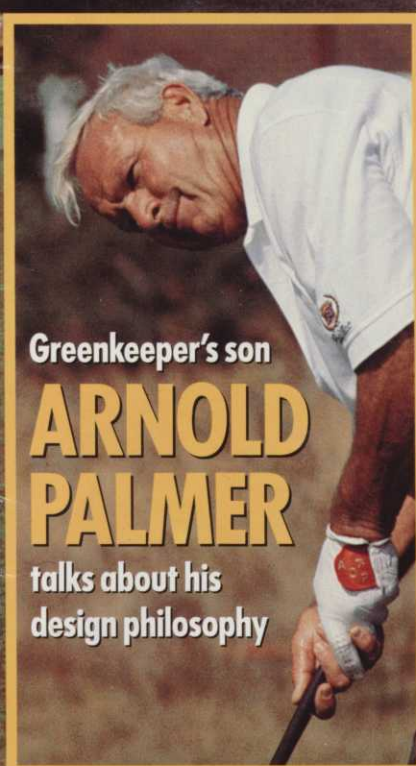


GREENKEEPER

International



Greenkeeper's son

**ARNOLD
PALMER**

talks about his
design philosophy

Exploring
BUNKERS



Out of this world



But not out of the way

...and Harrogate between January 23–27, 1995 is most definitely the centre of the universe for:

- * Course Managers/Head Greenkeepers * Greenkeepers
- * Golf club owners and officials * Golf club secretaries * Green chairmen
- * Greens convenors * Golf course architects * Golf course constructors
- * Groundsmen * Local Authority specifiers and executives
- * Landscape contractors * Maintenance contractors * Agronomists
- * Conservationists * Ecologists * Manufacturers and dealers
- * Irrigation specialists * Consultants

...and everyone with an interest in fine turf maintenance.

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The BTME week in Harrogate is truly an event you should shift heaven and earth to attend.

BIGGA National Education Conference: January 23–24, 1995

BTME and Educational Seminar Programme: January 25–27, 1995

TO PRE-REGISTER, COMPLETE AND RETURN THE INSERTED BTME CARD OR CALL THE BTME HOTLINE: 0347 838581

Pre-registering enters you in a free competition with prizes worth £200. It also ensures quick and easy entry into the event. Your badge and full information will be sent to you early in '95 just before the BTME week.

the
Learning
experience

Ask for more details

For comprehensive information of all that's going on, telephone 0347 838581 and ask to speak to Ken Richardson, BIGGA's education officer. He'll answer all your questions and send you a copy of "The Learning Experience". Event organisers are the British and International Golf Greenkeepers Association, Aldwark Manor, Aldwark, Alne, York YO6 2NF. You can also request a copy of "The Learning Experience" by fax: 0347 838864.

FINDING YOUR WAY TO HARROGATE IS EASY

BY RAIL: The comprehensive rail network means you can get to Harrogate very easily; for example 25 trains run daily from London King's Cross to Harrogate and there are some 15 trains from Edinburgh, 16 from Glasgow and 30 from Manchester

BY AIR: Leeds/Bradford Airport is 12 miles away and has direct flights from major European cities. **BY ROAD:** From North and South – A1, exit Wetherby, nine miles from Harrogate. M1 and M62 to Leeds, which is 15 miles away. **BY SEA:** North Sea Ferries, from Rotterdam/ Zeebrugge to Hull, 60 miles away.



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 *A happy
Christmas and
prosperous New
Year to all our
members, readers
and advertisers*

GREENKEEPER

International

DECEMBER 1994

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WIN £50 CASH IN OUR
BUYER'S GUIDE
COMPETITION:
TURN TO PAGE 46

FREE READER REPLY SERVICE

Use the post-paid Reader Reply Card facing Page 54 for further information on the products and services advertised in this issue. Just state the companies' Ad Ref numbers, post the card to us and we'll arrange for further information to be sent to you direct.



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GREENKEEPER

International

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EDITOR

Chris Boiling

Tel: 0347 838581 • Fax: 0347 838864

DESIGN/PRODUCTION EDITOR

Tim Moat

Tel: 0904 610611 • Fax: 0904 643074

SALES AND MARKETING MANAGER

Bill Lynch

Tel/Fax: 091 413 7218

SENIOR ADVERTISING SALES EXECUTIVE

Carol Dutton

Tel: 0347 838581 • Fax: 0347 838864

SALES AND MARKETING ASSISTANT

Louise Lunn

Tel: 0347 838581 • Fax: 0347 838864

PRINTING

Hi-Tec Print, Unit 7, Universal Crescent,
North Anston Trading Estate,
North Anston, Sheffield S31 7NZ
Tel: 0909 568533 • Fax: 0909 568206

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address changes to BIGGA at Aldwark
Manor, Aldwark, Aline, York YO6 2NF

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Golf Greenkeepers Association

Greenkeeper Education and Development Fund

The Fund provides the key to the future for greenkeeper, golf club and game. Individuals and companies can join the Golden Key Circle and Silver Key Circle. For details, contact BIGGA on 0347 838581.

GOLDEN KEY CIRCLE COMPANY MEMBERS:

• ET Breakwell Ltd • Hardi Ltd • Hayters PLC
• Jacobsens • Kubota UK Ltd • Lely UK Ltd • Rigby Taylor Ltd
• Toro Irrigation • Zeneca Professional Products

SILVER KEY CIRCLE COMPANY MEMBERS:

• Ransomes • Risboro' Turf



Pre-registering for BTME means speedy admission and you could win a prize: see the inserted card in this issue

ADVERTISING WORKS IN GREENKEEPER INTERNATIONAL:

“Greenkeeper International is the only professional magazine we advertise in because it works

– KIM MACFIE,
Sales and Marketing
Director, Hayters PLC

“**FOR MORE DETAILS CALL:**
Bill Lynch on 091 413 7218, or
Carol Dutton or Louise Lunn at
BIGGA HQ on 0347 838581.

ENTER & WIN

In co-operation with BIGGA, Supaturf Products are offering you the chance to win a free trip with the BIGGA party to the GCSAA in San Francisco in February '95 – worth over £1100.00!

Supaturf will be launching a brand new product for Greenkeepers at BTME. This same product will be launched at GCSAA in San Francisco in February '95 and you could be there to see it!

The lucky winner will accompany the BIGGA party on an action packed week with opportunities to see the newest golf course products, attend seminars, meet fellow professionals, and of course, visit all the sights!



Your prize includes: Overnight accommodation at Heathrow with car parking, return flight Heathrow-San Francisco, UK and USA taxes, transfers to and from hotel, 8 nights accommodation based on room only, US accommodation taxes and travel insurance.

HOW TO ENTER

PART ONE Simply answer the two questions below, cut out the coupon and return to Supaturf Products without delay.

PART TWO Visit the Supaturf stand whilst you are at BTME in January and complete the final two questions.

You could be on your way to San Francisco! First prize is restricted to BIGGA members only. Non BIGGA members, there are many other don't worry, there are many other prizes to be won! All entries must be received at Supaturf products by 15 January 1995. Usual rules apply.

Supaturf

PLEASE COMPLETE
IN BLOCK CAPITALS

Question 1 – What is the name of the famous suspension bridge in San Francisco?

Question 2 – What is the name of the famous prison in San Francisco Bay?

Please tick

I am a BIGGA member with a current passport

I would be available from Sunday 19 February '95 to

Wednesday 1 March '95 to accompany the BIGGA party

I shall be attending Supaturf's stand at BTME to complete the final part of the competition.

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Position _____

Club _____

Address _____

Post Code _____

Tel: _____

GK/12/94

Yes No

☐ ☐

☐ ☐

☐ ☐

☐ ☐



Come with BIGGA to the GCSAA Conference and Show *San Francisco '95*

The Golf Course Superintendents Association of America will be holding its 66th International Golf Course Conference and Show in San Francisco from February 20-27, 1995.

BIGGA's party attending this major international event will assemble on Sunday February 19 at the Excelsior Hotel, Heathrow Airport, leaving the next morning on a direct flight to San Francisco and arriving back at Heathrow on Wednesday, March 1.

The GCSAA will present an action-packed week dedicated to presenting the latest in educational opportunities with more than 60 educational seminars on offer, the newest golf course products and services, and an opportunity to meet with fellow professionals. Those attending will be able to visit Chinatown, Golden Gate Bridge, Sausalito/Muir Woods, Union Square, Golden Gate Park, Alcatraz and take the cable car to the world famous Fisherman's Wharf – just some of the attractions of San Francisco.

An exciting trip is in prospect and bookings with full payment must be received by Friday January 6, 1995.

ITINERARY

Sunday, February 19

All participants assemble at the Excelsior Hotel, Heathrow Airport, overnight accommodation with free car parking included.

