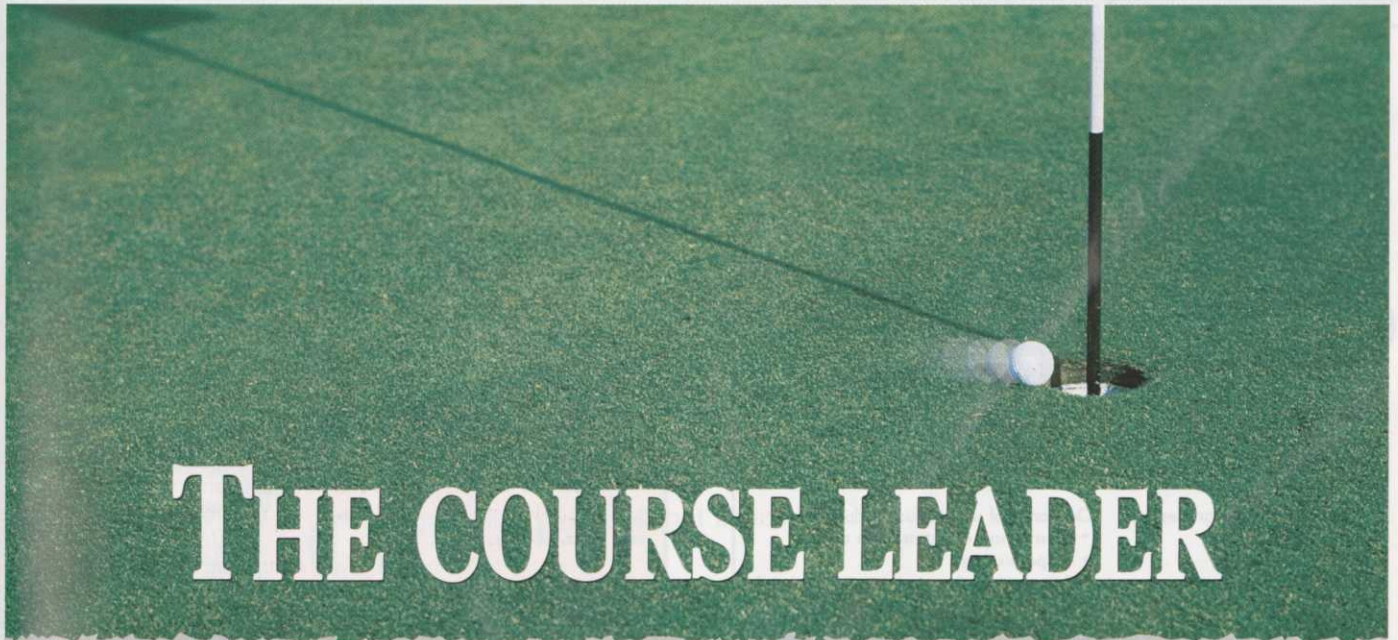
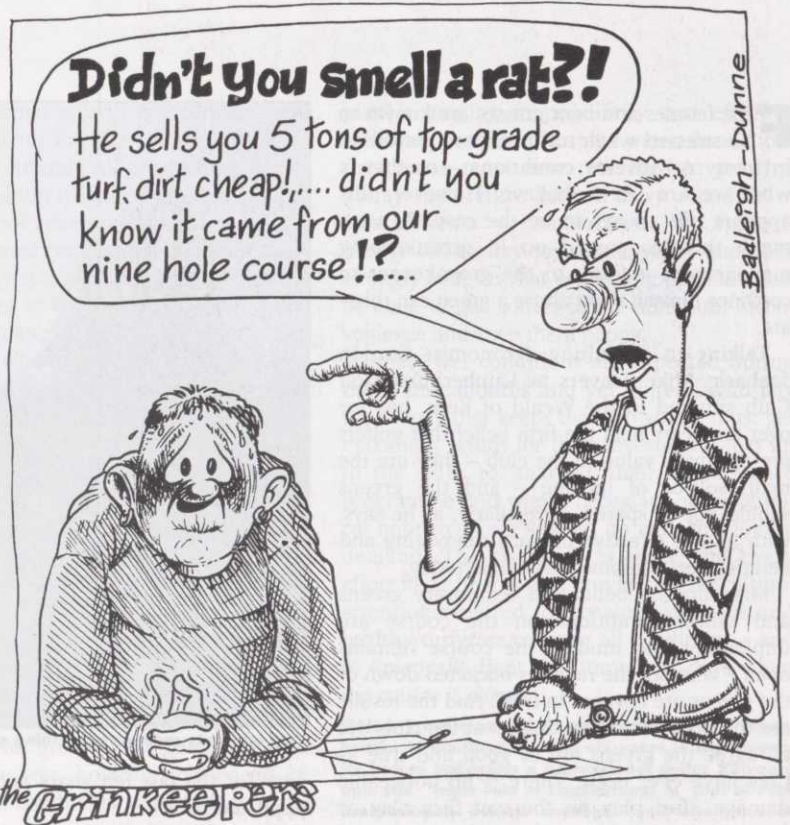
But many clubs prefer to use turf without ryegrass for their tees. I have become a convert to smooth stalked meadow grass

'em

in fescue/bent mixtures since the introduction of Limousine. Before Limousine, smooth stalked meadow grass stood out like a sore thumb and looked rather ugly. But the finer, lighter-green leaves of Limousine have changed all that, to give an attractive, relatively hard-wearing, sward. It's probably not a good idea, however, to use smooth stalked meadow grass in the turf for green aprons because it does tend to have a drag effect on a rolling ball.

The best way of making sure of the quality of any turf is to go and see it being grown and harvested in the nurseries. You'll soon get a good idea of how much attention is paid to detail. However, in practice, lack of time prevents many people from making the trip. In that case, a sample is the next best thing, but make sure you keep it in good condition so that it can be compared against subsequent deliveries. If you're not satisfied that the delivery matches up to the sample, send the load back where it came from.

■ The author, Tim Fell, is managing director of Tillers Turf Company Limited.



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Greens must not

Fine fescues and bent grasses are known to be stressed when turf areas are played on in frosty or adverse conditions – or that is what we are led to believe. However, this appears not always to be the case. As with many theories passed on in greenkeeping management it is up to the greenkeeper to convince himself what abuse a green can tolerate.

Talking to consulting agronomist Gordon Jaaback, Mike Travers at Lamberhurst Golf Club situated in the Weald of Kent, has for over ten years held the firm belief that golfers are the main value to the club – they are the main source of income – and the greens should not be spared. Particularly, as he says, with all the effective modern renovating and aerating turf equipment available today.

Mike doesn't believe in temporary greens and unless conditions on the course are unpleasant and muddy, the course remains open – whether the rain has bucketed down or the greens are covered in frost. And the results are there for all to see. Golfers at the club will all agree the greens are as good and true as they have ever been. There is no noticeable damage after play on the wet firm clay or frosted greens. This has been the case every



Golf on frosty greens: 'everything should be done to keep greens open'

year for the last ten years and the members appreciate this.

There are no gimmicks or special treat-

ments. As on most courses *Poa annua* is dominant on the green though fescues and bents seem to be increasing. Mike keeps the nitrogen

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levels up with six applications of 10-2-6 plus 1.5% Fe turf granules at 34 grams m² and follows up with an autumn treatment of 4-6-7.5 plus 3% Fe at the same rate. Liquid applications of iron sulphate are applied in one or two treatments in the late autumn before the frosts arrive. He keeps the cutting height low – in the winter at 5mm and during the summer as low as 3mm. Yes, the root growth is shallow – not more than 35-40mm – but Mike is confident he will improve the depth.

The greens are constructed with local heavy soils. Underground pipe drains were installed in the nine greens constructed in 1976 but are generally ineffective. There is no significant difference in the drainage of these greens compared to the first nine holes that are without any drainage. The soil texture is such that permeability is very low and surplus water unable to penetrate is lost by surface drainage. The greens all have a good puttable grass cover – although mainly *Poa annua* – and Mike believes the low cutting height is necessary to get the playing surface he wants.

Mike directs his efforts at removing thatch and relieving compaction. He is a strong believer in the regular use of thatching reels –

often heavily when growth is vigorous – and he slits throughout the year, hollow tining in the spring and autumn. All greens have had at least two Vertidrain treatments in the summer and levels are not adversely affected.

'Today the worst compaction can be treated', he says, 'so why spare the greens if there is no sign of suffering or deterioration?' Over 2,000 rounds were played between Christmas Eve and January 5 when frost cover every morning lasted until ten o'clock. Although often well frosted into the rootzone the temperatures – though not measured – could not have been lower than -5°C. This is probably where the explanation lies. Temperatures are so close to zero that rigid conditions do not persist and limited bending and bruising of the leaf can occur. Cut short to 5mm the dense mat is not displaced by foot traffic – even with no frost – and so physical damage is negligible.

The winter of 1992-93 has been the most severe on record. With no temporary greens, play has been maintained on frosty mornings and often on wet greens throughout the winter. The course was, however, closed on 26 occasions when conditions were such that the course virtually closed itself. Now that winter

play is gaining in popularity cost effective measures to remove surplus water throughout the course must now rate high in priority. Today most clubs have a busy schedule of commitments – Lamberhurst has approximately 100 society days in the year – and Mike strongly believes that everything possible must be done to put golfers to the minimum inconvenience and keep them happy.

Frosty wet conditions are expected during the winter months and yet golfers, who pay the money that keeps the club going, must get maximum return for their investment. It is up to the clubs to 'sharpen' their maintenance programme and where necessary effect physical improvements to keep up with the golfing demand. The challenge is there and every effort must be made to provide all the cultural attention required to sustain a vigorous and healthy turfgrass cover in all conditions – and to drastically limit the number of days when the course is closed.

■ Mike Travers served an apprenticeship as a greenkeeper in Scotland, serving six years in that capacity before becoming a professional golfer 22 years ago. His triple role at Lamberhurst is that of PGA professional, course manager and chairman of green.

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REVVING UP



Mark Barthelmie, the powerhouse behind Risboro' Turf, is quite unlike the accepted notion of a typical executive.

For a start, you would be hard pushed to find him dressed in the archetypal uniform of the rising yuppie – the Yves St Laurent suit and the nifty silk tie. I'll grant you he's got a smart suit – I've seen him wearing it – but he's much more at ease dressed casually, more in character as the boss who at the drop of a hat will scamper off to stage a convincing machinery demo in the middle of a fairway, ever at ease and easy to be with as 'one of the boys'.

For weeks I'd been chasing an interview, my plans thwarted by his being in America 'on business' and relieved to be at last meeting the man who had proved so hard to nail down. I arrived at the company headquarters, a nifty, button-bright, purpose-built location in rural Buckinghamshire complete



Top gear: Mark Barthelmie aboard his 1991 Harley-Davidson Sturgess

with its own green acres of testing ground, to be greeted by Mark's co-director Richard Taylor with the classic put-down, "Mark's out at the moment, hopes he won't be long – have a cup of tea!" Had Mark forgotten I was coming, I wondered, but within minutes he bustled into

his office, a grin beaming from ear to ear, fresh from staging a demo. The smile told it all, and though I was too polite to ask the outcome I could tell it had been a resounding success. Yes, Mark Barthelmie is the sort who gets high on the scent of 'a deal' and never happier than

when face to face with his prospect, convincing him that he's got the answer to a particular problem.

The walls of Mark's office tell a tale of their own, emblazoned with plaques and plinths in recognition of Risboro' Turf as trailblazers. There are 'Dealer of the Year' and 'Distributor of the Year' awards by the number, manufacturing and trade association accolades galore – all declaring the company as one that gets off its butt and performs! The casual observer could not fail but to be impressed.

Unconventional is the word that springs most readily to mind, for I learned that Mark had combined his 'business' jaunt to the GCSAA show at Anaheim with anything but a conventional pleasure trip – to Las Vegas with Lynn, his fiancée of some three years standing, followed by their taking a short hop in a stretch limousine to one of the dozens of 'wedding chapels' ➔ 18

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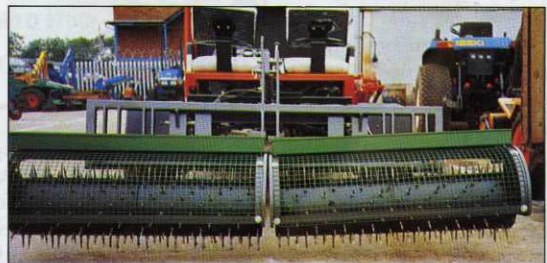
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REVVING UP

17 ➔ found in the marriage capital, there to pay out a few dollars and take vows of matrimony American style – a mere seven minutes later our bachelor hero and his betrothed left as fully paid up members of the ‘just married’ club, returning swiftly to the hotel bar for a celebratory glass of soothing spirit!

I learned from Mark that Risboro’ Turf had been formed about six years ago by him as a direct result of his involvement in his father’s business, Risboro’ Agricultural, a company selling farming machinery and fine turf supplies and famous in Buckinghamshire, Berkshire and Oxon for innovation and service. Mark trained in agricultural engineering at Rycot Wood College before joining the family firm and covering the whole gamut of the business – fine turf, workshop, stores, on the road, machinery development and modification, sales and general administration and the setting up their first computer system – a perfect training ground that left little to chance.

Bolstered by his new found administrative skills and with the growing realisation that the agricultural business was running on borrowed time, with farming going through a transitional period, Mark saw the need, as he put it, to ‘look after his own interests’. At the time Risboro’ Agricultural had been modifying Ryan turfcutters for Marshall Concessionaires, and by applying the principles of service, back-up and having spares on the shelf, together with making the turfcutters work efficiently on hill and dale rather than on flat land, Mark used his contacts to gain the new firm’s first agency: Risboro’ Turf becoming synonymous with Ryan in Bucks, Berks and Oxon. The rest is history, for the company wrote its own success story and other agencies followed. Winning the Jacobsen agency was another milestone and it is with some pride that Mark looks back now to those days in the early 1980s when he became one of only two original Jacobsen dealers (now area distributors) to maintain an unbroken connection to the present day.

On the road covering BB&O single-handed, Mark soon became aware that there were bigger fish to catch, a customer demand waiting to be met for tractors, hollow-tiners, tee mowers and the like.

Soon Iseki and Beaver were added and gradually the company took other agencies on board, building up a sound business which today supplies – and services with great efficiency – a complete range of fine turfcare products.

That is the secret of success for Risboro’ Turf, the efficiency with which they sell and service, for Mark believes that service is the key to their acceptance in the market place. The business is split between golf courses (they call on every greenkeeper in the three counties and count on something like 98% as customers) and local authorities, together with an increasing growth in the domestic market, having won the Honda agency from fierce competition.

The company has recently moved into manufacturing, rising to the bait of numerous requests to supply something similar to the old Pattisson/Sarel roller for greens aeration, but a machine-mounted version that could be hauled behind a Cushman or compact trac-



‘To be honest, I think the dealer very often gets a rough deal and I aim to see that my dealers don’t – it’s that simple’

tor to cover greens at some speed. Using skills learned at Rycot Wood College, Mark slipped into mechanical engineering mode to develop prototypes which, constantly developed and improved, have proved most successful in production, selling in rewarding numbers. Indeed, so successful has this venture been that they have appointed some 15 dealers countrywide to handle the demand.

I’ve never met a businessman that at some time didn’t have a tub to thump or an irritation that needed airing. Mark is no exception. Choosing his words carefully, he described his particular ‘tub’ as that of being “constructively critical of the way some manufacturers handle themselves and how they conduct their business”. He continued, “I’m outspoken and always have been, which is not surprising because we are at the receiving end – in a direct firing line from manufacturer and end user alike – and this is one of the reasons why getting into manufacturing has been

so rewarding. I’ve seen to it that those things I and my fellow dealers don’t like about the way some business is conducted are conspicuous by their absence in our ethical involvement as a manufacturer. For example, I know all my agents personally and we are not out to carve each other to pieces, rather we’re out there to conduct sensible business and sell the right product. Equally, our warranty claims are handled without so much as a squeak, no matter what. To be honest, I think the dealer very often gets a rough deal and I aim to see that my dealers don’t – it’s that simple!”

Being conscious of one’s responsibilities, proud of one’s achievements and craving to get things right is something that Mark is vehement about. Having discussed the approach to responsibility and seen how they are ‘getting things right’, pride is paramount in their most recent achievement, being only the second in the country in their specialised business to gain

the coveted BS5750. “We wanted to be at the front of the queue because we are critical of ourselves and the way we do things. I’m always inviting input from staff and clients alike and we make a point of asking our customers what they like (or don’t like) about our business. The BS5750 has proved a great sharpener, getting effect systems into place for us to cope with constructive criticism – in truth, we get very few complaints and I’m planning to keep it that way!”