Monday, February 20

Depart Heathrow for San Francisco direct non-stop flight. Departure 1100 hours arrival 1500 hours. Transfer to the Holiday Inn, Union Square. Stay eight nights, room only basis.

Tuesday, February 28

Transfer back to airport. Depart San Francisco 1800 hours arrive Heathrow 1230 hours on March 1. Return transfer to Hotel to collect cars and drive home.

PRICES

£754.00 per person based on twin shares

£1,094.00 per person based on single room accommodation, plus comprehensive travel insurance for the duration £35.00

Included are: Overnight accommodation at Heathrow with car parking, return economy flights from Heathrow to San Francisco, UK and US taxes, transfers from the airport to the hotel and return, eight nights accommodation based on room only, US accommodation taxes.

Please forward full payment of £789.00 or £1,129.00 (unless travel insurance is not required) to BIGGA, Aldwark Manor, Aldwark, Aline, York, YO6 2NF to arrive by Friday January 6, 1995 at the latest, together with name, address and contact telephone number.

Are you in
the picture?

Copies of this photo of
Open champion Nick Price
with the BIGGA support
team at Turnberry are now
available, priced £5 for a
10x8in colour print. Send
cheques to BIGGA HQ.

NEWS



Greenkeepers' anger at 'poor' consultants

Consultants are as welcome at golf courses as Tony Blair would be at a Conservative Party conference. That's the conclusion we drew after sitting down with a group of greenkeepers and asking for their views of consultants. It seems the good ones are very good and the bad ones are your worst nightmare – and they outnumber the true experts.

The nearest anyone came to praising them was John Bayliss, head greenkeeper at Coventry Golf Club. He said: "I have found that the majority are very good but there are a few that are only

interested in making money."

Canadian Craig Smith, head greenkeeper at Golf Club Mudau in Germany, said: "My general view is that consultants may be beneficial but because of poor controls on qualifications one can never be sure of sound advice."

He added: "I believe it is important to remember that consultants usually offer one man's opinion, and you should govern yourself accordingly."

Mark Jones, head greenkeeper at Preston Golf Club, was far more outspoken. He said: "They're very poor. They tend to

take the money and run. They seem to be accountable to no-one, the greenkeepers take the blame for any disasters." But he did single out the STRI for praise – "they tend to be more reliable."

Peter Gee, head greenkeeper at Sandy Lodge Golf Club, said: "In my view no individual, no matter what their qualifications or experience, can come to a club for four hours and set out a maintenance programme for a year. This is done by many consultants in golf course maintenance. Although for specific tasks such as irrigation specs and general management they can be useful."

Ian McFarlane, head greenkeeper at Salford GC, said he had mixed feelings. "I feel they pick your brains and feed back what the club want to hear, not what they think. If you are paid to do a job why do committees need another opinion as it is mostly the same content as you have given them?"

However he says there is one exception – Jim Arthur. "At least Jim is honest and forthright."

What do you think? Write to the Editor, Greenkeeper International, Aldwark Manor, Aldwark, Aline, York YO6 2NF.

Supporters give green light to ecology booklet

The long-awaited Education and Development Fund ecology project has been given the green light. At a recent STRI board meeting, ecologist Bob Taylor was given the go-ahead to produce a practical guide to the ecological management of golf courses. The booklet should be published late April '95.

"This project has been a long time coming to fruition," says BIGGA's marketing manager Bill Lynch, "but we're delighted it is finally happening. I'd like to thank all our golden and silver key members of the Education and Development Fund, but especially Jacobsens, for seeing this project through with us."

FLYING DIVOTS

■ If you pay your BIGGA subscription yourself, remember you can claim tax relief on the amount paid. This will save first assistants £11.25 and deputy head greenkeepers £13 as the subscription to BIGGA has been approved under section 201 of the Income and Corporation Taxes Act 1988. Members should notify their local tax office on their annual tax return.

■ The date for next year's South Turf exhibition at Motspur Park near Kingston, Surrey, has been set: June 21. Companies wishing to exhibit at the show should call Louise Lunn on 0347 838581.

■ Hayter has appointed Gwilliam Kellands Ltd, Somerset, as agents for Hayter Professional and Beaver mowers. Gwilliam Kellands spares distribution points are at Monkton Elm, Taunton and at the Cadbury Garden Centre, Congresbury, Avon.

■ Some fascinating facts are contained in a report published by the Golf Facilities Trade Association. These include:

- Scottish courses are more likely to use temporary greens for more than five weeks per annum than the South, where 50% more rounds are played;
- Buggies are now permitted on 50% of courses;
- Stand-alone driving ranges are more successful than ranges at courses, and ranges in the south are more popular than those in the north, Midlands, Wales and Scotland. The report costs £295 (£195 for GoFTA members). Tel: 0181 6811242.



■ Claymore Grass Machinery has appointed John Smith as its northern field engineer. He was previously in Claymore's

service department. His new duties include providing back-up and assistance when necessary for all machinery sold by Claymore dealers in the north of England.



A variety of companies. A common goal.



"Zeneca Professional Products has always believed in improving quality through education and training. Our Golden Key support of the Education and

Development Fund is a clear demonstration of this policy."
Roger Mossop, Marketing Manager, Zeneca Professional Products.



"Education and training are the life blood of the Association. Hayter are part of the Association's life. Our Golden Key support is

therefore vital."
Kim Macfie, Sales and Marketing Director, Hayter PLC



"Ransomes thought that the Education and Development Fund was a terrific initiative when BIGGA introduced it at the beginning of 1992 and it has received our fullest support since that time."

Richard Bishop, European Sales Manager, Ransomes Sims and Jefferies Ltd.



"We have supported the Education and Development Fund as Golden Key supporters since its launch in January '92 and have every

intention of continuing to do so in the future, particularly as we have seen a significant development in the standard of the education of greenkeepers throughout the UK during the time of our involvement."

Graham Dale, Managing Director, Lely (UK) Ltd, UK distributor for Toro Commercial Products.



"In the full knowledge that the industry's future lies in highly trained and qualified professionals, Breakwells as a leading distributor within the industry is pleased to support BIGGA's Education and Development Fund to help

bring about a continuing improvement in standards."

Len Breakwell, Managing Director, ET Breakwell Ltd.



"Risboro' Turf, as a BS5750 registered distributor and Silver Key supporter

of the fund, believe education and training essential for the future and are pleased to continue our involvement."

Mark Barthelmie, Managing Director, Risboro' Turf.



"As a Golden Key supporter of the fund the Toro company is happy to help focus attention on the quality of educational opportunity available. We feel that the education programme BIGGA has developed provides a breadth of management skills to meet the high demands expected by the industry today."

Mark Gunter, Technical Sales Manager,

Northern Europe and Middle East, The Toro Company Irrigation Division.



"Education and training must be the cornerstone of any successful professional body and therefore Rigby Taylor feel that it is in the long term interest of all of the major suppliers in our industry to support this fund. The members of BIGGA are our customers and we believe that it is important to invest in the future development of the industry and to use this fund as our way of showing our appreciation of the business placed with us."

Clive Williams, Sales Director, Rigby Taylor Ltd.



"Hardi Ltd, the leading supplier of chemical application and aeration equipment, are very supportive of BIGGA's Education and Development

Fund. It is vitally important that the industry at large is trained to the highest level. This is our reason for continued participation as a Golden Key supporter."

Colin Gregory, Managing Director, Hardi Ltd.



"In our view you cannot get enough training because there is always something to learn. At Jacobsen staff training takes priority, and for this reason we are totally committed to the BIGGA Education and

Development Fund."
René Orban, Director of European Operations, Jacobsen Texttron.



"Five years ago Kubota made the first grant to the Education and Development Fund and during this period the golf industry has witnessed an increasing recognition of the importance of the role of the greenkeeper. British greenkeepers now have access to training in management skills and have established a world-wide reputation for their expertise. Kubota is very proud to have been part of this process and we remain committed to the continued development of the greenkeepers' profession."

Brian Hurtley, Director, Vice-President Kubota (UK) Ltd.