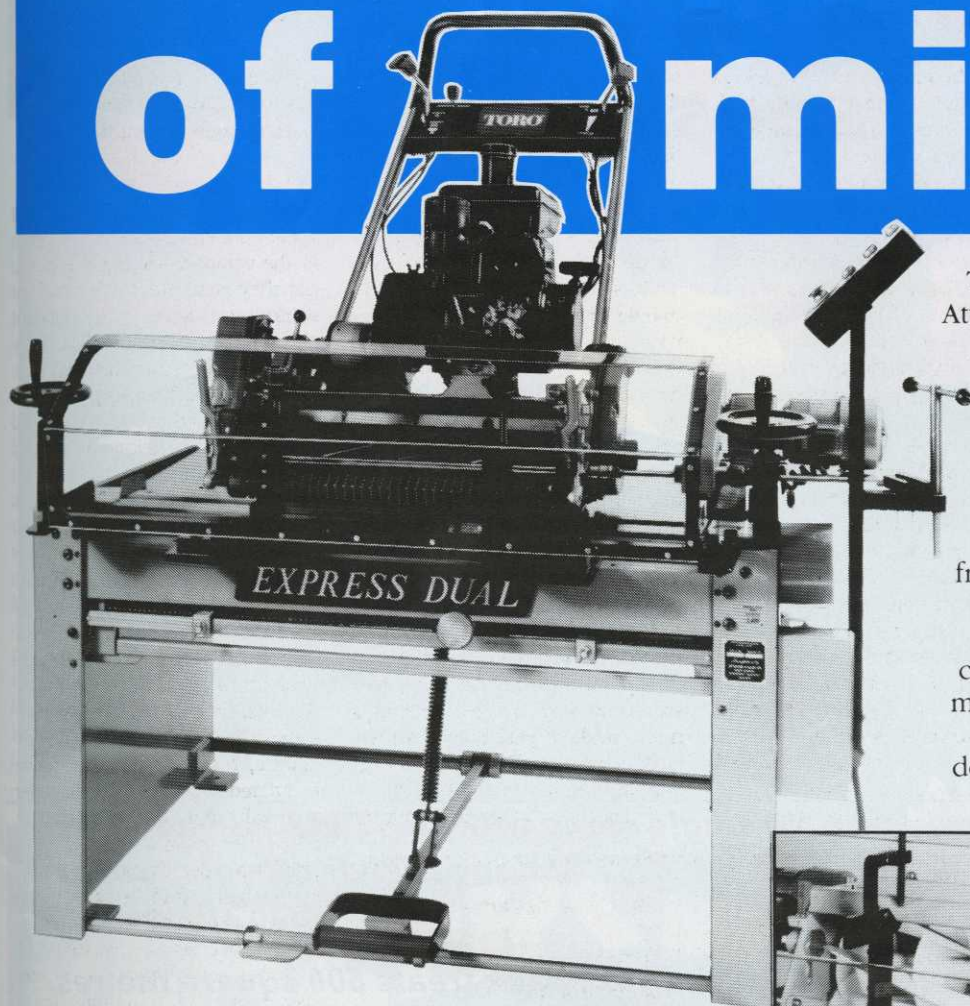
In these ‘Gold Key’ interviews the stock question that often throws a subject is ‘what makes you tick?’ It’s surprising how many business tycoons ramble on at length about their industry, never at a loss for words, yet at the thought of talking about themselves they become tongue-tied. Not so our Mr B, who’s eyes positively lit up as without hesitation he replied, “I love my motorbikes, they keep me sane!” I said he was unconventional, and to prove the point he went into a reverie about the joys of owning

and riding not just any old machine, but his beloved 1991 Harley-Davidson Sturgess, a giant of a machine which is his way of blowing away the cobwebs of everyday life. Not content to be a ‘biker’ alone, he’s influenced others in the company to follow suit – or did they convince him? – and the workplace is awash with gleaming and delicious two-wheeled monsters. I drooled over three stunning Harley’s in Mark’s garage, his own, Lynn’s (finished in a strident shocking pink), and co-director Richard’s, all 1340 powered. Together they like nothing better than to ride to mainland Europe for the annual Harley ‘thrash’, their destination this year being Milan.

Mark’s greenkeeping connection goes back to the old days of EIGGA – with an involvement in section affairs through local secretary Seve Schmitz. Enamoured by the sight of a huge Jacobsen trophy on Seve’s mantle, Mark learned that it was competed for by greenkeepers regionally and nationally, the overall winner going to the USA. As a Jacobsen dealer Mark sought involvement; and in splitting the event away from being a routine section meeting they’ve sponsored a BB&O tournament ever since, even though the national event is no more. “To sum it up”, Mark told me, “I’ve always thought it right to put something back into the heart of our business – the greenkeeper – which readily explains why I’m a Gold Key supporter. It is an indication of our absolute commitment to them. Finally, as a further commitment to improving professionalism, we have plans to open a training room in the winter, for greenkeepers to spend four or five hours with us and perhaps join us for lunch, give them a chance to gain hands-on experience with state-of-the-art machinery – maybe on how to set up the latest cylinder mower or groomer – and meet local reps and machinery specialists for an informal exchange of views”.

Roy Kates had primed me to expect an individualist and a free-thinker and I was not disappointed – I came away conscious of the commitment this man and his young team put into everything they touch. The greenkeeping profession in Bucks, Berks and Oxon can rest easy, Mark Barthelmie has his finger firmly on their pulse. It is beating vigorously.

Peace of mind



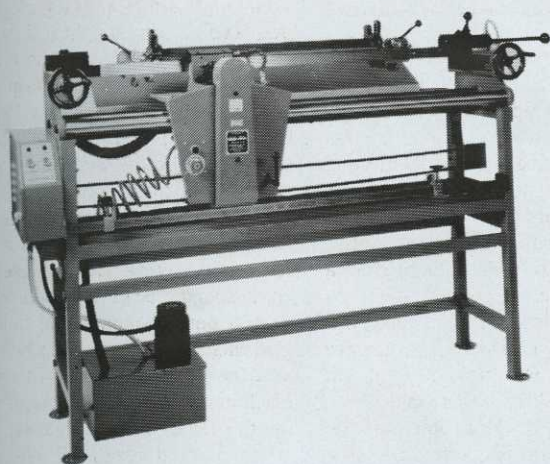
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Greenkeeper education

Changes are about to take place in the format of greenkeeper training. BIGGA's executive director NEIL THOMAS tells David White how the changes came about and what's going on



Neil Thomas:
'Developments now taking place will prove of major significance in advancing the cause of greenkeeper education and training'

■ DW: There has been much talk throughout the past year of the establishment of an education unit for advancing greenkeeper education and training. I understand that agreement has now been reached to enable this unit to proceed. Will you confirm this and explain the background which led to its establishment?

■ NT: I can indeed confirm that agreement has been reached for the education unit, which will be the responsibility of the Greenkeepers Training Committee (GTC) to go ahead with immediate effect. I welcome this opportunity to explain the significant developments of recent months, which will have far reaching and beneficial consequences for greenkeeper education and training.

The starting point was a paper which I prepared for the May '92 meeting of the GTC under the heading 'The Future Funding of Greenkeeper Education'. In it I pointed out that the last few years had seen very significant progress in the development of greenkeeper education in

which the GTC, in conjunction with BIGGA and the Approved Training Colleges, had played a key role. However, a critical phase in funding had been reached and with the establishing of the Joint Golf Course Committee (JGCC) it was to be hoped that more substantial funding would become available in the near future. The immediate concern related to the Greenkeeper Training Manual - a major development - and I felt that the significance of this manual, its implementation and on-going reappraisal and development, was not to be underestimated.

Greenkeeping qualifications would in future receive due recognition within educational circles on a national basis, and I pointed out that we were on the verge of a major move forward in the committee's endeavours to enhance the education and training available to greenkeepers.

Time was short, as the introduction of the manual and establishment of the necessary administrative procedures needed to coincide with the start of the academic year in September 1992. It was my view that this could only be achieved by establishing an Educational Unit to oversee the future of greenkeeper education, which would be funded by the JGCC. Its initial task would be to oversee the implementation of the Training Manual with all its ramifications, and it would then move on to encompass further educational developments as recommended by the GTC and approved by the JGCC.

It was felt that the unit should be headed by BIGGA's education officer, who already → 22

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'BIGGA views the new situation in a positive light and welcomes the assurances that there will now at last be a substantial increase in the funding of greenkeeper training'

21 → held dual responsibilities in relation to BIGGA and the GTC. These dual responsibilities would continue as BIGGA itself would continue with greenkeeper education as its priority. BIGGA's current educational programmes in relation to conferences, seminars, management courses and the development of the Master Greenkeeper Certificate are on-going and would be developed within its own budget assisted by contributions from other bodies and companies as appropriate.

BIGGA was willing and able to offer the GTC facilities through which its programmes could be carried out, as a lease on additional accommodation at BIGGA's headquarters was being negotiated to take effect from 1 June 1992. However the board of management of BIGGA, whilst recognising the importance of the GTC's grants for the benefit of greenkeeper education over the last few years, felt it essential that the GTC now appreciated that the Association was unable, however willing, to accept any further workload in relation to greenkeeper education from the GTC without the provision of adequate resources, of which staffing represented a prime requirement.

There were two points to be made – the first was that the GTC could not continue to develop educational and training provisions for greenkeepers without a wider administrative base than that currently enjoyed under the auspices of BIGGA. Second, such a base could be developed cost effectively in conjunction with BIGGA's existing expertise and resources and without the GTC having to assume an 'employer' role.

■ DW: What was the GTC's response to this paper?

■ NT: The GTC was sympathetic to the proposals but felt unable to accept the financial commitment without a pledge to further funding.

■ DW: What subsequently transpired?

■ NT: Immediately following the GTC meeting in May I was contacted by the EGU's golf course committee and a meeting was set up involving myself and David Golding, along with the deputy secretary of the EGU and the chairman of the EGU's golf course committee. At the beginning of June the deputy secretary of the EGU submitted draft proposals to BIGGA for the establishment of a greenkeeper training education unit, and we responded accordingly. A final draft was forwarded to the chairman of the GTC at the beginning of July, indicating that the finance committee of the EGU had given outline approval for financial support for the setting up of the unit. Essentially the EGU was prepared to support BIGGA's initiative to the GTC in an attempt to finally get the education unit moving.

At this stage, therefore, both BIGGA and the EGU were in broad agreement on the proposals.

■ DW: Good, it seems as though rapid progress was being made. I wonder, were matters going too well?

■ NT: My understanding is that the papers were then submitted to a meeting of the JGCC by the

EGU's representative in July and at this meeting a decision was taken that the new unit must be administered separately from BIGGA and key amendments were made to the EGU's draft proposals. The next communication was a letter received at the end of August from the EGU enclosing the EGU's document for the setting up of the proposed unit and advising us that a meeting had been called for early September at the EGU offices. This was attended by the chairman and myself and it became clear to us that the document now contained significant amendments to the draft proposals from July. At the September meeting there was clarification of certain BIGGA reservations and general agreement on the need to proceed with the unit, whilst recognising that the proposals needed the formal consideration of both BIGGA and the GTC as well as the approval of the four home unions through the JGCC.

■ DW: I presume that you then reported to BIGGA's board of management and the GTC. What was the outcome?

■ NT: During October both BIGGA and the GTC responded formally to the proposals and whilst both bodies supported a proposed reduction in the size of the GTC, concerns were expressed in relation to the proposal that the administration of the GTC's accounts would pass from Aldwark Manor to the EGU's offices in Leicester, thereby separating general and financial administration, as well as in relation to BIGGA's representation on the restructured committee. Additionally, concerns were expressed about the future relationship of the GTC and the JGCC, which seemed far from clear. However, at the end of December the chairman and myself attended a meeting with the chairman of the GTC and the executive consultant to the JGCC where we were advised that the JGCC was determined to implement its proposals as they stood – irrespective of the representations from BIGGA and the GTC. Furthermore, in a new development, it was now envisaged that the staff employed within the new unit would be employed directly by the GTC and not by BIGGA. Irrespective of this, the GTC still wished to administer its affairs from within BIGGA's offices. Having originally requested a meeting with the JGCC as early as last July, the board's response was to again request a meeting with the JGCC to try and resolve the divergence of views on key points. The meeting never took place, though a subsequent meeting was held on 17 February with the chairman of the GTC and the chairman of the EGU's executive committee attending.

At this meeting BIGGA made it clear that the preferred solution was for the education unit to function within BIGGA's offices under the overall control of BIGGA's executive director, albeit with a clear separation of the functions of BIGGA and the GTC, given that there would be close co-operation on educational programmes. David Golding, as education officer, would head the education unit working through myself. Under this arrangement the staff of the unit would remain BIGGA employees, their costs being met by the GTC. In essence, the

work of the GTC would continue as it had done for the last five years under BIGGA's auspices.

However, it was again repeated that the JGCC wished to establish a separate employer role. This being the case, BIGGA's board of management determined that initially the GTC should seek separate accommodation with the two bodies continuing to work closely. To this end, BIGGA's enquiries indicated that accommodation could be made available in the near future within Aldwark Manor in the South Lodge building. BIGGA considered it crucial that the GTC remain at Aldwark Manor, as this was now viewed within the game of golf as the 'home' of greenkeeper training. By being located in near proximity the closest of co-operation would be possible.

■ DW: Did the meeting reach final agreement on the way forward?

■ NT: Yes indeed, it has finally been agreed that the GTC will function as an autonomous body – with its own employees – located within Aldwark Manor. I must make it clear that this is not what I see as the preferred solution. However, BIGGA views the new situation in a positive light and welcomes the assurances that there will now at last be a substantial increase in the funding of greenkeeper training.

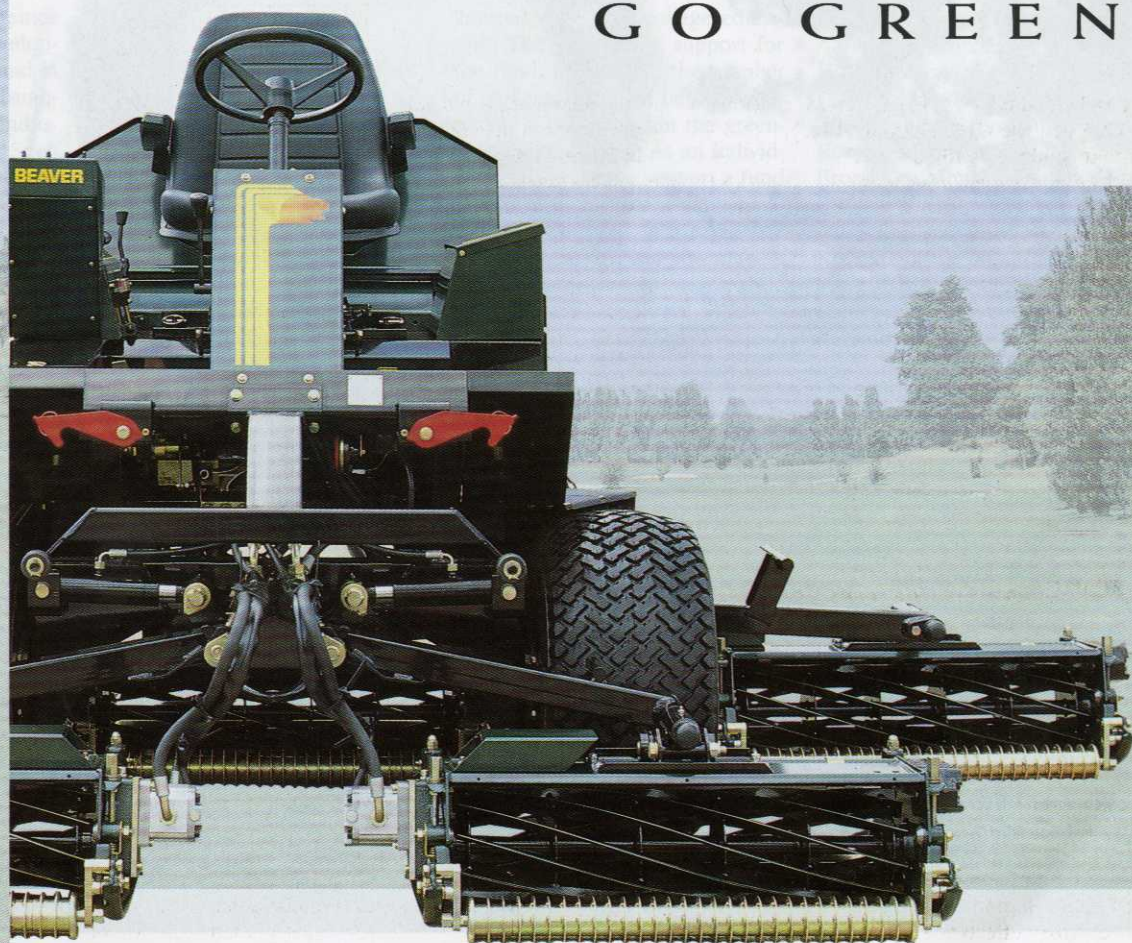
BIGGA will continue with education as its foremost priority and its programmes for its members, for example the BTME, the National Education Conference, the Toro/PGA European Tour Student Greenkeeper award, the ICI Premier Greenkeeper award and our own management courses will continue to be administered from within BIGGA, liaising with the GTC as necessary.

It is anticipated that David Golding will accept an offer to head the new unit and whilst the two of us will continue to work closely on all greenkeeper training matters, sadly he will be leaving the employ of BIGGA. This applies also to Sue Gudgeon, who is likely to be going with David to carry out administrative duties with the GTC.

■ DW: What of the future?

■ NT: It is certainly a period of change. The four Home Unions – as the 'employers' – have at last accepted responsibility for funding the education and training of the 'employees'. In reaching this stage BIGGA has undoubtedly taken the initiative and after five years of striving, through the GTC, the Association can at last see a light at the end of the tunnel. I am optimistic for the future. I feel that the R&A will remain supportive and they have already agreed to match the four Home Union's contribution at a rate of 6.25p per registered golfer during 1993/94. The GTC will need time to settle down, whilst reorganisation within BIGGA will be necessary. In the medium term I am confident that the developments now taking place will prove of major significance in advancing the cause of greenkeeper education and training. BIGGA will continue to be at the forefront of these developments, ensuring that its members interests are best served.

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Education and Development Fund pays for career and training videos

It is now just over a year since the Education and Development Fund was established and in that time it has received substantial backing from both the industry and BIGGA's members. Such has been the support that the Association will this year be producing its long awaited career video as well as the first of what is hoped will be a series of training videos. This first training video will feature pesticide spraying and the application of fertilisers.

Both these projects have only been made possible through the support of BIGGA's members and those companies within the fine turf industry who recognise the value of BIGGA's educational programmes and the need to ensure first class training for those entering the greenkeeping profession if the desired standards of golf course management and maintenance are to be achieved,



maintained and improved upon in the future.

Financial contributions will channel the resources of the game and the industry into one central fund from which specific spending programmes can be determined. BIGGA is greatly appreciative of the support it receives from its Golden and Silver Key members and hopes that many more companies and individuals will take out these categories of membership.

BIGGA's board of management has signified its intention to implement at an early date a scholarship awards scheme to enable selected students to be

assisted with their college education. The greater the support for the fund, the greater the number of students who can be helped to pursue a career within the greenkeeping profession. As an individual member please support a fund from which one day you may well be a beneficiary. As a region or section of BIGGA can you make a contribution to this worthwhile fund? As a company working within the fine turf industry please consider whether the fund does indeed represent the ideal opportunity to offer a financial commitment which will advance both the status of the greenkeeping profession and standards of golf course maintenance.

Since the last listing of members in the February issue of Greenkeeper International, the following members have committed themselves to the fund for 1993:

Golden Key Circle: Howard

Evans (associate), Richard Green.

Silver Key Circle: Barry Heaney, Huw Parry, Douglas Smith, George Malcolm, Roger Willars, Tim Banks (company), Barry Cooper (associate), John Millen, Bruce Cruikshank, Joseph Woolley, Ivor Scoones, Peter Brooks, Graham Winckless (associate), Kerran Daly, J Slessor (company) William Montague, John Wilson (associate) Adrian Archer, David Harrison (associate), Wayne Heathcote.

In addition both Central section in Scotland and Cleveland section have made donations for 1993 and it is hoped that this year will see BIGGA regions and sections generally giving a major boost to the fund.

Education continues to hold the key to professionalism and the further advance of golf course management.

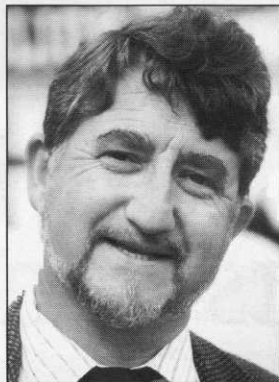
NEIL THOMAS

Spraying seminar makes sense of new Health and Safety legislation

In the magnificent setting of the new oak barn at Wildwood GC, Hardi and Scats sponsored a one-day seminar on 'Spraying in the Nineties'.

Jon Allbutt gave an up to date picture of the legislative framework for those buying and using sprayers, making the point that new legislation does not necessarily mean we are doing anything wrong that needed correcting by introducing new regulations; and to emphasise the point Jon reminded more than a 100 greenkeepers and local authority managers of how it was 30 years ago. Drawing on personal experiences, he recounted how mowrah meal and the old powdered mercury fungicides were used before the word coverall was invented!

The Pesticides Safety Precautions Scheme and later the Health and Safety at Work Act made a change for the better. In 1986 the Control of Pesticides Regulations introduced statutory controls for the storage and use of all pesticides. Jon reminded the audience of the second organisation that approved non-agricultural pesticides: the Health and Safety Executive. Old containers of wood preservative without HSE



Jon Allbutt: Spraying seminar

numbers would need to be disposed of and this fact had not received the same publicity as the more readily recognisable weedkillers and fungicides.

The HSE, we learned, will also be introducing new specifications for sprayers in 1993 which will affect the equipment on golf courses. Existing sprayers may be able to be updated if they not too old, though Jon warned against updated tired machines that have weathered pipework and tanks – far better to buy a new unit that complies with the new specification.

Knapsack sprayers also must have a new BSI Standard 7411 –

1991. Sprayers must now meet strict new standards for leaks, durability, impact to hard surfaces, size of filling hole and a total weight not exceeding 20 kilos. We were warned that not all sprayers on sale (even to this day) meet the new standards, so when ordering make sure that it meets the aforementioned BSI 7411.

After lunch Jon spoke about how to arrive at the best specification for a new sprayer: the need to decide the size of tank and the machine that will carry the sprayer, is it compatible, the width of boom with regard to the terrain; should it have electric or manual controls? Jon's advice was to buy the biggest tank that could

be afforded and if necessary have a trailed unit with a walker boom for use on greens and tees.

The final session took part on the course, looking at some of the Hardi range. The new Cushman demountable sprayer was driven by some of the greenkeepers as Jon demonstrated pressure testing, calibration and spraying techniques. There was considerable interest in the new walker boom and this was demonstrated on one of Billy McMillan's new greens.

A very successful day was brought to a close by Colin Gregory and Robert Love who gave a vote of thanks to Graham Aslett and Billy McMillan for the use of the club.

Date set for Hayter Challenge final

Arrangements for the grand final of the Hayter Challenge Tournament have now been finalised. Commented executive director, Neil Thomas, "I am delighted to announce that the Hayter Challenge Tournament final will be held at the prestigious Sand Moor Golf Club, Alwoodley, Leeds on Wednesday, 15 September with

practice facilities available the previous day.

"Accommodation for the participating teams will be provided on the University of Leeds campus at Bodington Hall just four miles from the golf course. The stage is set for an exciting finale to this eagerly anticipated golf tournament."



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3. The compact tractor can be equipped with attachments which turn it into a mini digger-loader for drainage work and lifting and movement of materials such as soil and top dressings.

4. Wide flotation tyres enable the compact tractor to work on most fine turf surfaces without fear of marking or damage. Care still needs to be taken in soft or wet conditions and when making sharp turns.

5. Specialist attachments have extended the versatility of the compact tractor, enabling it to tackle most tasks around the course throughout the year.

6. A load-carrying, tipping body mounted on the chassis of a specialist turf vehicle helps maintain good balance and weight distribution while keeping the number of wheel marks to a minimum.

7. Most turf vehicles are offered with a range of purpose-built attachments for year-round turf care. British courses will usually respond better to implements designed initially to work under British conditions.

8. Three wheels traditionally give better manoeuvrability than four, although care still needs to be taken when making sharp turns on banks and sloping greens surrounds. Proper user training is vital.

9. Although capable of rapid movement around the course with both a passenger and attachments, most turf vehicles have a reduced ground clearance demanding sensible driving over undulations and peaks.

10. Small diameter wheels of equal size front and rear enhance the turning circle while maintaining a low centre of gravity for good stability.

POWER PACKED

MICHAEL BIRD takes a comprehensive look at compact tractors and specialist turf vehicles - and discovers a wealth of choice. On Page 31 Greenkeeper International presents an up to date guide to all that's available. On these pages: what to look for and what you're going to need...

The expression 'horses for courses' could well have been coined to help unravel the dilemma faced by those who are charged with the selection of a new power unit for their turf maintenance needs.

Never has there been a greater choice available, with a host of compact tractors vying with an increasing number of specialist turf vehicles for a share of a growing, and potentially profitable, market for their various manufacturers and their dealers.

Yet, it is not uncommon to hear a whispered admittance of mistakes being made in the final selection. These can range from incorrect specification to the realisation that the power unit is totally unsuited to the work for which it was bought. Thankfully, the last-mentioned situation is not a frequent occurrence due to the importance now being placed on the comparative demonstration.

However, there are still plenty of

opportunities for errors of judgement to creep in, heightened by the excitement of having a new 'toy' with which to 'play'. Having acted in haste, there will be plenty of time to repent, not in leisure, but far more likely in the grey light of dawn on a cold, wet, wintery morning.

So, how do we make sure that the power unit we buy is right for the job and right for the circumstances under which it will be used? The first step is to make a list of the tasks that one expects the new acquisition to undertake. In the case of a course which has been used to a fair amount of foot and hand work, the eventual list could be quite lengthy, encompassing aeration, spraying, top dressing, mowing, loading, lifting, movement of hand tools and materials, brushing and drainage, among others.

Capable of carrying out all these tasks, it is hardly surprising that compact tractors have been described as 'maids of all work'. It would be unfair to complete the adage because they are certainly masters of some jobs. These include those that require a high power to weight ratio, such as mowing; those that demand good traction, such as drainage work; and those where a positive PTO drive is needed to power mounted or trailed attachments such as a Verti-Drain or rotary cultivator.

That said, versatility is seen as the greatest attribute of the compact tractor because it can be used with so many different items of equipment, mounted or trailed, at the front, mid or rear of the power unit. These include a range of cultivators and mowers, front loaders and rear-mounted backhoes, drainage equipment and machines and attachments developed specifically for year-round turf care and maintenance. Indeed, it is not uncommon now to find that attachments designed primarily for use within a specialist turf maintenance system can be used without modification on a compact tractor.

When the Japanese compact tractor first appeared in Britain almost 20 years ago, the fitting of turf tyres was the exception rather than the rule. Over the years the position has reversed, and advances in low ground pressure tyre technology means that these

tractors can be used safely on most fine turf surfaces without fear of marking or damage. There are two provisos to the above statement. Extra care needs to be taken in wet or soft conditions on all parts of the course; while turning too sharply with a compact tractor on fine turf is not recommended, as many users will have discovered to their cost, particularly when using four-wheel drive.

Although four wheels, properly shod, help to spread the weight of the tractor over the greatest surface area to minimise compaction, there are disadvantages, no more so than the one of limited manoeuvrability when compared to a specialist turf maintenance vehicle. The compact tractor needs sufficient ground clearance to carry out the multitude of tasks over all terrains for which it was originally designed, and sold. Good ground clearance demands wheels of adequate diameter, and therein lies the problem: The greater the wheel diameter, the harder it is to provide adequate lock to enable the tractor to 'turn on a sixpence', to coin a phrase.

Recent developments have gone some way to overcoming this shortfall. They include tractors which hinge in the middle and a system which automatically doubles the front axle's speed of rotation when the turning angle exceeds a pre-determined level. The result is said to 'pull' the tractor through its turn, reducing the turning circle and the risk of turf damage.

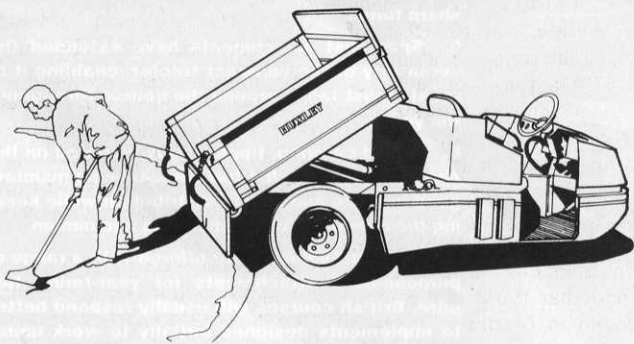
A further disadvantage of the compact tractor is one of lower stability in comparison to a specialist turf vehicle when working across banks or when turning sharply on the sloping approaches to an elevated green. Large diameter wheels raise the centre of gravity of the tractor, reducing its ability to work safely at angles which the ground-hugging turf vehicle can take in its stride.

The relatively high centre of gravity of the compact tractor demands in any case that it should be used with an approved roll-over bar or safety cab. A weather cab is the only option one is likely to need on a turf vehicle, although one manufacturer does fit a roll-over bar as standard.

On that note, it is worth stating

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A forward driving position provides an excellent view over the work while enhancing the balance of the machine, especially when using rear-mounted attachments

here that although a specialist turf vehicle's wide track and low centre of gravity make it inherently more stable than a tractor, accidents can still happen. Three wheeled vehicles, for example, do not have the same level of stability as those with four and the ability to perform tighter turns can lead to potentially unsafe situations when taken to the limit. As a result, it is essential that proper instruction and training in the correct use and handling of the machine is given to all users.

Four wheel drive is regarded as an essential feature for compact tractors carrying out 'draught' work on fine turf, and other smooth surfaces, as wheel slip is a major cause of soil compaction. The grip and pulling power provided by the system can allow operations such as mole draining, ground renovation and soil cultivation to be satisfactorily completed without needing to call in a specialist contractor. Hauling of fully laden trailers also needs the positive traction provided by a 4x4 compact tractor, although the ability to disengage drive to the front axle can be beneficial, especially for tyre-wearing road work.

Most manufacturers offer this option on their tractors.

Other features which help give the compact tractor its all-round versatility include hydrostatic transmission, enabling selection of a forward speed to suit virtually every job; high capacity rear and, in some cases, front hydraulic lift linkages and power take-off shafts; and external hydraulic services for power-operated attachments.

The purpose-built turf maintenance vehicle, on the other hand, should not be regarded as the all-rounder which the compact tractor has to be to fulfil the needs of users ranging from Far Eastern rice growers to North American pig farmers, and from Australian road builders to European landscapers and grounds maintenance professionals. Developed originally as a light-treading, highly manoeuvrable power unit offering speed, low noise and excellent weight distribution, the turf vehicle does exactly what it has been designed to do, and more in a number of cases.

The important point to remember when comparing a turf vehicle with a compact tractor is that the

first-mentioned is a specialist item of equipment, the latter is not. The turf vehicle was introduced as a lightweight unit with a low centre of gravity, exerting minimal pressure on the turf through smooth, wide flotation tyres. It is designed also to be exceptionally manoeuvrable, without fear of damaging the surface, and able to work with a range of purpose-built attachments for the care and maintenance of fine turf.

Although most manufacturers offer their own range of attachments, it is recognised that some perform better than others under certain conditions. As a rule, users will find that those implements developed in Britain with input from UK turf professionals will produce a good result on every job they are pointed at. Development of the turf vehicle over the past 20 years has seen its abilities expand to the point where it can now take virtually all turf maintenance, transport and materials movement operations in its stride.

Load-carrying, tipping bodies positioned above or ahead of the vehicle's rear axle mean that sand, soil, fertiliser and other materials can be moved with min-

imal turf disturbance, leaving only one set of wheel marks. Tractors need either a trailer or transport box to do the same job, with the inherent disadvantage of adding weight where it is not wanted.

Equipment such as a sprayer or top dresser can be mounted direct to the chassis of a turf vehicle, helping maintain the excellent weight distribution which is a principal feature of these machines. Visibility is also of prime importance, and the turf vehicle's forward driving position enhances both the view over the work and the balance of the unit.

Another benefit is the ability to carry loads, and often a passenger, at higher speeds than a tractor, due to the fact that most turf vehicles have all-round automotive-type suspension to iron out humps and bumps. The majority of compact tractors rely solely on their tyres to absorb shock loads and the result can be a bone-jarring ride at anything faster than jogging pace over uneven terrain. The ability to drive fast on turf means, however, that extra care needs to be taken to avoid surface damage, a risk heightened by the turf vehicle's low ground clearance, especially over undulations or crests.

Noise is another factor which has to be considered, especially when working close to an hotel, holiday complex or residential area. The compact tractor's exposed exhaust and often minimal engine sound-proofing make for a noisier working environment than a turf vehicle, where the engine and exhaust are usually located low down beneath the driving position in a padded compartment.

As far as mechanical features are concerned, it is now common to find diesel engines on both compact tractors and specialist turf vehicles. Hydrostatic transmission, rear hydraulic lift and power take-off are also available, and, thanks to advances in hydraulic systems, it is probably only a matter of time before all-wheel drive makes an appearance.

So, as pointed out in the first paragraph, it really is a case of horses for courses. If you want a machine capable of carrying out virtually every job around → 31

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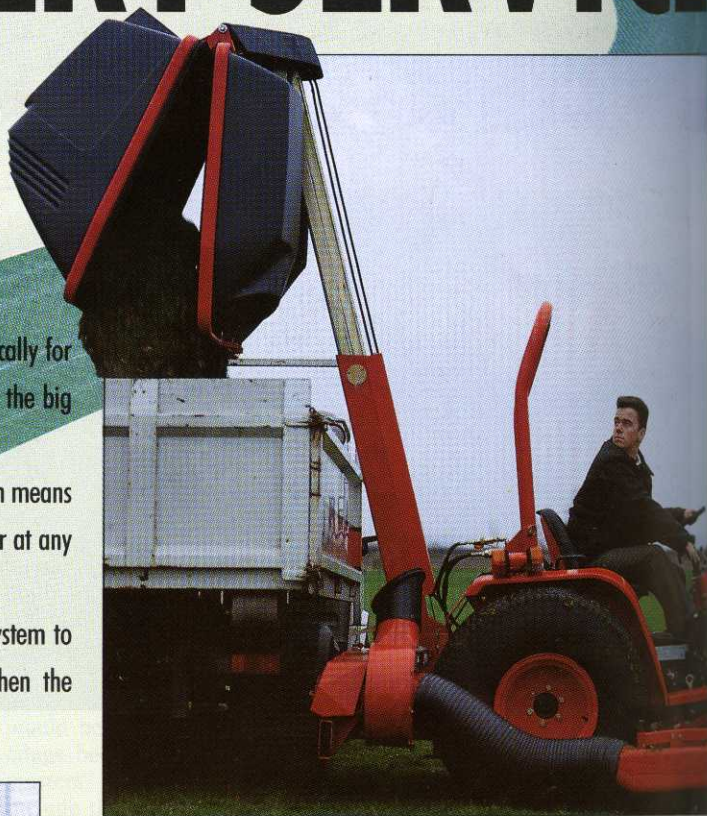
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POWER PACKED

29 → he course without any specific finesse, then a compact tractor will do all, and probably more, that you ask of it.