The British and International Golf Greenkeepers Association thanks the following companies for their support during 1994:

Golden Key: ET Breakwell Ltd, Hardi Ltd, Hayters PLC, Jacobsens, Kubota UK Ltd, Lely UK Ltd, Rigby Taylor Ltd, Toro Irrigation, Zeneca Professional Products. Silver Key: Ransomes, Risboro' Turf

All of these companies – plus some new ones – have already pledged their support for 1995. For more details of the Education and Development Fund and to find out how you can join the Golden or Silver Key Circle, call Ken Richardson or Bill Lynch on 0347 838581

A success story

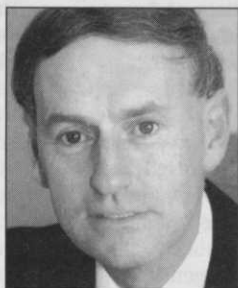
THE STORY SO FAR

On 1 January 1992 BIGGA formally established its Education and Development Fund. At the time I wrote that, "...the new Education and Development Fund has been established to enable the promotion and financing of educational programmes, scholarship awards and training aids for the benefit of the greenkeeping profession". Now some three years on we have a fund on which to draw and one which, given the ongoing commitment of both companies and individuals, will in the future be of enormous benefit for the education and training of greenkeepers.

1993 saw the production of the video 'Raising the Standard in Spray Application' which was circulated to all course manager members of BIGGA. At BTME '94 we launched the widely acclaimed career video 'Keeper of the Green' produced and financed in conjunction with the GTC. During 1994 the 'On Course Field Guide For The Major Diseases and Pests of Fine Turf' was produced and distributed and received an excellent reception from BIGGA members. Filming has just been completed for a module type video on 'Golf Course Preparation' which will premiere at BTME '95 whilst plans are in hand to produce an ecology booklet and a leaflet on grass identification. So the practical benefits of having established the fund are now evident.

FROM WHERE COMES THE FUNDING?

The fund has no guaranteed income and no grant aid. It depends entirely on what can be raised through the auspices of BIGGA. To this end it is gratifying to acknowledge the support received from companies within the industry as Golden and Silver Key supporters and this is done in good measure and quite rightly so elsewhere in this month's issue. Increasingly individual members are contributing to the fund as well as Regions and Sections. The fund is dependent on such support and those contributing are most welcome to put forward suggestions on future fund expenditure. With the companies, meetings are held twice a year to



BIGGA in focus

BY NEIL THOMAS

discuss spending programmes and to seek common ground in continuance of mutually beneficial relationships. The fund will only prosper with continued company support and individual contributions. It needs the support of BIGGA's Regions and Sections. Backing from across a broad spectrum of our industry remains vital for future progress.

GROWTH IN 1995

The fund is set to grow in 1995. Already Amenity Technology and Rhône Poulenc have confirmed as Golden Key supporters and Fenchurch will be a Silver Key supporter. Ransomes are upgrading from silver to gold status. Other new memberships are pending. It is an encouraging picture and one which allows for the development of further projects in 1995/96. All 1994 contributing companies have confirmed their continuing support for 1995 thus giving the fund a stability which will allow both for planning and for projects to come through to fruition. It is important to note that this fund is separated from the general running of the Association. Also that BIGGA has no other specific financing with which to further greenkeeper education and training and it is unlikely that alternative sources of finance will be forthcoming in the foreseeable future.

FUTURE PLANS

A major and exciting development is planned for the autumn/winter of 1995/96. There is a very definite need amongst greenkeepers for training to be provided on a local basis whilst still offering the opportunity for intensive in-house

courses at Aldwark Manor. As I write we are in the middle of the annual Management Courses and it is pleasing to report that this year's restructured courses to meet N/SVQ requirements have met with an enthusiastic response. These are real learning weeks and we plan to continue with them in the future. However there is also a need for courses to be taken to members and to facilitate training by making it available on a local basis. I am able therefore to make two announcements in relation to localised training – both made possible through the increasing resources of the Education and Development Fund.

NEW COURSES

During the first two weeks of October next year we are planning intensive Health and Safety courses on the basis of one per Region. These will be subsidised through the Education and Development Fund and be available to greenkeepers, BIGGA members and non-members alike, on a first come, first served basis.

Following on from the Health and Safety courses will be management training courses. These will be held during February and March 1996 initially on the basis of two per Region whilst it is hoped to be able to run these courses also in Ireland. These will be two-day courses financed from the Education and Development Fund with golf clubs sending greenkeepers merely being asked to meet the costs of one night's board and lodge. Again these courses will be available to both BIGGA members and non-members on a first come, first served basis. Whilst still in the planning stages it is hoped over the two-day period to offer a combination

of management and technical training. Importantly these courses will be directly relevant for N/SVQ qualifications and will therefore set attendees on the road to recognised national qualifications.

I believe these courses represent an exciting development and will help many more greenkeepers to identify with both BIGGA's educational programmes and the growing importance of the fund. For those not attending Aldwark Manor for courses, training programmes must sometimes seem remote whilst the availability of localised training will most surely be welcomed by golf clubs and greenkeepers alike. We would welcome ideas on course content as essentially those taking the courses will want to teach what greenkeepers wish to learn. If you are aware of a gap in educational provision let us know about it. If these courses prove successful then I envisage a steady expansion in the years ahead.

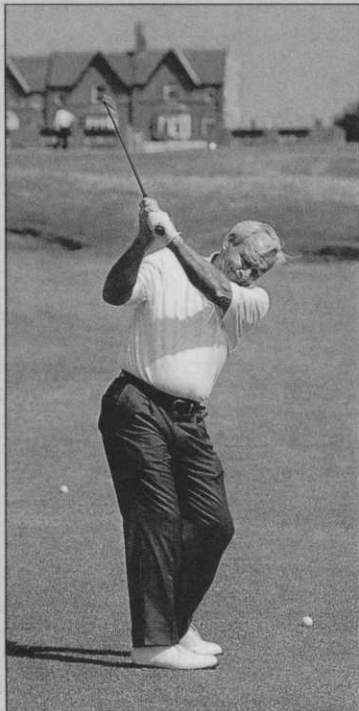
IN CONCLUSION

After three years, the Education and Development Fund, and with it the setting up of Golden and Silver Key memberships, must be viewed as a success story. The fund is even more vital today than was envisaged back in 1992. Continue to support it and seek others who will wish to be associated with the development of greenkeeping as a profession for as I wrote again some three years ago "...the enhancement of knowledge and technical expertise... will surely in turn lead to higher standards of course management and better playing conditions for golf club members".

I believe this is beginning to happen.

■ The Sussex Section of BIGGA has made a donation of £500 to the Education and Development Fund as part of its commitment to the future training of greenkeepers. In welcoming this donation, executive director Neil Thomas said: "It is particularly pleasing to receive a section donation as it is indicative of the support our members are

now giving to the fund. We already enjoy a considerable amount of company support but it is also essential that BIGGA's members either collectively through Region and Section donations or individually support a fund which is being utilised to provide enhanced training and educational opportunities for greenkeepers."



BORN: September 10, 1929, in Latrobe, Western Pennsylvania. Nowadays he spends the warm months of the year there, but makes his winter home in the Orlando, Florida, area.

MAJOR CHAMPIONSHIP WINS: US Masters – 1958, 1960, 1962, 1964; US Open – 1960; Open Championship – 1961, 1962

ARNOLD PALMER won the United States Amateur Championship in 1954 and, turning professional the following year, won the Canadian Open for the first of his 61 victories on the US PGA Tour. Over the next four years Arnold won 11 more tournaments including the 1958 US Masters, but that was only a prelude to an astonishing decade to come.

1960 was perhaps Arnold's golden year. He again won the US Masters, to the delight of his new fans who became known as Arnie's Army. Their march continued to the US Open where Arnold shot 65 in the final round to overcome a seven-shot deficit and pass 12 other contenders. Although he did not win the third leg of the Grand Slam, the Centenary Open Championship at St Andrews, he returned to win the Open in 1961 and 1962, and other stars from the US PGA Tour followed him restoring the Open to its pre-eminence amongst the Major championships.

Arnold won the US Masters again in 1962 and 1964, and was indisputably the dominant figure in world golf when he won the inaugural World Matchplay Championship at Wentworth in 1964. In all, Arnold added 19 overseas titles to the 61 he won in the United States. After turning 50 in September 1979, Palmer won the first Senior event he entered – the 1980 PGA Seniors Championship – and he went on to win the US Seniors Open the following year. Arnold has won 12 Senior titles to date, taking his competitive earnings to \$4,721,436.

Greenkeeper's

Chris Boiling joins Arnie's Army at Royal Lytham and St Annes and talks to the golfing legend about course design

Arnold Palmer is the son of a greenkeeper – and could easily have followed in his father's footsteps. His brother Jerry did. He took over from Milfred J ('Deke') Palmer as the superintendent at Latrobe Country Club in Pennsylvania. Now he is also the general manager at the course where his father started working at the age of 16 and continued until his death in 1976. MJ worked his way up to superintendent and then to pro-greenkeeper. "He ended up being both for 50 years until he died at the age of 72," says Arnold, who bought the 18-hole course in the early '70s.

For sentimental reasons? "Well, yes, I liked it and it was where I was raised. It's a great golf course," he told me as he practised for the Senior British Open at Royal Lytham and St Annes.