If, however, you feel your course deserves the light tread of a machine which has been purpose-designed to maintain turf with matched implements

throughout the year, carry loads 'on-board' with minimal risk of surface marking and move about swiftly and quietly without discomfort, then you need to look seriously at a specialist turf vehicle.

At the end of the day, you will probably decide that you

want both and this is likely to be an excellent decision when aiming solely for the optimum solution to year-round course management and maintenance. It's then just a question of persuading the person holding the purse strings! Good luck.

COMPACT TRACTORS UP TO 26HP

Make	Model	Power	Drive	Transmission	PTO	Price
John Deere (0949 60491)	670	19hp	4	M	540	£8556
	755	20hp	4	H	540	£9243
	855	24hp	4	H	540	£10111
Ferrari (061 624 6390)	22-3W	22hp	4	M	540/1000	£8470
Ford (0268 533000)	1220	16.7hp	4	M or H	540	£7616
	1520	22.7hp	4	M or H	540	£9332
Hinomoto (0789 415588)	C144	17hp	2 or 4	M	540/1000	£5770
	C172	20hp	2	M	540/1000	£5880
	C174	20hp	4	M	540/1000	£6600
	C174 HST	20hp	4	H	540/1000	£7300
Honda (081 747 1400)	H 6522	22hp	4	H	540	£9350
Iseki (0954 718981)	TX2140F	16hp	4	M	540/1000	£6135
	TX2160F	18hp	4	M or H	540/1000	£6585
	TU318F	17.5hp	4	M or H	540/1000	£8575
	TU320F	20hp	4	M or H	540/1000	£8985
	TA525F	25hp	4	M	540/1000	£11300
Kubota (0844 216685)	B4200	12.5hp	4	M	540/860	£5420
	B7100	16hp	4	M	540/825	£6630
	B1550	17hp	4	M or H	540/825	£7280
	B1750	20hp	4	M or H	540/825	£8500
	B2150	24hp	4	M or H	540/825	£9015
Lamborghini (0788 891446)	Runner 250	25hp	4	M	540/1000	£8990
Massey Ferguson (0203 531000)	1010	16hp	4	M or H	540/790	£5901
	1020	21hp	4	M or H	540/790	£8132
	1030	26hp	4	M	540/1000	£9135
Same (0788 891446)	Solaris 25	25hp	4	M	540/1000	POA

Key: Drive: 2 = two wheel drive; 4 = four wheel drive; 2 or 4 = model available in either two or four wheel drive versions; Transmission: M = gearbox; H = hydrostatic; PTO: Rear power take-off speed(s) in rpm; POA = Price on application.

SPECIALIST TURF MAINTENANCE VEHICLES

Make	Model	Engine Power/type	Transmission	Wheels	Features	Price
Cushman (0473 270000)	Turf Truckster	22hp, 27hp P	M	3 or 4	2S; H; P	POA
		22hp D				£9965
John Deere (0949 60491)	1800 Utility Vehicle	18hp P	H	4	2S; PS; H; P	£6656
GMV (0532 347699)	Ground Maintenance Vehicle	43hp P	M	4	2S; H; P	£14750
Huxleys (0962 733222)	Huxtruk	23.5hp D	H	3	2S; PS; H; P	£10750
Jacobsen (0536 417777)	Workhorse	23.5hp D	M	3	2S; H; P	£8995
Sisis (0625 503030)	Hydomain Twin 25	25hp D	H	4	2S; PS; H; P	£11990
Toro (0480 476971)	Workman 3000	27hp P	M	4	2S; PS; H; P	£11590
		21hp D				£12590

Key: Engine type: P = petrol, D = diesel; Transmission: M = gearbox, H = hydrostatic; Features: S = number of seats, PS = power steering, H = can be used with hydraulically powered attachments, P = can be used with PTO powered attachments.

● All information was compiled from details supplied by each manufacturer. Prices shown represent the basic starting price for each of the models and are subject to VAT. For space reasons, data has been kept to a minimum and shows solely the base model. For the full specification of any machine, together with its optional equipment and accessories, please contact the supplier's sales department on the telephone number given.



Update

It's official – the BIGGA Turf Management Exhibition 1993 was the best yet – and the forward planning starts NOW to make sure of another big success in 1994!

Information packs, complete with an application form and full details of how to take part in the industry's most popular indoor event, will be sent out to 1993 exhibitors this month. To be sure of the same stand space, exhibitors are urged to act straight away and return their completed application form with their deposit by June 1st at the latest.

Letters of congratulation for the January event have been flooding in. Arthur Harrison, sales director of Sisis Equipment, Macclesfield writes:

"Hearty congratulations to all involved with BTME. To say it goes from strength to strength would be an understatement. This year's exhibition was as good a show as we have experienced anywhere, for many a year.

Particularly encouraging was the greater number of visitors to our stand from an obviously increased attendance. We were impressed by the quality of visitors also, as well as the spectrum of 'non-golf' visitors which have hardly been abundant in previous years. Overseas visitors which we welcomed were from Norway, Sweden, Holland, Germany and France.

With so many shows in the past year attracting adverse comments, it was a pleasure to be present at a successful one and to experience something like the old-time 'buzz' which some thought would never return.

Long may you continue to get it right."

Look out for the start of an amazing new BTME '94 competition in next month's Greenkeeper International.

We've got prize packages worth up to £500 to give away, as BIGGA lets you join in the success of an event we call "the show of the year".

So what's up for grabs? Watch this space and find out!

Greenkeepers' Library

by DAVID WHITE



Harold Hilton: one of the great golfers of his day

Turfgrass Science, Agronomy Monograph 14¹, provided students, teachers, researchers, golf course managers and others with a source of information pertaining to the historical, technical and applied aspects of turfgrass science and management. Published in 1969, more copies of this have been sold than any other in the series. Now, the state-of-the-art information on turfgrass is available to you.

Turfgrass, Agronomy Monograph 32, updates some of the topics from the first monograph and offers detailed information on many new topics. As such, *Turfgrass* complements information contained in the earlier monograph and various turfgrass textbooks and reference books. The monograph is divided into five primary sections. The first explores the turfgrass industry and includes chapters on historical aspects of research and education, current status of the industry, and artificial turf. The turfgrass physiology section focuses on ecological aspects, energy relations and carbohydrate partitioning, and stresses due to salinity, temperature, shade, and traffic. The third section is on soils and water and emphasises soils and amendments, nutrition, fertilisation, water requirements, and irrigation. The management section offers chapters on energy conservation and efficient maintenance, integrated pest management, turfgrass management operations, and plant growth regulators. The last section addresses research techniques related to field and controlled-environment research, diseases, insects, weeds, and breeding.

The chapters include: 1. Turfgrass Science – Historical Overview, 2. The Turfgrass Industry, 3. Artificial Turf, 4. Ecological Aspects of Turf Communities, 5. Energy Relations and Carbohydrate Partitioning in Turfgrasses, 6. Salinity and Turfgrass Culture, 7. Physiological Effects of Temperature Stress, 8. Shade and Turfgrass Culture, 9. Effects of Traffic on Turfgrass, 10. Soils, Soil Mixtures, and Soil Amendments, 11. Nutritional Requirements and Fertilisation, 12. Water Requirements and Irrigation, 13. Energy Conservation and Efficient Turfgrass Maintenance, 14. Integrated Pest Management, 15. Turfgrass Management Operations, 16. Plant Growth Regulators and Turfgrass Management, 17. Field Research, 18. Controlled Environment Research Methods for Turfs, 19. Research Methods and Approaches to the Study of Diseases in Turfgrasses, 20. Methods of Research in Turfgrass Entomology, 21. Turfgrass Weed Science Research Methods, 22. Breeding Improved Turfgrasses. Though aimed essentially at the American market there is much that the British and European greenkeeper can learn from such a learned work, though I would have to admit that much of the technical data went straight over my head!

Published by the American Society of Agronomy, **Turfgrass Science, Agronomy Monograph 32**, hardback 828 pages, is available from the ASA, 677 South Segoe Rd, Madison, Wisconsin 53711-1086 USA. The cost is \$42.50 including postage. Prepayment in US dollars is required.

Harold Horsfall Hilton came to the golfing scene when golf was exploding into a popular sport with new clubs being started all over Great Britain. Hilton was to some extent a very private man but his famous win of The Open in 1892 brought him to the forefront of the great golfers of the day. Incredibly he won The Open again in 1897 before taking the Amateur Championship. He lost the finals of the Amateur Championships of 1891, 1892 and 1896 and it was not until 1900 that he first captured the trophy. Hilton went on to a repeat victory in the 1897 Open and also took the Amateur Championships of 1901, 1911 and 1913. He became the first and even now the only British player to win the US Amateur. Perhaps his greatest year was 1911 with his win of the Amateur Championship, a near miss in The Open and his victory at Apawamis, perhaps the greatest jewel in his crown, ending with the controversy of the 'rock' incident – which is fully explored.

The stories of these contests and all Hilton's other major tournament appearances are related in detail creating delightful sus-

pense as the events proceed. The author, John Garcia, has traced Hilton's golfing life and brings out his eccentricities, his achievements and his disappointments, giving a unique picture of one of the greatest ever amateurs. **Harold Hilton: His Golfing Life and Times**, is a lively account of perhaps the greatest British amateur golfer and of his contemporaries. It is enhanced by a foreword by Herbert Warren Wind.

Limited to 750 numbered and signed copies, **Harold Hilton: His Golfing Life and Times** is priced at £25 including postage, available from Grant Books, Victoria Square, Droitwich, Worcs. WR9 8DE.

There can be no doubt that environmental issues raised in Britain are not likely to lessen or go away, even though we are perhaps a long way from having the draconian laws which our American cousins are forced to abide imposed upon us. Ours is perhaps a simpler task in a less complicated environment, for we have only a smattering of pests in number compared to those in the USA, and a far easier climate. Nevertheless, it is important that every golf course manager be properly armed in every aspect of his craft and environment is no different from any other. Thus I can recommend the latest American publication **Golf Course Management and Construction: Environmental Issues**, as being worthwhile armory.

The book is described as a summary and assessment of the technical and scientific research on the environmental effects of construction and management on turfgrass systems, though in running to 951 pages, I would have to say – some summary!

The book is organised into eight chapters. The intro provides an overview and historical perspective regarding turfgrass management and environmental quality. Chapter 2 discusses the relationship of turfgrass management to the critical issues of water resources and also focuses on the issues of water use, water quality, soil and water conservation, and movement within the water cycle. Chapters 3 and 4 provide a state-of-the-art scientific review and assessment of the literature regarding the environmental effects of nutrient and pest management practices. Chapter 5 provides an introduction to concepts necessary for development of integrated management systems for turfgrass. Chapter 6 covers the direct and indirect effects of golf course management and construction on wildlife and aquatic organisms. Chapter 7 is an introduction to the issues of conservation and protection of wetlands which is emerging as a critical environmental concern of the 1990s, whilst an appendix, Chapter 8, (418 pages!) contains tables of toxicity tests related to the effect of chemicals used for turfgrass management. Each of the chapters includes a section on research and information needed to resolve the issues surrounding the positive and potentially adverse effects of turfgrass management. The book's intention is not to suggest or recommend site-specific turfgrass management practices. However, the information presented may be used as an introduction to the general principles for evaluating the potential environmental effects of turfgrass management.

Good textbooks should always have a highly detailed index, though some publishers fail miserably in this aspect. I am pleased to say this book is awarded top points on that score, for like the aforementioned 'Turfgrass Monograph 32', it leaves nothing to chance: seek and ye shall find! One could hardly describe it as a 'good read' and certainly I didn't, indeed couldn't, read it from cover to cover in a single stretch. In places I found it unnecessarily complicated for my admittedly limited scientific taste, nevertheless I feel it has a place in our library as a useful tool of reference.

Golf Course Management and Construction: Scientific Issues, edited by James Balogh and William Walker, is published by Lewis Publishers, 121 S. Main St. PO Box Drawer 519, Chelsea, MI. 48118, USA. The cost is \$78 US currency, or may be ordered through any major bookshop in the UK, such as Foyles.

BRUCE STANLEY reports on the activities of one golf club determined to ease the curse of slow play



Tackling

FRUSTRATION

Slow play, as at many other clubs, has been a contentious issue for Lyneham Golf Club in Oxfordshire since the course initially opened a little over two years ago. Now, at the approach of the first anniversary of the completion of the clubhouse and all 18 holes, positive steps are being taken to eliminate the problem for the benefit of players and the greenkeeping staff alike.

"There is little doubt that slow play is one of the greatest single frustrations on most courses in the country," commented general manager, Neil Biggs. "We appreciate that it is not unique to Lyneham but, being a new club, we are determined to nip the problem in the bud before members and visitors become set in their ways."

The result will, he hopes, improve not just the pleasure of playing a round at this scenic course, but enable the green staff to carry out their work with fewer hold-ups or interruptions.

Lyneham Golf Club is situated in the gently rolling Evenlode Valley, midway between Burford and Chipping Norton. Created out of former farmland, it covers 144 acres, measuring 6,808 yards with a par of 72. The club is privately owned by a founding board of directors, with both membership and 'pay and play' facilities open to the general public. In less than a year, membership has grown to almost 700, making the course very busy at weekends, public holidays and during fine weather.

"The problem of slow play was first drawn to the attention of members in a newsletter more than 12 months ago," explained Mr Biggs. "However, the ever increasing demand for golf brought matters to a head at the end of last year. Quite simply, we had to take urgent steps to speed up throughput which, at certain times, was painfully slow."

A letter, sent to all members in early January, spelled out the measures being implemented by the club. They include:

- Better management of tee time bookings to avoid a two ball match following a group of four balls. Members and visitors are made aware of the matches booked ahead of them and advised that it may be better to start at a different time. If a two ball match still insists on following a four ball, the players are asked to refrain from complaining if held up! Anyone booking a weekend morning start is recommended to make up a four ball. If unable, then the club will attempt to do it for them if necessary.

- Competitions to be better managed with entries being taken up to 14 days in advance. All matches will be played in three balls and made up 'selectively' by the club's secretary. No other matches will be booked during the times between the first and last players in a competition teeing off.

- The course to be patrolled at all busy times by members of the club's staff. They will carry a list of teeing-off times for each group and will insist on play being speeded up if one group is falling behind. To this end, the directors have drawn up guide-

lines with regard to the acceptable times for a typical four ball match to reach specified points around the course. These times are being posted on prominent signs alongside the 4th, 7th, 10th, 13th and 16th tees, with a guide-line time of 3 hours 40 minutes for the match to be back in the clubhouse. Two and three ball matches should be even quicker!

- Other measures include making one player responsible for the speed of play, and course etiquette, in his or her match; restricting start times for visitors until after 10.30am at weekends; and using a first tee starter during busy periods.

Neil Biggs commented that the process was principally one of education and that more experienced players were equally as likely as beginners to be responsible for slow play. "Our letter states that there is only so much that the club can do. The rest is down to the players," he said.

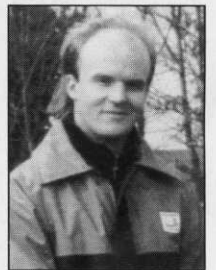
Guidance given to golfers includes being ready to play a shot immediately the way ahead is clear; keeping up with the match in front, rather than simply just ahead of the match behind, while being prepared to invite a faster match through; walking briskly between shots; clearing the green quickly when the last player has holed out; and being aware that in a friendly game or matchplay, there is no need to hole out on every occasion.

The result of the letter has been a 'dramatic improvement', pointed out club secretary, Cyril Howkins. "Players are now thinking and talking about the time taken to complete a round and even apologising if they exceed our guide-line times by a few minutes, promising to do better next time," he said.

And what of the greenkeeping benefits? "It can be painful at times watching a four ball putt out," comments head greenkeeper, John Heslip. "If we just happen also to be working on that green, there can be a great deal of wasted time waiting for the match to play through. I'm hopeful that the steps taken will lead to less interruptions, less waiting and increased safety on all parts of the course."

The club insists that no ball is played to a green while the flag is out. However, this has not always prevented frustrated players firing a 'warning shot' at a greenkeeper or slow-moving match ahead. The same applies on the fairway. "We do all we can to stay clear of matches," said John. "However, the demand for golf means that there are many times when we have to work in harmony with the golfers. It needs give and take on both sides, but if all players moved along a little quicker, having repaired their pitch marks and replaced their divots, it would make our job easier and eliminate much of the wasted time we spend on the course."