Latrobe is a small industrial town in Western Pennsylvania at the foothills of the Allegheny Mountains about 50 miles east of Pittsburgh.

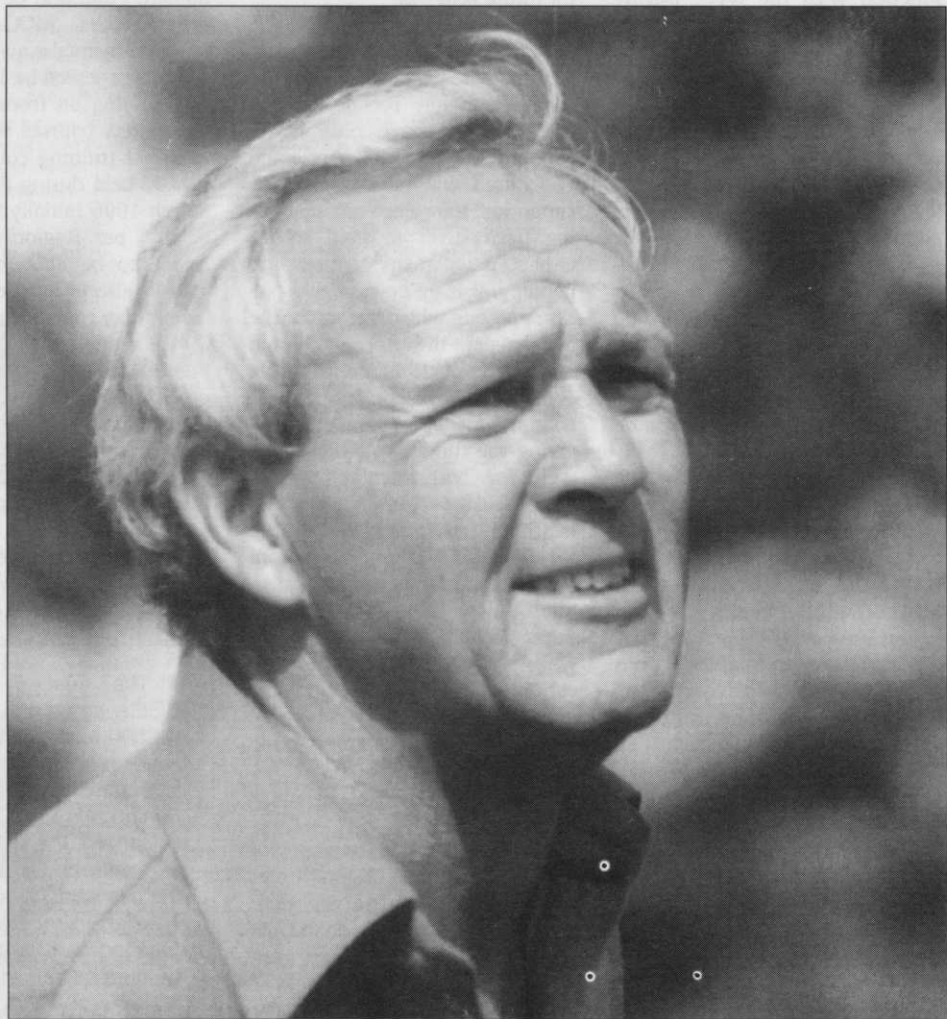
This is where Arnold learned his art using cut-down clubs. "My father was my only teacher," he recalls. "He gave me my first lesson – how to hold the club – when I was four years old. It lasted about five minutes and my lessons over the years never lasted much more than 10. I remember he put my hands on the club, showed me how to grip it and said 'Don't ever change it'. And I use the same grip today as I used then."

This grip and his distinctive swing have helped him win 92 tournaments, including the US Masters (four times), US Open (once) and British Open (twice).

His father also taught him about courses. "I worked with him building the course at Latrobe and learned a lot from his theories. He was a bit of the old school especially where things like drainage were concerned. It was all surface drainage then."

Helping his father build an additional nine holes at Latrobe in 1964 was Arnold's introduction to golf course design and construction, and he continued to stay involved with the design of courses on a limited basis during the heyday of his tournament career.

His call to design during this period was



son makes good...

through friends and associates requesting his expertise for their golf course projects. On several projects during this time (1969-71) he worked with noted architect Frank Duane.

The interest and popularity in golf course development grew in leaps and bounds in the '60s and '70s. And, as you'd expect, the golf course design services of the game's most dramatic and popular champion also increased rapidly.

In 1971 Arnold Palmer and golf course architect Ed Seay began working together – a partnership that continues today. Palmer's executive vice president and chief operating officer Ed was one of Arnold's playing partners during his Royal Lytham warm-up, with Arnold offering the less accomplished golfer this simple but effective piece of advice: "Keep your head still"

The cornerstone of Arnold Palmer's and Ed Seay's design philosophy is creating and producing the kind of golf courses for which the company's clients are asking. Most often they are looking for fun, beauty, excitement and challenge. Seldom is a course of extreme difficulty requested.

"I believe in traditional straight forward design that produces courses with lasting quality and that are exciting and enjoyable for all players. The designs are founded on the principals and strategies of the game and are sensitive to the land and the environment," says Arnold. "All of the great courses blend in naturally with the existing environment. We respect and try to preserve the existing terrain and environment on every course as much as it will allow us to do so and still stay within the framework of playability. Put simply, we do not force or design unnecessary gradework or features.

"Over the years I think we have persuaded a lot of people that you can build a friendly type golf course and do it in a way that will be good for the average player but that at the same time you can make it difficult enough on an occasion for the professional."

The greenkeeper's son was quick to add, though: "And I think of maintenance-friendly golf courses too. I like to keep the golf courses so that they are easily maintained and I think you're going to see, as time goes on, more of that because of the extremely high cost of maintaining some golf courses."

One thing Palmer's courses have in common is the absence of gimmicks and trademarks. "Hopefully all our courses are different. We do not have a design trademark, nor do we want one," confirms Seay. "We do, however, strive to design all of our courses so that they are beautiful, constructed soundly within the budget and are fun to play."

"I truly enjoy designing fun and challenging golf courses," adds Arnold.

Nothing in UK

The Palmer-Seay touch has left its mark on

courses located throughout the world. Seay, who is a past president of the American Society of Golf Course Architects, had the distinction on his own, prior to his joining Palmer in 1971, of designing many well known courses. The most prominent of these is Sawgrass in Ponte Vedra Beach, Florida, which was the site of the Tournament Players Championship from 1977-81, as well as some 100 other courses and residential developments in the United States.

The Palmer Course Design Company has been involved in over 200 golf course projects covering 27 states, as well as internationally in Japan, Thailand, Korea, China, Taiwan, Guam, Malaysia, Indonesia, Ireland, Italy, Germany, Spain, Australia, Canada, Philippines, and the first 18 hole course in mainland China.

But, as yet, they have done nothing in the UK. "I would like to know why," commented 65-year-old Arnold.

"I would too," interjected Ed.

'I knew as a youngster that I needed to be outside on a golf course, either playing or maintaining it'

"We have negotiated proposals to do golf courses in the UK on several occasions over the years but, unfortunately, for either financial or personal reasons on the part of the clients, it has not become a reality," explained Arnold whose company is currently working on 52 projects.

Sadly, for him, none are links courses.

"I would love to build a links course. We have built a couple but we don't have the opportunity often to build links golf courses," he said.

The most recent one they did – The Links of Kuilima, Kahuku, in Hawaii – received widespread acclaim and was rated by Golf Digest as one of the top four new resort courses in 1993.

"It's on the ocean and I think it qualifies very well as a links course. It is a very good golf course, one that is very difficult in the right conditions but a very playable golf course," he said. "It's one of my favourites."

Gets involved

When he is designing a course, Arnold likes to get involved in every aspect including the specification of grasses "I enjoy it – the nitty-gritty, the day-to-day stuff is fun."

As well as Ed, he receives tremendous help and support from Harrison Minchew and Erik Larsen, vice presidents and senior golf course architects with the Palmer Course Design Company.

"All of us work very well together. I give

them my feelings and thoughts on a particular hole or course and they fit it in," explains Arnold.

He knew from a very early age that golf was something he was going to do. "I knew as a youngster that I needed to be outside on a golf course, either playing or maintaining it," he recalls.

While he was growing up at Latrobe he used to take on and beat his fellow caddies, and continued his winning ways when he went to high school, dominating the game in Western Pennsylvania. He won his first of five West Penn Amateur Championships when he was 17, competed successfully in national junior events and went to Wake Forest University (then College), where he became no1 man on the golf team and one of the leading collegiate players of that time.