■ The editor will be pleased to hear from readers with views - different, unique or downright controversial - on ways of speeding up play. The best ideas will be published.



John Heslip, head greenkeeper at Lyneham Golf Club: 'Slow play causes frustration among players and green staff alike'

GREENS DESERVE A LITTLE GOLD



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Facts about

FERTILISER

DAVID LAWSON takes a practical look at nutrients for your golf course

It is worth remembering that all soils contain some plant nutrients. Even a rootzone comprised of sand contains potassium and magnesium with possibly some phosphate. However, the actual amounts of nutrients held within the soil 'reserves' are governed primarily by the proportions of organic matter and clay minerals present. The soil organic matter, in particular, holds a store of nitrogen, sulphur and phosphorus which with time is released to the turf through the activity of micro-organisms. The higher the soil's temperature and moisture contents, the greater the rate of nutrient release. For this reason there is normally a flush of turf growth in the autumn when the soil is warm and wet.

In the indigenous soils of the golf course fairway the organic matter supplies adequate amounts of nitrogen and other nutrients for turf growth. These organic nutrient reserves are continually replenished from leaf clippings and dead roots, which break down to form soil humus. In addition, the turfgrass and soil receive nitrogen dissolved in rainwater. Although the actual amount will vary from region to region, the total amount of nitrogen supplied annually in rainfall is between 3 and 4 grams per square metre. This is equivalent to

the amount of fertiliser nitrogen applied in an average fertiliser dressing. Clay material in fairway soils will also hold short-term reserves of nutrients.

Therefore, most fairways do not require any fertiliser on a regular basis. However, badly worn approaches and walk-off areas will benefit from an annual application of nitrogen fertiliser. A convenient way of doing this is to apply a slow release fertiliser in the spring. Resin coated fertilisers are particularly effective as they will support even growth right through the growing season from one spring application.

Nitrogen

It is on the tees and greens where fertiliser application is essential. By far the most impor-

tant fertiliser nutrient for turf is nitrogen, which has to be applied to close mown turf in order to allow the grass to recover from wear and tear. The reserves of nitrogen within the soil or from top dressing materials and rainfall are not adequate, particularly as nitrogen is being removed in clippings.

The most severely nitrogen depleted situation is the sand-only rootzone. Trials at the STRI have shown that for fescue/bent turf 25 g/m² of nitrogen (N) should be applied each year. Using normal, soluble fertilisers this will require at least seven separate dressings each year, as no single dressing should exceed 4 g/m² of nitrogen. On rootzones constructed from sand-soil mixes the organic soil nitrogen has been so diluted that again a relatively high input of fertiliser nitrogen is required: about 20 g/m² of N per annum. This would be applied within a minimum of five dressings where soluble fertilisers are used.

Because of the low 'background' nitrogen content of these free-draining sandy constructions, it is often necessary to extend the fertiliser programme at either end of the main growing season. This allows the turf to recover from wear during the winter months. ➔ 37



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Facts about

FERTILISER

35 → On these rootzones it is perfectly acceptable to use traditional soluble fertiliser products based on ammonium sulphate. The inclusion of organic nitrogen in spring and early summer is also worthwhile, but it is important not to rely on organic products for the main source of nitrogen as severe disease problems can occur. Sand-texture rootzones do quickly become very acidic, so to counteract this less acidifying fertiliser materials can be used. Liquid nitrogen fertilisers normally contain urea-nitrogen, which is only half as acidifying as ammonium sulphate. In addition, these liquid products are a convenient way of applying small amounts of nitrogen at either end of the main growing season. These liquid products vary dramatically in the amounts of nitrogen which they contain and it is often difficult to ascertain how much is being applied with one application. Advice on this can be obtained from the STRI.

Slow release nitrogen fertilisers have been developed largely to reduce the number of fertiliser applications and to 'even out' the pattern of growth. Such advantages would be seen most obviously on high sand content rootzones. However, care should be taken in their use on golf greens. Materials which work



through their low solubility (IBDU and ureaform) do not have the same ability to discourage annual meadow-grass establishment as ordinary soluble products containing ammonium sulphate. The long-term effects on turf quality from application of coated, controlled release fertilisers has not, as yet, been investigated.

On golf courses where greens or tees are constructed from loam soil there may be such a substantial amount of nitrogen released from organic matter that the annual fertiliser nitrogen requirement is as low as 8 g/m² of N. This

would be supplied within two fertiliser dressings. However, the annual rate should normally be between 12 and 16 g/m² of N. An ammonium sulphate-based fertiliser programme is appropriate and any excessive acidity produced can be counteracted by applying top dressing materials with a neutral pH value.

Phosphate

Many golf greens contain more than adequate concentrations of soil phosphate for fine turf as a result of the application of phosphate fertilisers regularly over many years. Chemical analysis of the soil will show whether or not this is the case. Many of the newer, free-draining sandy rootzones do not contain such high phosphate concentrations and where soil tests indicate very low amounts, a phosphate fertiliser should be applied to prevent deficiency. An application of around 2 g/m² (as phosphorus pentoxide) can be applied in spring within a mini-granular fertiliser. Alternatively straight super phosphate can be applied at 10 g/m². Such application rates will prevent deficiency without causing an excessive accumulation of phosphate in the rootzone. The presence of a low soil phosphate concentration should not be ignored as it may lead to severe die- → 39

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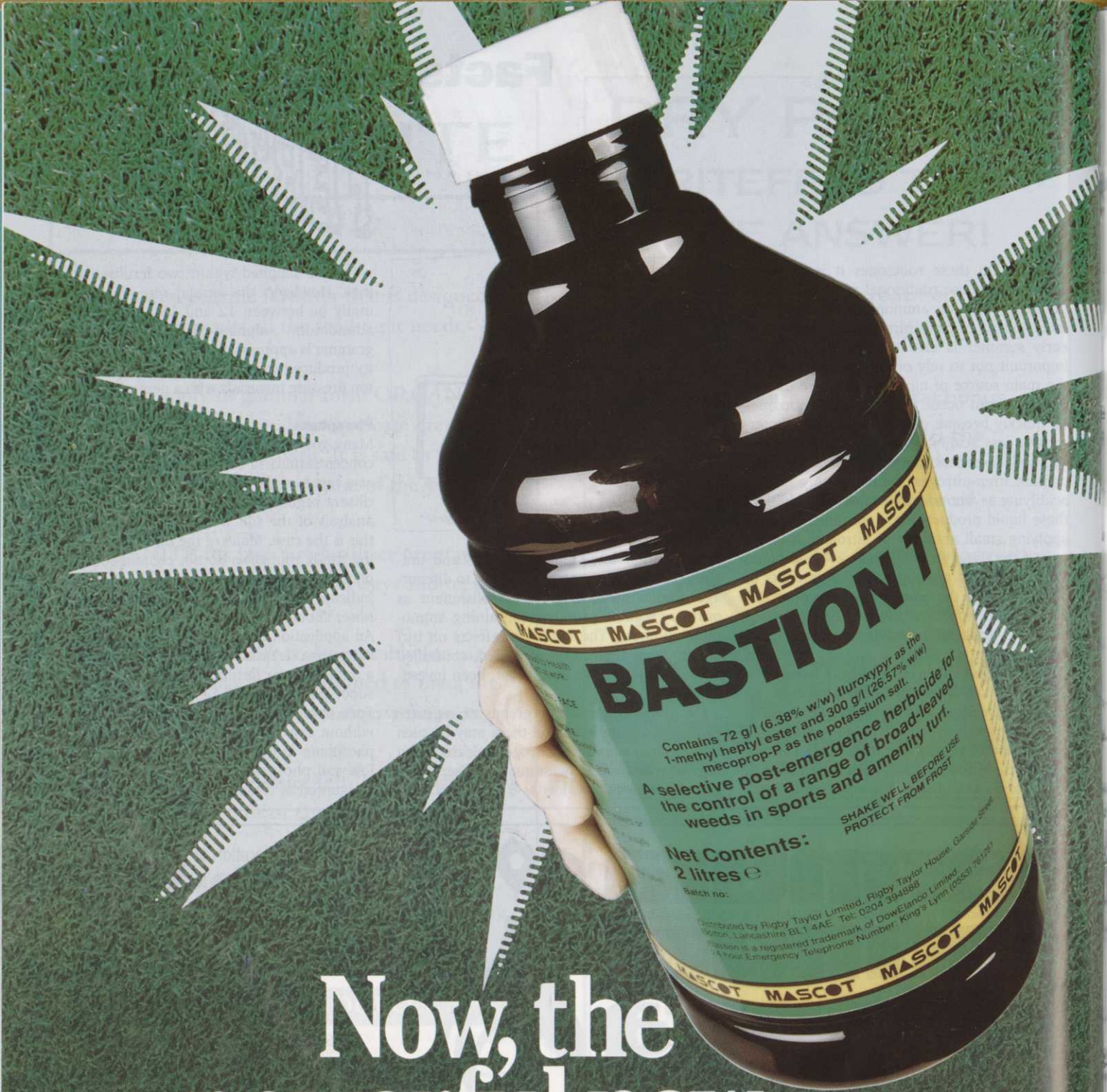
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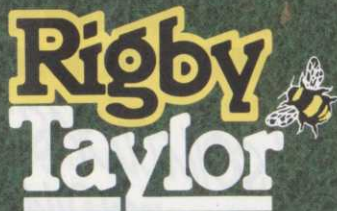
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Facts about

FERTILISER

37 → back in close mown fine turf.

Potassium

Potassium is known to aid in the drought tolerance of turfgrasses and there is also some evidence that it aids disease resistance. Again, it is sensible to ensure that there is an adequate concentration in the rootzone. If there is a requirement for potassium then between 6 to 15 g/m² (as potassium oxide) should be applied in a year. The higher end of the range is applicable for very sandy rootzones and this is divided into three dressings each of 5 g/m² of potassium oxide. For loam soils a single dressing in the spring of 6 g/m² of potassium oxide would be adequate. The potassium can be provided from micro-granular turf fertilisers or as straight potassium sulphate.

Magnesium and micronutrients

Only on very high sand content rootzones is there any need to be concerned about the levels of magnesium and micronutrients available to fine turf. Even here, visible symptoms of deficiency are not commonly encountered. However, it is possible that very low plant concentrations of magnesium or micronutrients will lead to some impairment in growth. At present there is simply not enough information on this. Therefore, where rootzone chemical analysis reveals low concentrations of magnesium or micronutrients it is a sensible precaution in the spring to apply a magnesium or micronutrient (trace element) containing fertiliser. Many proprietary fertiliser products now contain magnesium and an annual application equivalent to 2 g/m² of magnesium oxide will be adequate. Alternatively Kieserite applied at 7 g/m² or Epsom salts at 12 g/m² will supply sufficient magnesium for the turf.

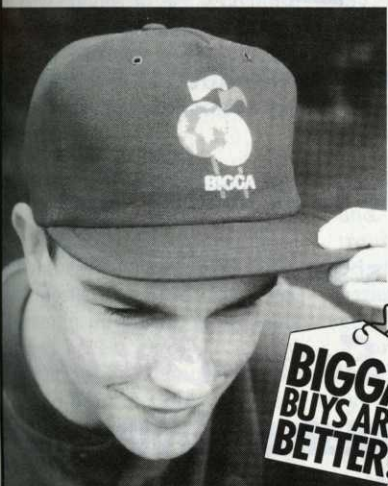
A number of fine turf fertilisers contain a micronutrient content, but there are also available concentrated micro-nutrient fertilisers for use in horticulture and agriculture. Advice should be sought before using such products on fine turf.

Fertiliser products

There are many new fertiliser products coming onto the market – liquids, microgranules, organics and slow release. It is often difficult, from the label, to know what is actually in the bag or container and what their long-term effect on the turf will be. If there is any uncertainty then get in touch with STRI.

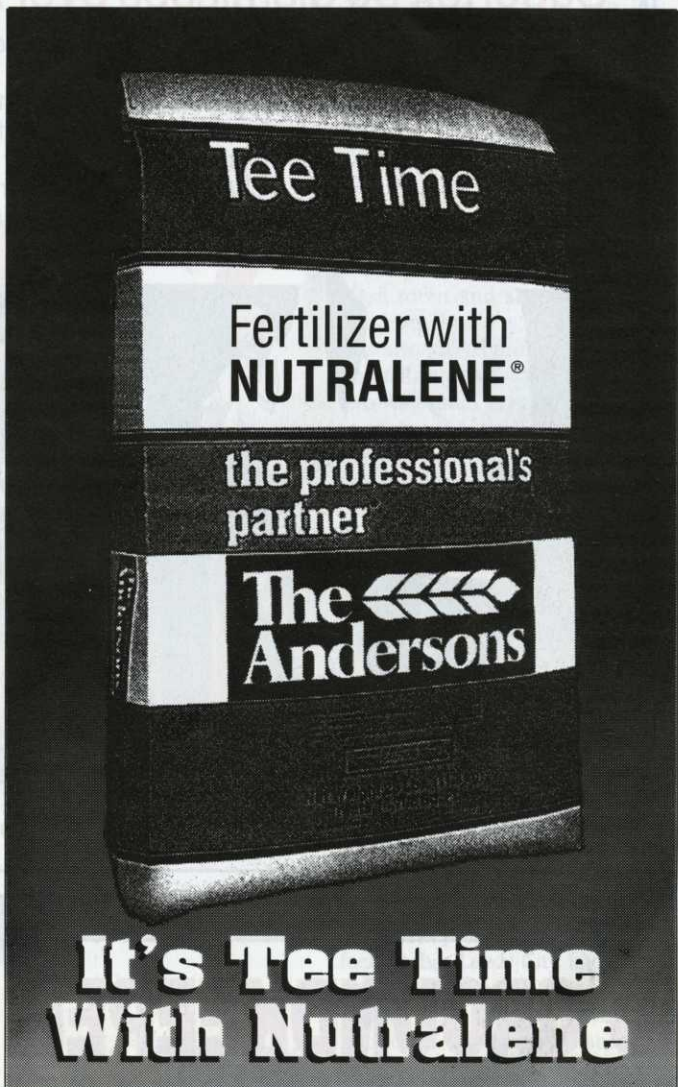
■ The author, David Lawson, B.Sc. Ph.D., is a soil chemist with the STRI.

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IT'S GIRLS' WORK TOO

Most men find themselves dwarfed by Tracy Ruane. Not that she's an exceptionally tall person – tall 'for a woman'. But then, 'for a woman' she has an exceptionally unusual job: At 29, she's head greenkeeper at Oulton Park Golf Club in Leeds – one of only two women head greenkeepers in the country. She is overflowing with enthusiasm for her work and in this she encapsulates the pride and optimism of the small body of women greenkeepers working in this country.

The male-dominated golfing establishment is generally perceived to be very hostile to the idea of women playing the game on an equal footing with the men. This could also be said to be true of the golf professions, given the tiny percentage of women, even in the USA, who work in the industry as specialists, but the few who have been given responsibility as greenkeepers are witness on the whole to the fairness and generosity of their employers, who have begun to reverse the trend of discrimination by appointing them.

Apart from Tracy Ruane, Gerry Wigley is head greenkeeper at Costessey (pronounced Cossey) Park Golf Club near Norwich, and Jane Ryan is assistant head greenkeeper at Abbeydale Golf Club near Sheffield. They have all taken different routes into the profession. All attest to having made a kind of 'discovery'; as Gerry put it, 'I never knew I liked grass so much'. Never knew, that is, until she did an intensive, full-time course in horticulture for two years at Pershore College which opened up a whole range of new options to her – favourite of which was greenkeeping. You couldn't really get a much greater acreage of grass anywhere other than a golf course to satisfy a love of grass.

Tracy Ruane's moment of truth came during a spell of greenkeeping during the second year of her four-year Leeds City Council horticultural apprenticeship, when she was posted to Gotts Park golf course in Armsley, West Leeds. 'Before I went there I'd always thought I'd be a gardener, but after I'd been at Gotts a while, I thought, no, this beats gardening hands down.' She asked to be allowed to stay on in greenkeep-

How come that Britain has only two female head greenkeepers? MAJA MIHAJLOVIC examines the changing attitude towards women on the golf course

ing for her third year. The apprenticeship involved rotating from year to year between gardening in parks, greenkeeping, arboriculture and work on the tree gangs with, finally, a year in nursery work, but instead of going onto the third stage she was sent to Temple Newsham golf course for a few weeks to see how she got on with it. She ended up staying 18 months. 'Luckily for me there weren't many people that wanted to do golf. The lads wanted to work with chainsaws and wear the ear muffs and ballistic trousers and the other girls either went into the parks or nurseries. For me it was golf.'

Jane Ryan was a farmer's daughter before meeting and marrying a greenkeeper and in so doing, being forever converted to the religion that, for many, is golf. According to legend, she bad-

gered the committee where her husband was employed as head greenkeeper until they took her on temporarily for 25p an hour. She too was allowed to stay on – that was more than 15 years ago. She and Paul, her head greenkeeper husband, work successfully together at Abbeydale with their small team of men where they have been for nine years.



Tracy Ruane: 'I have not been discriminated against at all'

'So', the people ask, 'what do women greenkeepers do when they want to go to the toilet?'. The question may seem childish but in one sense it has a value.

Any club which tries to provide its greenkeeping staff with the best sanitary and other facilities it can afford is one which is interested in the morale and well being of its men. If it values the work they do, the comfort of its women will be taken account of in the same way, and at Oulton, Tracy Ruane con-

firms, the facilities are excellent.

Tracy is very proud of their mess room and she, in fact, has her own separate bathroom. She was also able to influence the City Council into providing her with a two-way radio in case she needed to contact a manager urgently, as she had cause to when an elderly golfer died out on the course. This prompted them into thinking of the security of the women that work for them outdoors in different parts of the city, and they have now supplied their female workforce with rape alarms.

The really striking thing about Tracy Ruane, however, is her powerful optimism and unshakeable confidence in her own and her team's ability. There is no reason why she shouldn't be confident, but looking at the record and seeing that she is the sixth head greenkeeper at Oulton in the last two years, you have to admire her guts. This time there is the feeling that Leeds City know they have the right woman for the job.

Her relationship with the municipal system has been an extremely fruitful one. She is in no doubt of how just they have been with her: 'I can honestly say I have not been discriminated against at all, and I don't think that would have happened if I'd worked on a private course. I've been given the chance to train all the way.' She got her job with the Leeds City Council on leaving school at 16. It was her 'first and last' interview. Since discovering her vocation, she has worked for 12 years on the city's fine municipal golf courses, and now, as contractors for the City Council, she and her lads are in close touch with their contract managers, able to phone through whenever they need to pass on information or gain consent for work to be done. The managers come out regularly and discuss work in progress with all the greenkeepers working at Oulton and Tracy is justly proud of the relaxed and productive relations they have with them. 'My management don't isolate themselves from the workers, which is nice, they come out onto the course and they know their ideas.'

Tracy has four men in her team. The oldest is 51, the youngest 21, the others in their mid-20s. The course in their care is a new one

IT'S GIRLS' WORK TOO

designed by Dave Thomas and has only been open for two years. Tracy thinks it opened far too early, before it had adequate chance to establish and, with an average of 70,000 rounds per year, the problems in maintaining playing conditions have been enormous and have seen off several predecessors. They are also working on bringing a short nine-hole course into play at the same time, and on the day I visited building work was in full swing on the conversion of an old hall and other buildings to a multi-star hotel and leisure complex.



Jane Ryan: badgered the committee until they took her on

Hence her excitement at being involved in the scheme from so near the beginning. It is an excitement which she thinks she has been able to communicate to the lads. Of course the relationship of a head greenkeeper with his or her staff is an essential one.

Tracy explained to me how much she admired the way her old boss, Eric Garlick, headed his team at Gotts Park, where she worked for eight years. His fairness, the way he listened to his staff, giving them credit where due and never pulling rank – these are the principles she brings to her style of management. She admits having had to steel her nerves at times before giving instructions, especially at the beginning when she didn't know her staff. She gives much of the credit for getting it right to Eric Garlick, but she is helped in this by a considerable amount of personal charm. If her lads come to her all the time now with ideas and suggestions and discuss work over breakfast, lunch and tea instead of reading the paper, it is a symptom of the trust they have in her and the enthusiasm for the job she has managed to pass on.

Already they are beginning to feel they are achieving high standards; Another municipal course nearby had to close after six weeks of rain – they were able to

keep Oulton open. 'I've managed to excite my management with the idea that we can do it, because I think they started to think, 'What are we going to do with Oulton? It's just hassle, a lost cause...' It's a really good feeling because I know it's going to happen, I have full confidence, and my lads do now – we know we can do it.'

Asked about golf and the playing of the game, both Tracy and Gerry add their voices to the debate on the side of non golfing greenkeepers. They do play, though unenthusiastically, and sometimes, according to Gerry, downright bad temperedly. As she puts it: 'Being a greenkeeper doesn't make you a better golfer, and being a good golfer doesn't make a better greenkeeper. I'm sure that there are excellent golfers that are greenkeepers but I think that too much playing the game takes away something of the art of the greenkeeper.'

Few people are lucky enough to hit upon the right job for them first time, and unlike Tracy, Gerry Wigley worked in catering for many years, before indulging her interest in gardening by doing a job in a nursery and subsequently taking up the course in horticulture at Pershore. She has three children ranging in age from five to 18 and her husband, Ray, who trained as a systems analyst, now works as a greenkeeper alongside her at Costessey.

Gerry Wigley is more low-key in her approach than Tracy, but the conviction is there just as strongly. For a head greenkeeper she has relatively little experience behind her, but the intensive and in-depth education she has had, followed by two years' on-site training alongside two experienced greenkeepers has fuelled the same indomitable spirit that Tracy shows.

Problems of a different kind beset them at Costessey, which is a private club owned and run by the developer, but the team of four men, Ray included, have a similarly co-operative and understanding relationship based on a good team spirit – something of a family atmosphere. The age range is very similar to that of the team at Oulton, the younger men being aged from 18 to 27. A river runs through the site and as the water

table is high, they suffer very much from flooding during extended periods of rainfall, although they usually manage to avoid closing the whole course.

The distinctive thing about Costessey is the extent to which Colin House, the owner, is involved in the co-ordination of the club's responsibilities to the upkeep of the course. There is no green committee or green chairman for Gerry to present her reports to – she deals directly with Colin on issues of purchase and policy. They are both ambitious for the best, working closely together, and she thinks that, as someone who had no experience of golf course development before Costessey, 'he's done pretty damn well for his members'. It is these direct communication links that give both Tracy and Gerry the support they need to run an effective programme for the golf course. Gerry advises on seed mixes and fertilisers to use and they discuss the regime together whenever necessary. She consults him as the person with the final say on dreaded course closures, but the fact that advice is freely given and received is a sign of mutual respect that seems to belie the sexist reputation of the private golf-club's environment.

Then again, Colin House, or Leeds City Council, or even Abbeydale Golf Club, may well not be typical of most employers of greenkeepers. The old argument that money and training would be wasted on women because they might become pregnant doesn't wash with them. They see the dedication their staff have shown, men and women, and let that speak for them. When Tracy Ruane says 'If I ever stop looking forward to going in to work in the morning, I'll go and do something else', you believe her. It is true though that, as she points out, greenkeeping has generally not been a job that women want to do: they usually have not been brought up to think they could or would want to do it. Lorna Tyson of Myerscough College is one who believes that there are young women around in greater numbers now who would genuinely benefit from increased opportunities to enter the profession. She is on the steering committee of the BTME and sees

improving contacts with schools as a way of communicating the possibilities to young women choosing their careers.

In my conversations with Tracy and Gerry, we touched on the question of why it is widely held that such a job is no career for a woman. There are many women gardeners. They seem to have become acceptable earlier, and as Gerry points out, women often take an active, if not dominant, part in the gardening at home. While no-one would dare to suggest any more that greenkeepers are glorified gardeners, least of all the three women I spoke to who know all too well how false this is, it surely is not such a huge leap of the imagination for the stalwarts who can accept the idea of women gardeners to accept women greenkeepers? Well, actually, it is. Golf tends to become a political thing, crystallising social attitudes. But things are changing. There will always be the stalwarts, male and female. The women all stress that they work in a man's world, that they have no illusions about trying to change attitudes on their own. They enjoy very good relations on the whole with their male colleagues, their employers and the male golfers out on the course. They do not seem to take a defensive attitude,



Gerry Wigley: intensive and in-depth education

do not in fact seem to have been obliged to do so. Gerry tells me that the golfers are nicer to her than they are to anyone.

Without the benefit of any hard evidence, it appears fair to assume that the changes in attitude originate in a greater appreciation of the skilled specialist that the greenkeeper is now seen to be. This and a less condescending and snobbish attitude on the part of golfers to what used to be termed a 'manual' or 'labouring' job must reflect a stronger concern for the health of the course itself than for 'propriety'.

And when it is realised how

Tests themselves go in for analysis

energetically and effectively these women carry out their task, and on top of that, how they love their work and take pride in the detail as well as the broader picture – several male greenkeepers have referred to the quality of the finish women give to their work out on the course – the confidence of the three employers who have placed Gerry Wigley, Tracy Ruane and Jane Ryan in positions of responsibility is utterly justified.

It is not that they are more able than their male colleagues. None is immodest enough to claim such a thing. It is, as Tracy explained, that although at times they may have had 'to work 110% to be 100% good, whereas a lad could work 90% to be seen to be just as good', they know they are as good, and they have proved it. When Tracy went to the BTME in January everybody shook her hand, people she'd never met, and then she was introduced to the Duke of York, she knew she'd achieved something unexpected, and it has left her – and her employers – riding on the crest of a wave.

In her own words, 'When I was made head greenkeeper I thought, wow, this is brilliant, I'm dancing! I'm still dancing, I still keep having to tell myself. But just look what's happened in the last six months: I've been in every paper, I've been on television, I've met the Duke of York, I mean, my God! And the pride the Council have now, it's really good, I mean, good for us all – for me, for the lads and for the managers'. And, I would suggest, for women in green-keeping.

It is sure that the congratulations she received extend equally to Gerry, who has been steadily working away as head greenkeeper in Costessey for about a year now, and it is equally sure that other women greenkeepers can take heart from this mark of official recognition by the figureheads of the industry.

■ The author, Maja Mihajlovic, is a freelance journalist with a special interest in golf course architecture and fine turf maintenance.

To test or not to test! This is the clear option being presented to greenkeepers by some of the leading commentators in the sports turf industry. Articles in various magazines over the last few months have been either very supportive or very critical of physical and chemical analyses. However, the whole issue is being made more complicated because these commentators are confusing the purpose of testing with the methods and interpretation of analyses.

It is unreasonable to maintain the view that testing has no relevance to a greenkeeper's planning because of an experience with poor and erratic results produced by difficult and inappropriate test procedures. Nor is it reasonable to make claims for testing that owe more to the experience of the greenkeeper in developing the right management strategy for their course.

To make any way forward therefore, it is necessary for greenkeepers to have a realistic understanding of what testing can reveal about the course. From there it is possible to determine the most suitable test methods to provide the required information.

Stated simply, testing for the physical and nutritional properties of the rootzone is necessary to build up a record of the changes in those properties since the time of course construction. The more comprehensive the analyses the clearer the association that can be made between a measured change and either an improvement or decline in the sports turf.

An analysis does not make judgement about how good or bad the condition of the rootzone is; this only happens when you compare the analysis with the quality of the turf. Testing is valid even when it shows that the rootzone does not meet an ideal textbook description.

This is quite common and it demonstrates that a combination of rootzone material, climate and turf species can adapt well despite contrary opinion. If however, one component of the rootzone undergoes change – as will invariably happen despite maintaining a constant management programme from year to year – then the change can be so significant as to throw the other factors out of balance and a problem in the turf arises.

To illustrate this consider the following scenario, one that may have applied to many courses during the recent prolonged spell of rain. These saturated, cool conditions

lead to a substantial loss of nitrogen as volatile ammonia, and the subsequent imbalance of carbon to nitrogen reduces the manufacture of organic acids in the soil solution.

Less acid activity and lower soil oxygen combine to cause precipitation of nutrients such as copper, zinc, iron, manganese and calcium as insoluble compounds, whilst potassium and manganese are washed through the profile. There may be an increase of a whole pH unit. As a consequence the greenkeeper may observe either a promotion of a less desirable grass or weed species, an increased persistence of disease, or just a general decline of the quality of the turf cover.

It will be obvious to take measures that improve aeration and if necessary correct compaction, but testing would almost certainly be required to show the degree of change in the pH and nutritional status that normal management practices do not easily correct.

'Enthusiasm for testing is not often matched by expertise of many labs'

To carry this a step further, the justification for testing and recommending rootzone materials at the start of construction is because we can make some predictions about the way they are likely to change in the early years of the course and thus hopefully begin the management with fewer headaches.

The enthusiasm for testing, however, is often not matched by the expertise of many labs conducting such work and this is where the whole issue comes crashing down.

If our industry intends to follow the American example by testing and recommending suitable rootzone material, then we should be aware of some of the problems that can arise from test procedures as laid down by the USGA.

The methods for determining bulk density and particle size analysis have been long established and there should be no problem in obtaining reasonable reproducibility either by the same lab or by different labs provided they have competent technicians.

The testing for hydraulic properties of the rootzone, which has been the cause of the apparent unreliability of physical analyses to date, can

be easily resolved by substitution for a range of simpler and more accurate procedures.

Chemical analysis appears to be poorly understood by many people in both greenkeeping and the laboratory services. This is obvious because of the emphasis placed on soils as opposed to tissue analysis. To illustrate, let me take up the cause of one well known critic of chemical analysis on the question of suitable phosphorus levels in the soil.

Most of the phosphorus fertiliser applied to soil is very quickly taken out of the soil water solution by forming insoluble compounds with calcium, iron and aluminium components present. Thus if a soluble extract of the soil is analysed it will obviously show very low concentrations of this nutrient.

In reality the soil needs to have a relatively high concentration of phosphorus because plants obtain this nutrient by conducting a series of complex acid reactions in the near vicinity of the roots, a very small area which is quickly depleted. If phosphorus was available only in levels indicated by the soluble extract then it would be unlikely that many soils would support a sports turf.

Tissue analysis however, is a reliable way of showing the availability of nutrients at a given time and by comparing the analyses of similar turf samples it is a much easier way of establishing the range of nutrient concentrations, and therefore fertilizer applications, that are required to support good growth.

Soils analyses should be used to determine if the levels of nutrients are accumulating to a point where inhibition of the extraction of other nutrients becomes possible. This is often the reason for the apparent deficiency of manganese and molybdenum.

In summary therefore, any greenkeeper who has lost confidence in the capacity of physical or chemical analyses should be consoled by the fact that there are both test procedures and experts who can make testing a cost effective and meaningful exercise.

■ The author, Colin Sainsbury B.Sc., is a turf scientist currently working at the new London Golf Club in Kent. He studied soil science and plant physiology at the University of Sydney before embarking on a career which took him throughout Australia, the Pacific Rim and the Middle East. He has worked in Britain over the past 30 months, being instrumental in setting up and running a test laboratory at the LGC.

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AROUND THE GREEN

Keeping in touch with news and comment from the regions

KENT

You should soon receive details regarding our Spring Tournament at Rochester & Cobham GC, also those concerning a visit on 26 April to the London Golf Club. Joe Paulin, The LGC's course manager has kindly offered to host a visit, which will enable all Kent members to see at first hand one of the major golf construction projects in Europe. As you may know, the two courses at LGC have been designed by Golden Bear Inc., with Jack Nicklaus personally designing one of the courses – the Heritage. The timing of the visit should perfectly coincide with a wide range of activities taking place on the courses, from construction to initial maintenance. It is certain to be an excellent educational experience and opportunity, with perhaps a follow-up planned for next year.

Although informal, we propose to meet in the Horse & Groom public house between 12.00 noon and 1.00 pm. The pub is sited on the left side of the A20, about 3-4 miles beyond Brands Hatch Circuit, heading south towards Maidstone. Not only will this give us a chance to meet, but those who wish may buy a pub lunch or sandwich. For those who choose to go straight to the course, may I suggest you arrive at the maintenance shed complex no later than 1.30 pm. The London Golf Club is located just off the A20 signposted 'Stansted' on the same side of the road as the pub and about 2-3 miles past the Brands Hatch Circuit. For further information call me on 0322 664547.

Those of us who make it through to the regional final of our new Hayter Challenge Tournament will find it strange that BIGGA regional administrator, Norman Exley, will no longer be in attendance. As you may know, Norman passed away in February. His enthusiasm and commitment will be missed not only by our region but also at national level by our Association.

For many years Norman suffered from a heart complaint, so apart from sending our condolences to his family we have seen fit to send a small donation from the Kent section toward heart disease research.

PAUL COPSEY

SOUTH WEST

Happy Birthday Dear Jo-hn, Happy Birthday to you. Yes, 18 February was John Kane's birthday, so what better way to celebrate than win a section event, especially when you have reached the ripe old age of... no, I promised not to divulge his actual age, (but if you multiply thirty by two, and then add two, you won't be far off!) The section event in question, was the early Spring Meeting at North Wilts GC, Devizes, Wilts.

Sponsored by British Seed Houses, we followed our successful formula of golf in the morning and a lecture in the afternoon. Both parts of the day were an outstanding success, the weather relenting to allow some enjoyable golf over a course well prepared by Jon Boorman and his staff. The result of the golf was: 1st. John Kane (Clevedon) 76-6=70. 2nd. Derek Eves (Painswick) 95-24= 71. 3rd. Nick Wilson (Filton) 81-9=72.

Jonathan Franks of British Seed Houses was in fine form after lunch, giving one of the most interesting & entertaining lectures I have ever attended, just the right blend of facts, slides & figures. Well done Jonathan and thanks. Thanks also to North Wilts for their hospitality, to both the indoor and outdoor staff for their efforts, and also to Messrs Avoncrop, Rigby Taylor & County Mowers of Witney for prizes.

The autumn/winter education programme is now complete. That so many have shown the interest and initiative to take this training, and not hide behind

'Grandfather Clauses' and general ignorance of the statutes, has been particularly rewarding. I certainly hope that this training will continue to be available in the future.