Deeply affected by the death in a car crash of his close friend and classmate, Bud Worsham, younger brother of 1947 US Open champion Lew Worsham, Arnold withdrew from college during his senior year and began a three-year hitch in the Coast Guard. His interest in golf rekindled while he was stationed in Cleveland. He was working there as a salesman and playing amateur golf after his discharge from the service when he won the US Amateur in 1954 following his second straight victory in the Ohio Amateur earlier that year.

It was during this period that he met Winifred Walzer at a tournament in Eastern Pennsylvania. They were married shortly after he turned professional in the autumn of 1954. "I thought about doing a lot of other things, including aviation (he pilots his own Cessna Citation VII jet aircraft). But while I was a manufacturer's rep I decided that I really wanted to be out in the air and playing golf."

During his illustrious career he achieved more than most men can dream about. But, he confessed to me, there are two unfulfilled goals. He has given up hope of ever achieving the first, but the second is still a possibility.

"I have never won the PGA Championship. This is certainly something that I would have loved to have accomplished in my younger days," admits Arnold, who finished second three times and bowed out of the competition earlier this year after 37 appearances.

"Secondly, I would like to continue to build golf courses and do design work, especially something that I haven't done yet – create a golf course totally following my own conception of what should be done in its design and construction."

All his design work to date has reflected his client's wishes, and he has not yet designed a course that just satisfies him or his company.

Even though Arnold is 65 he shows no signs of slowing down, so one day we may just see a course that is totally an Arnold Palmer design. And it may be his first course in Britain...

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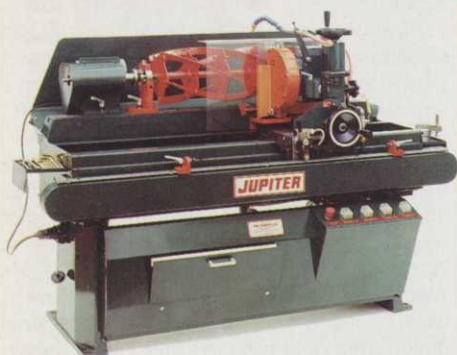
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THE MAGNIFICENT SEVENTH

A RECORD number of exhibitors will be at the 1995 BIGGA Turf Management Exhibition in Harrogate, January 25-27. More than 140 companies and golfing bodies have taken all the available space at the Harrogate International Centre. This is the first time in the seven-year history of the event that it has been a complete sellout.

Every aspect of golf course maintenance is catered for at Europe's premier fine turf show. If you're looking for seeds or strimmers, turf or tractors, mowers or mats, pop-ups or pipes, electric greens machines or expert advice, you'll find it all at BTME. All the major companies and many smaller ones will be there.

The '95 show will open at 9am on January 25 with a ribbon-cutting ceremony in the main entrance performed by BIGGA's chairman, accompanied by other Board of Management colleagues.

As well as the exhibition there is also a series of educational seminars. Subjects covered include 'Budgeting for Golf Course Management' by Colin Hegarty of the Golf Research Group, 'Rabbit and Vermin Control' by Dr IG McKillop of the Central Science Laboratory, 'Plant and Grass Breeding' by Dr David Patterson, a turfgrass breeder, 'Health and Safety' by Douglas Shearer, a health and safety consultant, and 'International Turfgrass Trends' by the world renowned Dr James Beard.

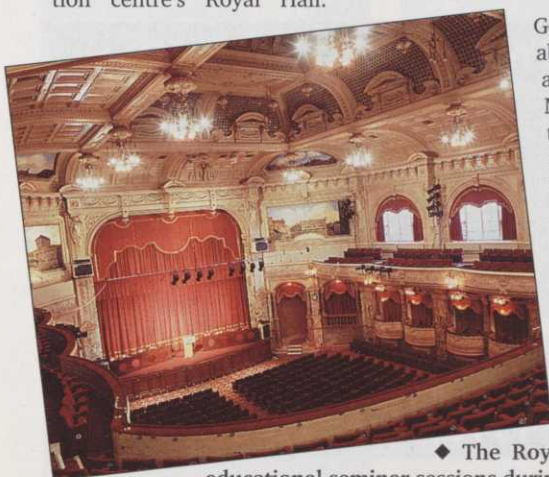
Some of Britain's top course managers will also be talking in the exhibition centre's Royal Hall.



Popular comedian Tom O'Connor and ex-New Seekers singer Lyn Paul head the all-star cabaret at The Majestic Hotel on Thursday January 26. Entertainment for the National Education Conference dinner on Monday January 23 will be provided by the Rainbow Jazz Band. Greenkeepers will be providing their own entertainment on January 26 as Wednesday night is karaoke night. Is Harrogate ready for this, we wonder?

“Every year the BIGGA Turf Management Exhibition gets bigger and better. This year's event looks set to be the best yet – the magnificent seventh. A record number of exhibitors will be at the show with many major companies using it to launch new products. A record attendance is expected from all categories of visitor. They will be seeking knowledge from the technical experts speaking at the educational seminars, coming to see the latest machinery and other products, and coming to spend time and learn from old friends. If you haven't been before, you don't know what you're missing. It's the most useful and informative week in the greenkeeping calendar. See you there!”

JOHN MILLEN
BIGGA chairman



◆ The Royal Hall – venue for educational seminar sessions during the BTME '95.

George Brown will talk about this year's Open at Turnberry, Iain MacLeod of Tain will talk about Golf Course Management in the Highlands, Jim Cassidy will talk about Ashridge – the last five years.

On BIGGA's stand there will be a legal expert offering free advice to anyone having trouble at work.



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Announcing the winners of Greenkeeper International's BTME competition

They may not have won the National Lottery, but they've won the next best thing – our popular BTME competition, worth £750 in prizes.

And the lucky winners are... **Nigel Buxton**, first assistant,

Cavendish Golf Club; **Andrew Young**, Otley College student and first assistant; and **Stuart Hogg**, deputy course manager at Fontrosse and Rosemarkie Golf Club.

First prize winner, Nigel Bux-

ton, wins return rail travel, three nights' accommodation at a top hotel in Harrogate and entry to all educational seminar sessions.

Second prize winner Andrew Young will receive return rail fare, two nights' accommodation

and entry to all seminars. Third prize winner Stuart Hogg will be given one night's accommodation in Harrogate and entry to all the seminar sessions.

Congratulations to all our winners – enjoy the show!

World class speakers line up for educational event

ENVIRONMENTAL issues, agronomy and irrigation are the main themes for the 1995 BIGGA National Education Conference at The Majestic Hotel, Harrogate, January 23 and 24.

'Green' issues will be covered by David Stubbs, executive director of the European Golf Association Ecology Unit, Neil Sinden of the Council for the Protection of Rural England, Wally Grice of the Forestry Authority, Bob Taylor of the STRI, James Moore of the USGA and Dr James Beard of Texas A&M University.

Agronomy will be covered by several course managers, including Andy Campbell.

Irrigation will be covered by

the Learning experience

Charlie Barebo of Otterbine Barebo, RA Murray of the Leeds Weather Centre, George Bell of NRA Thames Region, consultant Philip York and head greenkeeper Martin Smith of Ramsdale Park Golf Centre.

Other greenkeepers giving talks at the National Education Conference include Billy McMillan of the Wildwood Golf Club, Duncan McGilvray of Letchworth Golf Club, Joe Paulin of the London Golf Club and Geoff Allinson of Patsull Park Golf Club.

The National Education Conference is followed by the BIGGA Turf Management Exhibition at the nearby Harrogate International Centre, January 25-27. Running alongside the show is a series of education seminars with a similarly high calibre of speakers.

The quality of this line-up of speakers means Harrogate will be hosting the most informative and comprehensive fine turf education programme outside San Francisco in 1995.

"It's a week few greenkeepers, club secretaries and chairmen of green can afford to miss," says BIGGA's education officer Ken Richardson.



BTME opening times

Wednesday January 25:

9am-5.30pm

Thursday January 26:

9am-5.30pm

Friday January 27:

9am-1.30pm

◆ BIGGA's president, Viscount Whitelaw, who missed last year's show because he had some important speeches to make in the House of Lords, intends to be there this year to see how much BTME has grown since his last visit.

LATE BOOKINGS

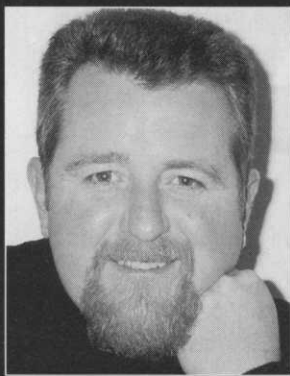
Accommodation is still available but it's being booked fast. Call Sami Collins at BIGGA HQ today to reserve your hotel room. Telephone 0347 838581.