Westurf, as if you didn't know, is now only a couple of weeks away, so for heaven's sake get your feet through the gate, visit each & every stand and repay some of the effort which has been put into it. Helpers, stand by!

Finally, with the growing season just around the corner, I'll wish you all happy greenkeeping for 1993, and remind you that there is no need to face problems alone. There is a strong and active Association behind every greenkeeper, help is readily available, so don't hesitate to get in touch with any problems or news, however major or insignificant. That's what the Association is for.

PAUL WORSTER



NORTH WEST

The penultimate winter lecture, held at Bury GC on 24 Feb, was graced by a good attendance and enjoyed by all. John Hughes of British Seed Houses gave us a very interesting and informative talk on 'Improved Grass Cultivars', including how new varieties become available. On behalf of the section I thank John for sharing his time and knowledge with us.

An interesting piece of news has just come to me: NW section life member, Harry Walsh, and his wife Martha celebrated their 60th wedding anniversary last Christmas Eve. They received a telegram from the Queen and another from the House of Commons via their local MP. Harry and Martha celebrated their anniversary with a holiday in the Scottish Highlands and upon their return found a surprise family reunion had been arranged. It is interesting to note that Harry was national chairman of BGGA in 1972, the Diamond Jubilee of the Association. Harry is 83 years young and still very active, playing golf to a handicap of 22. We all wish Harry and Martha many more happy years to come.

The first golf fixture this year is the NW versus N Wales annual tournament, for which a team of sixteen is required. The match will be played on Monday 26 April at Llanymynech GC, sponsored by GEM Professional. Tee off is 1.30pm, so if you are available, please contact me. The Spring Tournament will be played at Birchwood GC on Monday 10 May, and as this is a qualifier for the Hayter Challenge Tournament regional final (and numbers are restricted) no guests will be allowed – this in order to allow as many members as possible to qualify. A deposit of £10 must accompany your entry form, which must be returned by 3 May at the latest. Tee off will be from 1.30pm and tee times will be allocated on the day. Smart dress is essential – think proud! Applications for the Spring Tournament to: Paul Pearse, 1 Swan Close, Poynton, STOCKPORT, SH12 1HX. If you have any queries – or indeed any news, please contact me on 051 724 5412.

BERT CROSS



BUCKS, BERKS & OXON

Greetings, all good greenkeepers. Here we are once again at the time of year when everything is going crazy and I seem to be repeating myself – 'so what's different about that', I hear you cry. Not much, unfortunately! Well I'm going to remind you of one or two things anyway, just to keep you going through the never-ending grass and all those ever so constructive comments from the members.

Anyone out there who would like to represent

BB&O in golf matches against the Surrey section, the Mid Anglia section and the section secretaries (could be your chance to get your own back!), please contact our match captain, David Goodchild on 0296 415337. These matches will be held over the summer, starting on 1 June at Stoke Poges GC. There is no handicap limit, so all are welcome.

Also for your pleasure, three golf days have been arranged for the summer, so keep 28 May, 1 June and 11 October clear prior to further information arriving by post.

The committee need you to come up with ideas for social events you would like us to stage in the next year, also ideas for next year's lecture programme – call or write to me with your input – please.

On the lecture theme, I would like to thank Stan Robinson of the Woodley Branch St Johns Ambulance for giving us a rivetting lecture on first aid, staged at Sonning GC on 23 February. Our thanks to Sonning GC for their generous hospitality, a very educational night was had by all.

At the moment we have a special offer – a selection of BIGGA ties in light blue or red – at a knock-down price of just £4.00. If you want to look the real 'pro at a section or national event (or even at your golf club) give me a call and place an order NOW!

RAY CLARK



CLEVELAND

Carl Crocher, who recently worked in Germany, has just completed a spell at Darrington GC before returning to take up a post as greenkeeper at a club north of Hamburg, with views toward Jutland, Denmark.

Now is the time to take a stock check, get quotations and place orders for delivery in advance of events. Divoting fairways in April is vital: five men, five days (except par three's). Greens compaction around flags is serious: with 500 players out between Friday and Monday (average weight 10 stone = 31 tonnes), rollers on greens are not necessary. Hole cutting more often is desirable, together with weekly solid tining in summer and weekly slitting in winter – or Vertidrainage once or twice a year. Drainage is absolutely vital.

The outing to GEM Professional Products in Lancashire was a success and we were well received by senior GEM staff, witnessing fertiliser production at first hand. For a family firm they are to be complimented on being so up-to-date and we offer them congratulations on obtaining BS750.

An HND course in Greenkeeping is now on offer at Askham Bryan College.

BRUCE BURNELL



NORTH SCOTLAND

The section sends Kenny Anderson all the best for his new job at Sheringham in Norfolk and congratulates Dale Robertson on taking over from Kenny as head greenkeeper at Newmarcher, near Aberdeen. I recently attended the section secretaries/regional administrators meeting at head office. This was very worthwhile with many discussions and ideas being bandied about. The book-keeping workshop was the most discussed, with much learnt in a short space of time.

The 200 Club tickets are slowly coming in, though these should all be sold by now. Please send your money in immediately – the first draw takes place next month.

The section library is up and running with ➡ 46

45 → the following books available: • Turf Management for Golf Courses, James Beard. • Turf Management Handbook, Freeborg. • Golf Course Presentation, John Hacker and George Shiels. • All Year Round Golf, Jim Arthur. • Greenkeepers Training Committee Manual • The COSHH Pesticide Regulation Book. These are available by phoning Gordon Moir on 0334 74021, or me (Iain MacLeod) on 0862 894402. We hope to add more books during the year, so if any member knows of a greenkeeping related book, let us know and maybe we will add it to our lists. Also, anyone wishing to donate a book or books to the section please get in touch.

The Nairn Dunbar course is currently undergoing some changes. The 'Hill' holes over the road are being scrapped to make way for housing and three new holes have been constructed and will come into play in time for the 1994 British Amateur Championships to be played at Nairn. The old 6th, 7th, and 8th were, respectively, a par three followed by two short par fours. These now are replaced by a 509 yard par five, a 400 yard par four and a 131 yard par three, increasing the overall length of the course from 6431 yards to 6713 yards and par from 71 to 72. Grass Technology International are the designers and Souter's of Stirling are the main contractors. One of the most striking features of the extension is a bridge built at the 11th tee by a local man, using the red granite from a local quarry and employing the dry stane dyking method. The new holes come into play after the old eleventh, which now becomes the eighth. This will give the course a traditional links design of nine holes out and nine back. Some of the design features incorporate the style of James Braid, designer of Gleneagles, and those of Dornoch man Donald Ross, the father of American golf course architecture. The greens, tees, aprons and bunker surrounding were turfed, with fairways being seeded in a project costing in excess of £150000. We wish Derek Roy and his staff all the best in this year of change, having to maintain the existing course while settling in the extension, but still hope to see them at section outings if time permits. The section are hoping to organise a trip (in conjunction with Souter's and Nairn Dunbar) to visit the holes during the settling in period this year.

In conjunction with Allan Miller and Pat Allan of Stewart's, two organised tours have been arranged to visit Stewart's turf farm and works. The first takes place on Tuesday, 20 April, when a bus will leave from Inverness and take us to the turf farm, where we will be given a guided tour. Lunch will be provided and we will then visit the 'Stronghold' works at Dalkeith before returning in the evening to Inverness. The same itinerary will apply on Tuesday 27 April, though this time the bus will leave from Aberdeen. As guests of Stewarts, there is no charge for these trips, but members should note that numbers are limited - so it is a case of 'first come, first served'. Members naturally have priority, but if there is space, green chairmen etc. will be most welcome. Time is not on our side so please phone me on 0862

894402, especially to reserve your seat for the bus from Inverness. Please support this initiative by one of our patrons. Finally, welcome to two new members Duncan Adams from Royal Aberdeen and William Duggie from Inverness.
IAIN MACLEOD



SURREY

February seemed to have flown by and with no golf event or winter lecture to report, I welcome this opportunity to remind members of our forthcoming Spring Tournament. This year the venue for the 36 hole medal is Coombe Hill GC and the date (please note, this is on a Tuesday) is 20 April. This is a qualifying event for the Hayter Challenge Tournament. Please remember to check your current handicap, carry your BIGGA membership card and, as for all of our events, dress appropriately in the clubhouse and on the course. The closing date for entries - 6 April - will in all likelihood have passed by the time this magazine falls on your doormat, though it must be noted that you will have had ample opportunity to enter, so late entries are likely to be rejected.

Please note that the Veterans Cup will be played for at the Autumn Tournament.

Finally, may I say how fitting it was to see Bert Watson featured in the February issue of Greenkeeper International, especially so soon after his

AROUND THE GREEN



being elected president of the Surrey section.
ROGER TYDEMAN

NORTH EAST

Grateful thanks are extended to the Ryton Gravel Company for an invitation extended to all section members to visit their quarry on 25 February, followed by a visit to the Caistron Nature Reserve. In thanking them I must also apologise for what was a particularly measly turn-out, for only eight people bothered to turn up! Thanks to Mike Bayley of Ryton Gravel, not only for showing the visitors around but in going to the trouble of providing soup and sandwiches. I hope that my next report will indicate a better attendance to the Abcon Top Dressing site and that it will not be necessary for me to apologise yet again for the indifferent attitudes that appear to be prevalent within our section membership.

May I remind all NE section members, especially those who enjoy playing in golf events, that without the generosity of suppliers such as Ryton Gravel and Abcon we would be unable to provide golf prizes to the standard that has become our norm. My message therefore is simple and crystal clear: AT ALL TIMES SUPPORT THOSE WHO SUPPORT YOU.

May I welcome the following new members: David Sharkey (Ryton GC), Owen Parker (Arcot Hall GC), Alan Harrison and Gary Needham (Garesfield GC), Gary Donnison (Gosforth GC), Steven Richardson (Birtley GC), and John Cheesman and Edward Brachtvogel (Slayley Hall G&CC).

In conclusion, may I again thank Terry Charlton (Turf Care) and David Dixon for providing the coach that took section members to Harrogate for the BTME in January. Unlike the aforementioned Ryton Gravel trip, this was well attended and I am bound to repeat the obvious: - if our members are picked up we have better support. Better still, if anything is free they are out in droves!
JIMMY RICHARDSON



NORTH WALES

Our first competition of the season will be held at Curzon Park, Chester on 22 April. Application forms are available from T Adamson and D S Proctor and must be returned with payment (£11.00 for members and £12.00 for guests) before 16 April 1993. Forms arriving after this date will not be accepted. Teeing off will be from 10.00 - 11.40 am.

Llanymynech is the setting for our annual match against the North West section on 26 April, with teeing off from 12.00 noon - 1.15 pm. Those wishing to be considered for the team should contact 'yours truly' on 0248 713490. This year the match will be sponsored by Gem Professional.

Congratulations to D Parry on his appointment to head greenkeeper at Prestatyn Golf Club, following the departure of N Pearse to Hydeberg Golf Club in Germany. I know I speak for the whole committee in wishing Norman every success in his new appointment.

Congratulations also to P Gabriel and J Chung, promoted to senior first assistant at Cardon Park, to J Moody on his promotion to head greenkeeper at Chirk Golf and Country Club, and to A Sharp on his new appointment in Kent.
D S PROCTOR

SOUTH COAST

Winter lectures have been reasonably well attended, although the January meeting at Came Down Golf Club was poorly supported, mainly due to the atrocious weather conditions. However, my thanks to Gwil Thomas from Lloyds of Letchworth for his firm's presentation.

In February, Jim Arthur gave a very enjoyable talk,

much appreciated by members present.

These meetings are arranged not only for their content, but also as a forum for local greenkeepers to meet and have a natter. If you've not been in the habit of attending our lectures, you are missing out in more ways than one!

Tournament time is almost upon us, and our Spring Tournament this year is being held at Sherborne GC on Wednesday, 26 May. The format for the competition is a 36 hole medal, though members not wishing to play 36 holes can play just one round. The entry fee will be £14.00 and all applications to play, with handicaps, fee, etc., should be addressed to our tournament organiser: Joe Burdett, 23 Jacobs Ladder, Child Okeford, BLANDFORD FORUM, Dorset. DT11 8EA. (Tel: 0258 861482).

Other section tournaments later in the year are: Summer Tournament, Alresford GC on Thursday, 29 July. Autumn Tournament, High Post GC on Tuesday, 5 October.

Finally, please support Westurf at Long Ashton on Wednesday, 28 April. This promises to be the biggest turf demonstration organised so far and a number of section officials are working hard to make this event successful.

BOB DENNIS

DEVON & CORNWALL

'THE BEST IN THE WEST AND IT'S FREE'... There are only a few days to go before this year's Westurf Trade Show, to be held once again at Long Ashton, Bristol on Wednesday 28 April. Westurf is RAC signposted from the motorway and when you arrive parking and admission is FREE.

Numerous local & national dealers will be there to answer your questions and you will also be able to see the latest machines being put through their paces on the large demonstration area - which includes a golf green. With all the latest turf care products on show you can't afford to miss Westurf '93.

Our February meeting was held at Perranporth GC on Wednesday 24th, with an early morning frost clearing quickly to allow members to compete on the excellently prepared links for the Avoncrop Trophy. Our thanks to Bill & John Mitchell who presented the course in such fine condition - and it was only February!

John Palfrey of Avoncrop presented the golf prizes to: 1st Clive Browning (Bowood) +4. 2nd Gordon Tamblin (Mullion) +4. 3rd Brian Summers (Carlyon Bay) +3.

The Harrogate Challenge also took place between Brian Summers & Gordon Tamblin, with £50 being donated to section funds by Devon Garden Machinery. The victor was Gordon Tamblin by one hole.

The section presented Jack Moore, head greenkeeper at Teignmouth GC, with a tankard to mark his retirement after over 30 years greenkeeping. We all wish you a happy retirement, Jack.

During the afternoon Mr Peter England of the HSE presented a paper on the new six pack regulations, this being followed by a lively question session. The section presented Peter with a BIGGA tie and thanked him for his paper. The section would also like to thank the captain & committee of Perranporth GC for allowing 75 members the use of their facilities, also to Mr R Pye for looking after the inner man.

Our Guest Day meeting will be once again at Launceston GC on Wednesday 7 July. Tee times will be from 12noon onwards and David Golding, the Association's education officer, will conclude the day

with his after dinner presentation on education. Non-golfers are most welcome to indulge in their usual course walk before joining golfers for the evening meal and David's talk. I look forward to meeting you all at Westurf.

RICHARD WHYMAN



SOUTH WALES

Those people expecting to see Huw Morgan's name at the end of this column might just wonder what's going on when they see my name in print. To set the record straight, after being elected to the post of section secretary for South Wales, Huw accepted a new job as course manager at the Wilderness Golf Club in Kent. He took up his new position on 15 March and his family will be joining him soon. The section wish him well for the future, whilst personally I'd like to thank him for dropping me in it at the deep end! Our Winter lecture/seminar programme will

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KATE YORK delves deeper into the mysteries of dry patch, in this her concluding article on the disease

A CASE OF DO

The first of these two articles, published in last month's Greenkeeper International, outlined the typical symptoms expressed in areas affected by dry patch and detailed results obtained from a comprehensive questionnaire survey of golf courses across the UK, together with a comparison between the chemical and physical soil characteristics of affected and unaffected areas.

This article concentrates on results obtained from studies involving the possible correlation between automatic irrigation systems and the location of areas affected by dry patch on specific greens and the progress made to date in elucidating the identity of the water-repellent materials which are known to be present in soils affected by dry patch. Also included for interest is information relating to the discovery that certain fungi are capable of producing water-repellence in soil which, prior to their colonisation, showed no such tendency.

Dry patch distribution and automatic irrigation systems

It is generally recognised that to provide sufficient water to an entire golf green, without over or under irrigating any area, is almost impossible. High spots and slopes will affect the final distribution of irrigation water on the surface and the underlying soil profile, as will factors such as prevailing wind speed and direction. However, automatic irrigation systems can be set up to give as near as possible an even water coverage under 'normal' wind conditions and applying water at optimal times during the day, when required, reduce to a minimum the problems which can occur with under or over watering.

With this in mind, an investigation into the possible correlation between areas of a golf green affected by dry patch, relative heights across the green and the volume of water deposited by the installed irrigation system, was completed for one representative green on each of three courses. The three greens selected for this study varied in their expression of the symptoms of dry patch. The first green was affected in large areas which were generally restricted to the edges of the green. The second showed several almost parallel strips of affected turf along the length of the green, from the apron towards the back edge. Finally, on the third, the symptoms appeared as interwoven ribbons of affected areas across the entire surface.

Data relating to the relative

height changes across the surface of each green were recorded by using an ordinary surveyors level, positioned at 1 m intervals, which were identified by small marker pins placed on the putting surface. These data were used to produce a three-dimensional representation of each surface, identifying the presence of high spots, slopes and ridges. At 2 m intervals across the green, the rate of water deposited by the irrigation system was calculated by collecting the volume of water in plastic plant pot holders, which fell at each point during a given time period. The results were used to prepare a diagram which identified the rate of irrigation water falling at each 2 m interval across the surface of each green under observation. The third assessment completed on each green identified the percentage of the surface area affected by dry patch in each 1m² as marked out on the greens' surface using pins shown in Figure 1. Using the information recorded, diagrams were completed which identified the exact location and severity of areas affected by dry patch across each green.