◆ The third European Forum will take place in the Royal Hall on Thursday January 26 from 1.30-3pm. Speakers include Tommy Lindelof, chief executive of the Swedish Greenkeepers Association; Peter Shaw, international member and course manager at Munchen-Riedhof in Germany; Dennis Mortram of Reaseheath College and Joe Baidy, president of the GCSAA.

◆ The BIGGA Annual General Meeting will take place at The Majestic Hotel at 5.45pm on Wednesday January 25. All members are urged to attend – but please produce your membership cards to get in.

◆ The British Association of Golf Course Constructors will be holding a reception in the Swan Hotel from 6-7.30pm on Wednesday January 25. Admission is by invitation only.

AMONG THE SPEAKERS...



Jim Cassidy, pictured, is course manager at Ashridge Golf Club and his talk in the Royal Hall on Wednesday January 25 will be about his course – the geology and wildlife, the management structure, improvements brought about by investment in modern machinery, the irrigation system and future plans.

◆ The Institute of Agricultural Engineers' amenity and ecological engineering group will hold a special seminar in the George Hotel from 2-5pm on Thursday January 26. The subject will be Engineering Progress in Sports Turf Maintenance. Speakers will include Marvin Jaques of Ransomes, Bill Oliver of Hardi and David Jenkins of Charterhouse. Entrance is free.



The Majestic Hotel will be the base for the '95 National Education Conference. If you are going to the conference, you'll find it much more convenient if you are booked into this 156-bedroom hotel. You will also find it more relaxing as it has a heated indoor swimming pool, Jacuzzi, sauna, gymnasium, squash court, tennis court, golf driving net and snooker/pool room.

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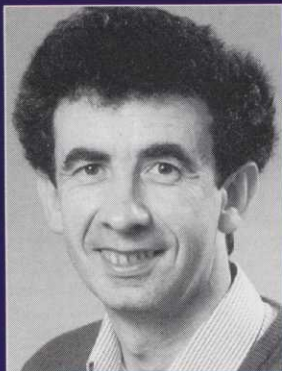
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AMONG THE SPEAKERS...



The welfare of wildlife is a growing public concern and therefore there is increasing pressure on greenkeepers to manage the problem species on their course in a humane manner. In most cases there is also legislation in place which prescribes the way in which animals can be managed, particularly, for example, badgers. Dr Gordon McKillop of the Central Science Laboratory will give details of management techniques – so greenkeepers can adopt a balanced, ecological approach to this sensitive subject – in a seminar at the BTME on Thursday January 26.

With one swipe, the queues are cut and you're in

THERE should be no long queues to get in this time. BIGGA has invested in a new pre-registration system and is employing the latest technology to ensure that visitors can walk more or less straight into the show.

For the first time, people who pre-register will get their badges mailed to them prior to the event. These badges contain a barcode. When the pre-registered visitor turns up at the Harrogate International Centre, this barcode will be 'swiped' by a light pen as you enter the hall.

A light pen will also be given free to most of the exhibitors so they can make a note of who they've been talking to (name, job title, course, address) by simply scanning your badge. Your details will then be recorded automatically for the exhibitor, so you won't have to hand out busi-

ness cards left, right and centre or hang around while someone writes down all your details in a book.

Coventry Data Services, specialists in this field since the '60s, have been commissioned by BIGGA to operate this convenient system.

Of course the key to getting in faster is to pre-register by completing the black and white folded BTME card inserted in this magazine. Pre-registrations from recent issues are already flooding in to BIGGA HQ.

FINDING YOUR WAY TO HARROGATE IS EASY
BY RAIL: The comprehensive rail network means you can get to Harrogate very easily; for example 25 trains run daily from London King's Cross to Harrogate and there are some 15 trains from Edinburgh, 16 from Glasgow and 30 from Manchester



BY AIR: Leeds/Bradford Airport is 12 miles away and has direct flights from major European cities. BY ROAD: From North and South – A1, exit Wetherby, nine miles from Harrogate. M1 and M62 to Leeds, which is 15 miles away. BY SEA: North Sea Ferries, from Rotterdam/ Zeebrugge to Hull, 60 miles away.

◆ The three qualities every greenkeeper should possess are perseverance, pride and professionalism. At the National Education Conference Geoff Allinson, the 27-year-old course manager at Patshull Park, will explain how he used these qualities to overcome problems at this 18-hole parkland course. Problems such as breaking down age barriers between him and his staff, improving greens with insufficient machinery, and overcoming problems caused by moles and buggies.



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WHO TO LOOK OUT FOR AT BTME '95

A selection of some of the exhibitors – full catalogue next month

Massey Ferguson Grass Equipment

Massey Ferguson Grass Equipment supplies a wide range of compact tractors and turfcare machinery for the professional groundscape market. In addition to its own branded products, the company is the exclusive distributor for Iseki turfcare equipment and Bucher grounds maintenance machines in the UK and Ireland. All three ranges are sold through a nationwide network of dealers.

On show at BTME will be models from the 17 to 35hp MF 1200 compact tractor line-up and the 25 to 45hp Iseki TA compact tractor range. Also on show will be the Iseki SF 300 diesel front cut mower and Iseki SG diesel riders.

Supaturf Products

Two brand new water management products for fine turf are to be launched at BTME '95 and Supaturf are preparing for a grand presentation at Harrogate. To promote the launch of these new greenkeeper products, Supaturf are running a competition with the chance to win a free trip to the GCSAA show in San Francisco with the BIGGA party. If you haven't already entered, please see the advertisement in this edition of Greenkeeper International for details.

To add to their existing range of line markers and marking liquids for both grass and hard surfaces, Supaturf have introduced a new range of line marking aerosols, called Supa Mark, ideal for use around the golf course.

BLEC

BLEC will be exhibiting some new prod-

ucts on their show stand to complement their range of construction and maintenance equipment. New machinery for 1995 includes a pedestrian overseeder, a range of attachments for Honda 2 Wheel tractors, including turf cutters, aerators, brushes, flail mowers, rotary mowers, renovators, also a new hydroseeder model has been developed for transporting on light trucks and trailers, ideal for golf course construction and renovation works.

The experienced BLEC staff will be on hand to welcome all visitors, both existing and new, on their stand.

Multi-Core

Multi-Core's TM1000 and TM1500 will be featured at BTME '95. Each machine combines robust construction with ease of maintenance, claim the manufacturers, resulting in downtime being kept to a minimum. A choice of tine spacings and sizes are available, from mini hollow and solids to 19mm hollow, giving up to five inch depth. All the current heads will be on display.

Also featured will be the popular greenkeeper pedestrian 21 inch aerator, offering reliability at an affordable price. So if you're looking for an aerator in 1995, don't forget to call in at the Multi-Core stand.

D&E Turf

Exhibiting for the fourth time at the BTME, D&E Turf are becoming well known throughout many sections of the Association for their innovative ideas and forward thinking. Many BIGGA

members have used their modern equipment for their renovation work.

In 1995 D&E launch their machinery education facility at their Bishop Auckland depot. Full details of the practical training courses will be available at BTME.

Dave Stephenson and his staff will be on the stand and look forward to answering any queries and providing competitive quotations for the many services available to the turfcare professional.

Martin Brothers

Martin Brothers (UK) Ltd have over three decades experience of servicing the amenity marketplace with quality sands and aggregates.


They believe they are now at the forefront in the supply of finest quality top dressings and rootzones, produced at quarries in Cheshire and Lincolnshire and available for delivery throughout the UK within 72 hours.

The company pledge is for quality products, competitive prices and superior service.

Martin Brothers claim that like their products, their service is second to none, backed up by helpful trained staff both in the office and in the field.

Vitax

Vitax will be displaying three new additions to their sport amenity and key product range. 50-50 Liquid Mosskiller is a fine turf and hard surface mosskiller and biocide. Pack sizes 5 litre – 10 litre. Vitax Stay Wet is the ultimate water



AMONG THE SPEAKERS...

◆ Billy's about! Billy McMillan, course manager at Wildwood Golf Club, Cranleigh, Surrey, is considering using a video for his presentation at the National Education Conference. Billy, 36, has been asked to "Put it all in perspective" by talking about greenkeeping, irrigation, agronomy and ecology – the main themes of the conference. But since he's a man of very few words (his words!), he's been asking BIGGA headquarters about what type of tape he needs to bring.

absorbing granule, say the makers, for targeting water precisely at plant root level. Fine X is a new improved seaweed formulation of this long established fine turf spring and summer powder fertiliser. Pack size 25kg. These new products will be featured alongside the full Vitax sport amenity and key range products.

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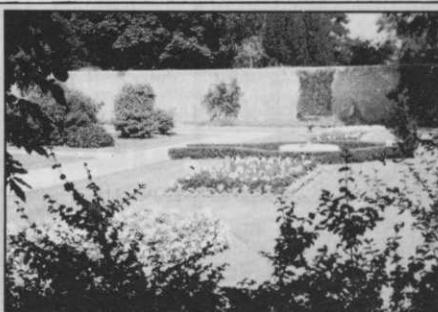
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WHO TO LOOK OUT FOR AT BTME '95

A selection of some of the exhibitors – full catalogue next month

ing reputation in supplying golf course equipment. In 1987 as demand grew for range equipment Patisson launched new innovative products to supply the driving range market. 1994 saw the new Patisson's emerge, with the launch of their new brochure and products. And now comes the new driving range brochure, offering customers a "one stop shop" for all their requirements, according to managing director, Mike Hinch.

Patissons are main distributors for Tildenet and recently signed an agreement with Range King ball dispensers. They also market a ball dispenser manufactured in the UK.

At Harrogate, Patissons will be launching a new product, which they describe as an "innovative secret". All will be revealed during BTME...

Mommersteeg

Mommersteeg lay claim to being the leading supplier of grass seed mixtures to the golf industry. Through their group of distributors covering the county they can supply top quality mixtures for greens, tees, fairways and roughs.

Whether you are planning course extensions or alterations, or you want to talk about a routine maintenance programme, visit the Mommersteeg stand at BTME for help and advice.

All mixtures are treated with Headstart – a biological growth enhancer, which Mommersteeg reckons increases the vigour of the young sward and ensures the establishment of a new playing surface as soon as possible.

Scotts

During 1994, the Scotts Company, USA, acquired Grace Sierra and its subsidiary officers including Grace Sierra UK.

At BTME '95, the new company, Scotts UK Ltd, will be introducing two new ranges of fertilisers, utilising technology unique to Scotts, which they claim to be the market leader in the United States. This will build on the already successful range of coated products, such as Sierrablen Turfmix and Osmocote N, currently available.

The new products will be of particular interest to greenkeepers maintaining sand based greens, low cut tees, fairways, approaches and surrounds including creeping bent and those interested in cost effective fairway fertilisation.

Euromec

Euromec will be displaying their new range of front deck mowers and collection machines at BTME '95. The company claims their equipment is ideal for local council use, parks, playing fields and residential areas, offering excellent productivity at competitive prices.

Mowers have been designed to collect grass cuttings. The top of the range Turbograss has a zero steering radius, to cut grass in difficult places. High speed blades cut cleanly and a powerful vacuum systems collects cuttings efficiently.

For effective vacuum collection, Euromec will have on display two innovative machines – the TurboVac and the MuckLoada.

Also on the stand will be a range of ride-on and walk behind sweeping machines.

HLD Ltd

Exhibiting for the first time, HLD will be featuring all aspects of their timber landscape and engineering product range. HLD offer what they claim is an unrivalled service for the design, manufacture and installation of timber bridges, boardwalks and access structures, with projects completed on several prestigious golf courses throughout the UK.

HLD manufacture to individual client specifications and all tanalised redwood structures carry a unique 25 year preservation guarantee.

JD Greasley Ltd

John Greasley established his business ten years ago to specialise in golf course construction. The company prides itself on high standards of work at a reasonable price.

During the last year, the company has constructed a new 18 hole course at Ridding Park, near Harrogate and has recently completed alterations including reconstruction of the greens at Open Championship course Royal Birkdale and a programme of bunker reconstruction at Wollaton Park GC, in Nottingham.

Inturf

Inturf grow a comprehensive range of turf for golf courses including high agrostis, fescue/agrostis and high fescue species in a variety of cultivar com-



AMONG THE SPEAKERS...

◆ At least four people will have water on the brain on the morning of Tuesday January 24. Charlie Barebo of Otterbine Barebo will start the drip of information by talking about ponds and lakes. RA Murray of the Leeds Weather Centre will continue the outpouring by talking about Meteorological Effects. Geoff Bell, water quality manager of NRA Thames Region, will explain how to use water wisely and leading irrigation consultant Philip York will shower you with information about how irrigation operating costs can be reduced with proper system design, installation and good management. These four talks are just part of the education programme lined up for the National Education Conference at Harrogate during BTME Week, January 23-27.

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WHO TO LOOK OUT FOR AT BTME '95

A selection of some of the exhibitors – full catalogue next month

binations popular with modern green-keeping requirements. Supplies are available anywhere, any time, say the company, in conventional rolls, big rolls or, by special arrangement, turf tiles.

Inturf say they have made tremendous advances in the industry, having developed the original and patented Big Roll turfing system and more recently their "Lay 'n' Play Turf Tiles".

Tildenet

Tildenet Ltd, the international netting company, claim to be market leaders in perimeter ballstop netting. They now supply fencing kits for self installation as well as offering a full installation service, including advice or obtaining planning permission.

At BTME, Tildenet will be exhibiting their increased range of golf practice nets, to cater from the busiest of professionals and golf clubs, to the keen beginner's back garden.

Target nets, anti-ball plugging nets and germination sheets can also be found on the Tildenet stand.

Sports Ground Irrigation

Sports Ground Irrigation will be showing the latest new products from Hunter Industries, including the new HPV electric valves and the PSC Controller for the bowling greens and residential markets. Hunter's new G750 large turf and valve-in-head sprinkler will also be featured, as well as a special section for the student greenkeeper with a range of technical literature specifically aimed at this important group.

Sports Ground Irrigation will also be offering for the first time the Phairway system of PH control, utilising the "Greenturf" system. Full technical details will be available, together with a working unit.

Lely/Toro

Toro is showing three new turf maintenance products at the BTME.

The Reelmaster 5300-D is a completely reworked model of the Toro 5100-D lightweight fairway mower with added power for cutting in tougher conditions. The new machine has the same technical specification but is fitted with a bigger engine and appropriately uprated other components. Other technical changes have resulted in excellent climbing performance.

The Greensmaster 3100-3WD is a new three wheel drive model of Toro's lightweight greens mower.

The Toro HC4000 is a new high-capacity aerator for use with smaller tractors of 25hp to 45hp. It fills the gap between larger fairway and smaller greens aerator.

Sovereign Turf

Sovereign Turf Ltd have been producing high quality turf for professional landscapers, local authorities and sports clubs since 1987. Top rated STRI cultivars, light sandy soil together with what they describe as innovative management techniques ensure that Sovereign Turf is of consistently high quality and available all year round.

Steve Williams and David Waring will

be pleased to welcome you to the Sovereign Turf stand where samples of the recently launched New Century Greens turf will be displayed. Also on show will be fine tees and hard wearing sportsturf grades.

Bourne Amenity

Bourne Amenity, marketing Tilcon products in the south of the country, are exhibiting with Tilcon at BTME '95. Bourne Amenity and Tilcon are jointly representing their complete range of amenity products available nationwide.

What they claim to be market leading products, such as Dunlop Sports Sand, Harden Redtrack pathway material and mixed top dressings and rootzones, will also be on show.

After a busy 1994 Bourne Amenity's contracting division will also be represented. Numerous projects that have been completed for prestigious clients include the London Golf Club.

Eric Hunter

Eric Hunter Grinders will be exhibiting their range of fine mower grinding machinery. The Jupiter and Juno machines are proving tremendously popular with golf clubs who are anxious to save on high outside maintenance costs and also improve cutting standards, says the company. Already used by many leading golf clubs such as Gleneagles, St Andrews and Turnberry, these machines lead the field in accurate "relief" angle grinding. This method of grinding is becoming immensely popular, they claim, due to the superior cut-

ting edge it produces which in turn has many other major benefits.

Barenbrug

Barenbrug will use BTME as a platform to advise visitors of their latest successes in the 1995 STRI Turfgrass Seed Report.

In the golf green sector, Barcrown remains at the top of the Slender Creeping Red Fescue table, where it has been joined at number eight position by newcomer Barlander. In the Chewings Fescue table, Barenbrug has three varieties in the top ten.

Heriot and Bardot perform well in the Agrostis category and dwarf perennial ryegrass Barclay and stable mate Barcredo are among the top six ryegrasses.

All the varieties will be on display in Harrogate and managing director Michel Mulder and his team will be on hand to explain the reasons why Barenbrug consistently scores so well.

British Overhead Irrigation Ltd

BOIL are staging a comprehensive display of tried and tested golf course irrigation systems at BTME. Among the equipment will be conventional and valve-in-head pop-up sprinklers, high efficiency solenoid valves, electronic control systems, associated hardware and Hunter's new PSC controller for small scale projects.

BOIL have 72 years of specialist irrigation design and contracting experience and staff are looking forward to informed discussions with turfcare professionals.