Because of the amount of data collected in this investigation, a complete analysis of the results is not possible in this article. However, a general review of the findings may prove useful to greenkeepers. On the first green identified, where the condition existed as large affected areas generally around the edge of the green, there did appear to be a significant correlation between where the symptoms occurred and the low water availability to these areas and associated ridges, slopes and high spots. A similar situation was observed on the second course in which the symptoms of dry patch followed the central area of the greens' surface, although a slight difference existed in that low levels of irrigation were calculated across the entire central part of the green, as no ridges or slopes existed in this situation. Finally, on the green identified as expressing ribbon-like symptoms across the surface, no significant height differences were detected on the green (ie. it was almost completely flat) and no correlation could be detected with changes in irrigation rates at each assessment interval.

In summary, therefore, it is necessary to identify the facts which have been highlighted from this study. High spots, ridges and slopes may support areas which have developed the symptoms of dry patch, but equally the condition can be expressed, albeit in a slightly different form, across the surface of a

green which is devoid of any significant height variations. Symptoms of droughting are easily confused with those of dry patch because ultimately areas affected by dry patch, which are innately water-repellent, are unable to retain sufficient available water for healthy grass growth. The grass is effectively droughted, not because the water is unable to reach the roots per se, but because the soil which supports the roots is unable to hold any water which passes through it.

The end result is the same for droughted areas as for those with dry patch, but this study clearly shows that although automatic irrigation systems are unlikely to provide an even and adequate water supply to all areas of a green, for whatever reason, the irrigation pattern and green contours themselves do not predispose a turf surface to dry patch. It is likely, however, that if dry patch has developed, both inefficient irrigation and green contours can exacerbate the severity of the symptoms.

Can water-repellent soils be caused by fungi?

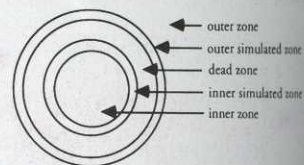
Much speculation has existed over past years regarding the possibility that fungi are capable of directly causing the build up of water-repellent materials in the soil and hence the expression of symptoms associated with dry patch. This study is believed to be the first to show conclusively that water-repellence can be conferred by the movement of certain fungi through the soil profile. Thatch fungi or superficial fairy rings, which are generally caused by members of the basidiomycete group of fungi, have often been thought of as having some role to play in dry patch development. Their usual 'ribbon-like' appearance on affected areas of turf is seen as mimicking the symptoms of dry patch. However, because of the numbers of fungi naturally present in any soil or areas of decaying organic matter (such as the thatch of turf), isolation of the specific causal organism has often proved unsuccessful. Other fungi belonging to the basidiomycete family are, however, more readily identifiable and one such example exists as the Type 1 fairy ring caused by *Marasmius oreades*. This fungus was used in recent studies to identify whether or not a fungus is capable of directly producing water-repellence within the soil through which it has passed.

As with all fairy ring fungi, *Marasmius oreades* moves through the soil profile by means of 'cotton wool' like mycelia, which grows radically

outwards from its origin. For the first few years the symptoms of this fungi are indistinguishable on the turf surface, but as the ring matures the amount of mycelium present within the soil increases and eventually symptoms such as those seen in Figure 2 are expressed. As the mycelium passes through the soil it breaks down organic matter, releasing available nutrients to the grass and hence stimulating grass growth. With time the older mycelium dies and breaks down, thereby releasing further available nutrients to the grass. This process ultimately shows itself in the typical symptoms of Type 1 fairy rings which are shown diagrammatically below.



Fig. 2: Type 1 fairy ring caused by *Marasmius oreades*



Each of these zones can be clearly identified in Figure 2 and it is this typical expression which has enabled us to study the possible role of this fungus in relation to the development of water-repellence. Soil samples were taken from the inner, dead and outer zones of three *Marasmius oreades* rings at each of the two different sites; one being a golf course having a sandy loam and the second a course with a much heavier clay loam soil. The soil samples were used to obtain information regarding soil moisture content, soil organic matter content, presence of active fungal mycelium and the presence/severity of water-repellence expressed in each of the three zones.

As with the study on irrigation and green features discussed earlier, this work produced a large amount of information which can readily be summarised for the context of this article. In essence what was discovered was that in the dead zone, ie. the zone which contains the highest concentration of active fungal mycelium, levels of water-repellence were found to be severe. This was not unexpected because fungal mycelium, particularly in such high concentrations, is known to repel

OR DRY

water due to the nature of the mycelium itself. However, it was discovered that soil samples from the inner zone had relatively high levels of water-repellence compared with soil samples from the outer zone through which the fungus had not yet passed. The depth of water-repellent soil varied between the two chosen field sites. On the lighter sandy loam soil, the fungal mycelium penetrated the profile to a greater depth than on the heavier clay loam. Soil samples from the inner zone showed high levels of water-repellence corresponding to the depth of the mycelium in the active part of the ring. However, studies confirmed that there were no mycelial fragments present in the samples taken from the inner zone and in fact, from our knowledge of the growth rate of this fungus, the soil from the inner zone would have been free of active fungal mycelium on average for about five years. This result is important because we now know that fungi have the capability in some way of producing water-repellency as a direct result of their passage through the soil.

Can we identify the water-repellent compounds in dry patch soils?

The fundamental question being asked in this present study of dry patch as it exists in UK golf greens is – 'what is the identity of the material present in affected areas which causes this repellence to develop?' Two approaches have been taken to provide an answer to this question, these being the extraction of the water-repellent material(s) from the affected soil using specific organic solvents, and a more direct approach to remove the water-repellent material from the surface of affected sand particles, by heating them with a laser beam to a temperature whereby they are made volatile and can be subsequently identified using specific analytical techniques.

This research has been completed in the last few weeks and at present the information obtained from these experiments has yet to be fully analysed. We know that the materials responsible for this water-repellency are present in soils which may show no symptoms, but with time



Fig. 1: Golf green affected by dry patch, showing marker pins, plant pot holders

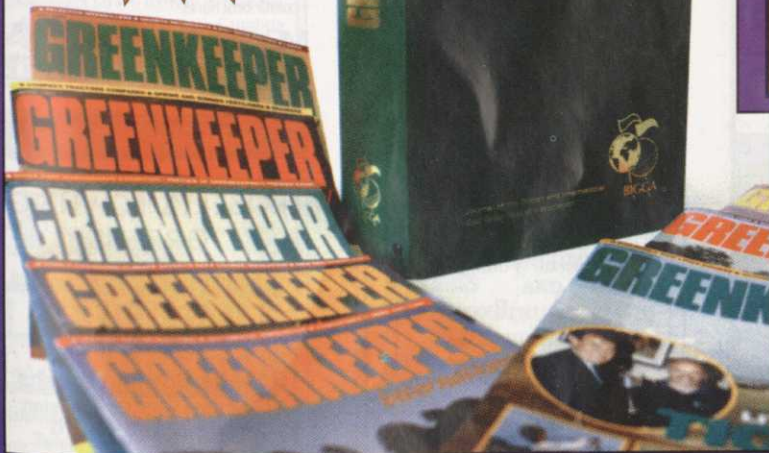
build up to levels which result in the expression of symptoms specific to dry patch. Certain chemicals have been initially identified in soils expressing dry patch, these compounds being 'waxy' materials, which may be responsible for the water-repellency. Although at this time it is not possible to identify conclusively the materials present in soils affected by dry patch, it is believed that completion of analysis still in progress will clearly show the nature of the compounds which build up in affected soils. Ultimately this will lead to the solution of this important maintenance problem.

■ The author, Kate York, is a research officer with the STRI.

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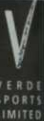
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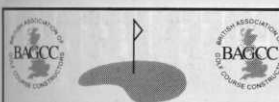
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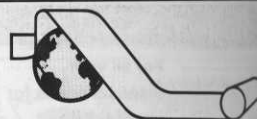
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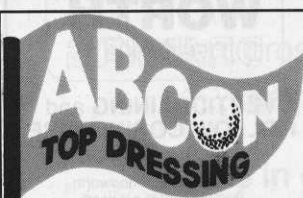
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NOTICE TO MEMBERS

Annual General Meeting

The BIGGA Annual General Meeting will be held on

Wednesday 21 April 1993

at 2.30pm in the Royal York Hotel, York
(immediately adjacent to the Railway Station)

— NEIL THOMAS, Executive Director

Copies of the audited accounts will be available from Section Secretaries during the four weeks prior to the Meeting.

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The successful applicant will be able to demonstrate experience in all aspects of golf course or sports turf management, with a practical knowledge of modern greenkeeping machinery and budgetary control. The ability to lead and motivate the team of five staff, organise work programmes and maintain health and safety requirements is essential.

Application forms may be obtained from
Bangor Golf Club, Broadway, Bangor BT20 4RH,
telephone 0247 270922.

The closing date for receipt of completed
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Practical knowledge of modern irrigation systems, greenkeeping machinery and budgetary control is also required.

The salary is negotiable according to qualifications and experience.

There is no accommodation available.

Interested applicants should apply in writing with a full CV to:

G E Carpenter
Weybrook Park Golf Club Ltd
Aldermaston Road, Sherborne St John,
Basingstoke, Hampshire RG24 9ND

The closing date for applications is Friday 30 April 1993



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Applications from individuals who are currently first assistants with 5-7 years experience would be welcomed.

Apply in confidence enclosing full CV to:
**Secretary, Wolstanton Golf Club, Hassam Parade,
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Please reply in confidence with full CV to:
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Salary negotiable according to experience. No accommodation.

Applicants should apply in writing with CV to:
**D Rolph, Secretary/Manager, Buckingham Golf Club,
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No accommodation available. Salary negotiable.

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**The Secretary, Craigmillar Park Golf Club,
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Knutsford Golf Club

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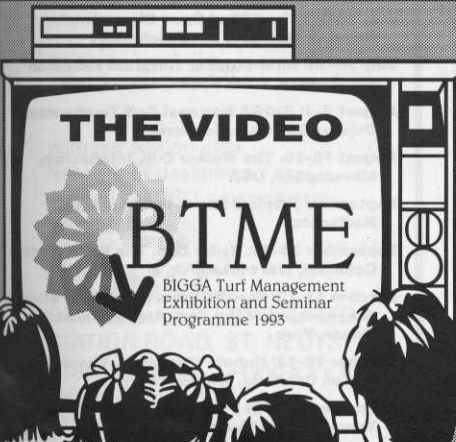
HEAD GREENKEEPER

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Applications and CV to:

**Mr D Francis, Honorary Secretary, Knutsford Golf Club,
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46 → have ended by the time this appears, so I'd like to thank all the speakers, David Smart (Liquid-Turf), David Ward (Porthcawl GC), Doug James (Nomix-Chipman), Michael Williams (Glamorgan-shire GC), Huw Morgan (Southerndown GC), Dennis Archer (Whitchurch SC), Carl Crome, Jon Allbutt, Bert Mayberry, Allan Webb and Rhone Poulenc.

A plea goes out to our membership for greater attendances to these events if they are to continue. The average attendance at evening lectures was nineteen, and with a section total nearing 130 for 1993 surely we can manage more! Thanks must go to those involved at Pencoed College for allowing us the use of the college facilities to stage these events, with special gratitude to Peter Gillard for his major contributions.

For 1993 there have been some major changes to the running of the golf days, not only to the price but the fact that the total cost must be paid in advance, (not, as it used to be, a deposit and the remainder on the day). Note therefore that the payment is the entry fee and this must reach the secretary at least ten days before the event. No Payment - No Meal - No Competition - No Exceptions! Also note that all the competitions begin in the afternoon, this to encourage greater attendance during 1993.

Last but not least I'd like to thank all the folks at Aldwark Manor for making the two day administrators /secretaries meeting which I visited so very interesting. This was my first visit, though hopefully not my last, and it was nice to put faces to the names of those who I had spoken to on the telephone, though never met. Thanks again to all involved in making my stay both rewarding and enjoyable.



PETER LACEY

LONDON

The last few months have not brought good news to our section, especially with the loss of a valuable friend and member - Norman Exley. He contributed a great deal over the years and will be missed by us all. Our thoughts are with his family. The London Section has donated £200 to the Brompton National Heart and Lung Hospital.

Spare a thought also for Nigel Greenyer from

AROUND THE GREEN



Highgate Golf Club. Last year he had a hip operation which unfortunately proved to be unsuccessful, this causing further treatment to be required. We send our best wishes for a speedy and successful recovery.

Doug Smith has been appointed chairman of the committee, with the committee structure being as follows: Doug Smith - Chairman, Barry Moggridge - Secretary, Craig Handyside - Treasurer, Martin Smith and Tony Dunstan - Education/Golf.

We are looking for two new committee members and anyone interested should contact Doug Smith on 0708-742148. Entries for the Summer Fourball Knockout are required, the cost being £5 per pair and the closing date 23 April. The contact, again, is Doug Smith.

TONY DUNSTAN

WEST SCOTLAND

The section has staged two social events since the start of the year, the first being a games night at Claremont Bowling Club. Some 24 members, traders and guests enjoyed an evening of indoor bowls, snooker, darts, pool and dominoes. The evening was declared a great success, the winners being Sandy Bulloch and Nick McComb from runners-up Danny Lauder and John Scott Snr.

Next came a football match held during February, a match staged between greenkeepers from either the north or south side of the River Clyde. As a player for the south, I can only imagine that our members from the north must have been overawed at playing in the shadow of Ibrox Stadium, for though involved in a ten goal thriller, they lost by nine goals to one! However, they have assured me that their 'away' goal will be crucial in the return match. A special thanks must be recorded to life-member Joe McKean for refereeing the match, it being good to see that with the result poised at one all, he was not 'conned' by Alistair Connell's dive in the box. Alistair is getting so slow these days that he shouted 'penalty' four times on the way down!

I am pleased to inform members that Hamilton GC will be the venue for our spring outing on 22 April. Thanks to Hamilton for courtesy of their course and we look forward to meeting the sponsors of the Hayter Challenge Tournament on the day. Entry forms have been posted and entries must be returned by the closing date.

Congratulations to Scott Ballantyne on his appointment as course manager at Cowglen GC and to Danny Lauder and Andrew McDowell on their moves as head greenkeepers to Strathendrick GC and Torrance House respectively.

Finally, this will be my last report as section secretary, as AJ (Sandy) Bulloch takes over the secretariat in

April. I hope every member continues to give the section his keenest support - such as I have enjoyed over the past four years - and that the section continues to grow from strength to strength.

GORDON KERR

MIDLANDS

I will start by thanking the staff at BIGGA HQ for again putting together a two-day package that allowed section secretaries and regional administrators the opportunity to get together - first to gain insight into the way our successful Association is managed and second to meet with other officials to discuss the running of the Association and the problems encountered in running our particular sections.

During the next month the Warwickshire College of Agriculture (GTC Approved) will be mailing to all

head greenkeepers and their golf clubs, seeking to establish if a need exists for the running of short courses. Included will be a comprehensive list stating what might be made available.

DEAN CLEAVER



CENTRAL SCOTLAND

The first social event of the year got off to a great start in February when 40 members and friends enjoyed a night at the ten-pin bowling centre in Falkirk.

Also in February, 30 members attended Souter's Sportsturf in Stirling and enjoyed seeing at first hand the facilities offered by John Souter to the green-keeping profession. Particular interest was shown in the CAD (computer aided design) of golf courses. Following lunch at Stirling GC, members were given a site visit to see the construction work carried out on the course over the past winter.

Our thanks to John Souter and his staff for staging a first class presentation and for delicious food and a little liquid refreshment to wash it down...

By now everyone should have received an entry form for the Spring Tournament at Falkirk Tryst on 28 April (note the change of venue). This will be the qualifying event for the Hayter Challenge Tournament, so if by chance you don't have a form - contact me now if you wish to play.

Section chairman Duncan Peddie and his committee extend a warm welcome to all new members and hope that you will take an active part in supporting the events currently being organised. It's a great way of getting to know fellow members.

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COMING UP

April 21: BIGGA Annual General Meeting, Royal York Hotel, York

April 28: Westurf Trade Exhibition, Long Ashton, Bristol

May 25-30: Amateur Championship, Royal Portrush, Northern Ireland

June 9-10: Landscape Industries '93, National Agricultural Centre, Stoneleigh Park, Warwickshire

July 5-8: Royal Show, NAC, Stoneleigh park, Warwickshire

July 15-18: The 122nd Open Championship, Royal St Georges, Sandwich, Kent

July 18-24: International Turfgrass Research Conference, Palm Beach, Florida, USA

August 2-4: BIGGA National Golf Tournament, Dunbar Golf Club, Scotland

August 18-19: The Walker Cup, Interlachen, Minneapolis, USA

September 7-9: IoG Show, Peterborough, Northants

September 24-26: Ryder Cup, The Belfry, Sutton Coldfield, Warwickshire

October 11-12: Toro/PGA European Tour Student Greenkeeper of the Year Award, Aldwark Manor, York

October 12-13: Kubota Challenge, The Belfry, Sutton Coldfield, Warwickshire

December 6-7: ICI Premier Greenkeeper of the Year Award, Aldwark Manor, York



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