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The Hunter G-700 is a proven and reliable gear-drive for all golf course sites. New pressure port nozzling ensures efficient water distribution across the entire 23,2 to 30,5 radius range. And the G-700 features the industry's first pure flow valve filtration system for dependable performance in harsh water conditions.

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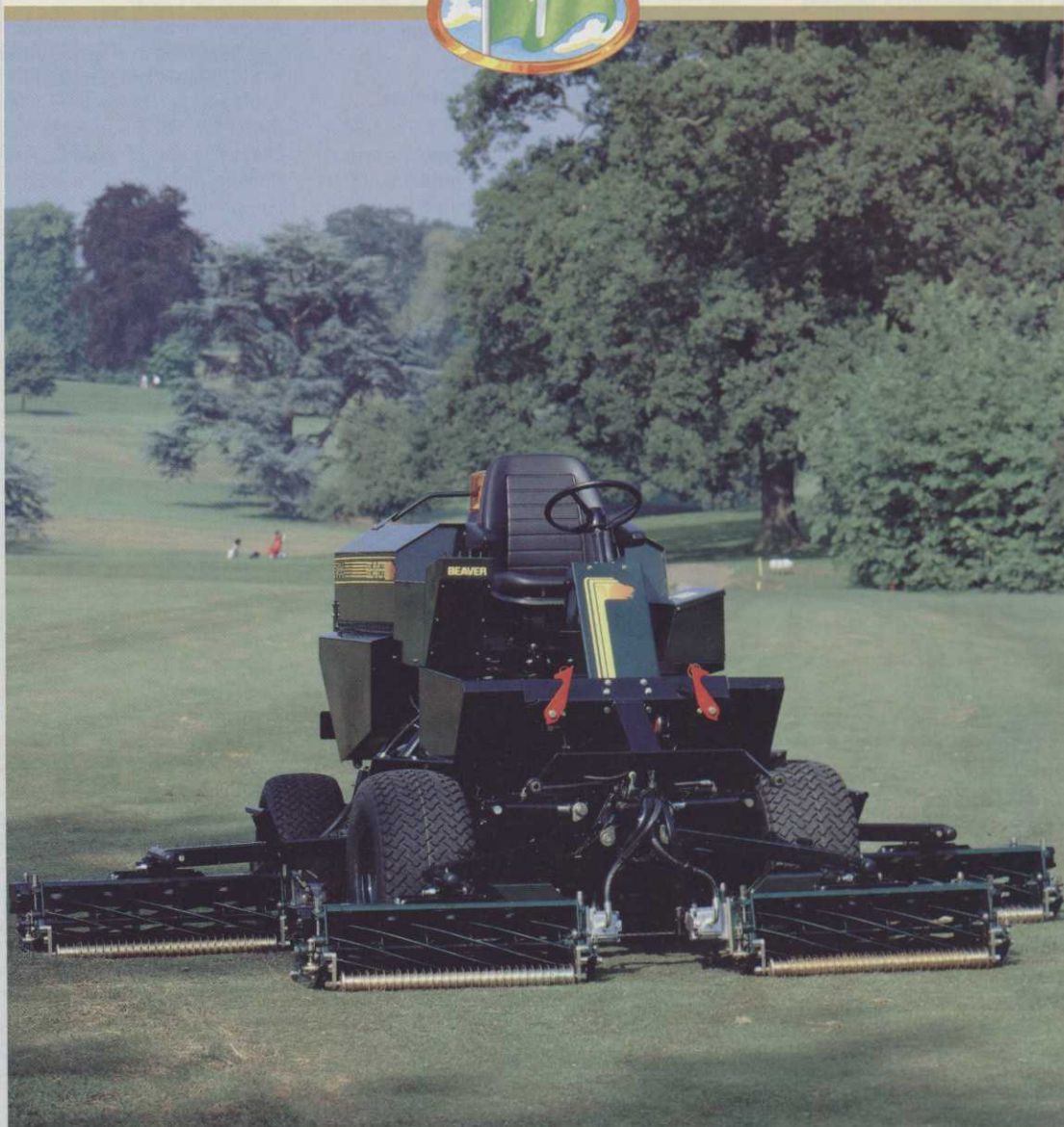
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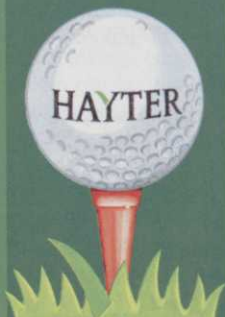
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IN SEARCH OF THE

The ever increasing intensity of traffic on golf greens during the past three decades has necessitated the development and use of high-sand root zones, such as the Texas-USGA Method. Dr James Beard, one of the distinguished speakers at both the '95 National Education Conference and BTME seminar programme at Harrogate in January, outlines the construction methods and specifications for this green which he believes is suitable for golf courses around the world.

Pre-1940, greens were constructed with high clay content soils. This was for two primary reasons: (1) better stability of the surface, and (2) better water holding characteristics that assisted in sustaining an actively growing green turf in the dry summer period when there was no irrigation capability. The compaction proneness of clay was not an issue because traffic was light.

The late 1940s and early 1950s introduced an era of (a) increasingly intense traffic, (b) public demand for higher quality turfed greens, and (c) the development and widespread use of overhead sprinkler irrigation systems for greens. The increasing traffic combined with the traditional construction approach of relatively high clay soils led to soil compaction problems that became the limiting factor in turfgrass culture on recreational surfaces.

Because the increasing soil compaction problem was seriously limiting turfgrass growth, both practitioner trial-and-error approaches and detailed soil physics research with high-sand content root zones evolved. The primary objective in using sandy textured soils was to provide adequate drainage of excess water and the resultant aeration needed to support rooting and overall healthy turfgrass growth. This early interest in high-sand root zones for greens was pioneered in the United States. The first root zone construction system that was soundly based on scientific principles and backed by extensive laboratory and field research was the Texas-United States Golf Association (USGA) method of root zone construction developed at Texas A&M University under the direction of soil physicists ME Bloodworth and JB Page. For the first time, detailed construction specifications and a soil physical testing procedure were established for green root zone construction to identify root zone components and their percentage compositions that met those specifications.

This Texas-USGA Method of root zone construction has proven the test of time with numerous successful turfed root zones having been in place for more than 30 years. Note, a key to success is proper construction that fol-

lows all the specifications in detail. Also, while this method carries the name of the original research location and the funding agency, the method is uniquely designed for use throughout the world and has successfully functioned in a diverse range of climates.

The Texas-USGA Method

Suggested specifications for the Texas-USGA Method are based on the 1960 specifications, with subsequent evolutionary refinements. It consists of a 300mm (12in) settled root zone over a 50mm (2in) intermediate coarse sand zone, over a 100mm (4in) gravel or crushed stone drainage bed which overlays a drain line network (see Figure 1). It is important that the final surface grade ensures drainage of excess water across and off the surface, usually in multiple directions. The construction method for greens is as follows:

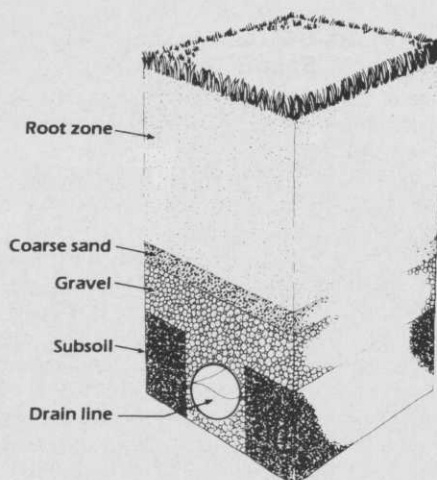


Figure 1: Profile of a Texas-USGA Method high-sand root zone modification with a water conserving perched hydration zone

Subgrade

Contour the subgrade so it conforms to the proposed finished grade, with a tolerance of ± 25 mm (± 1 in). The subgrade should be 450mm (18in) below the planned finish grade and should be firmed to prevent settling. Care should be taken to ensure that the final subgrade base contours, within the overall slope, drain off gravitational water to the nearest drain line.

Subsurface Drainage System

A herringbone or gridiron design is utilized, with 100mm (4in) diameter drain lines spaced at 4.6 to 6m (15 to 20ft) intervals at a minimum grade of 0.5 percent. The drain line trenches should be cut into the subgrade at as shallow a depth as possible. A 38 to 50mm (1.5 to 2in) depth of 6 to 10mm (0.24 to 0.39in) diameter crushed stone or gravel is placed in the bottom of the trenches and the

drain lines laid. Then additional stone or gravel is placed around and over the drain lines to fill the trenches.

Drainage Layer

Angular, hard, noncalcareous, washed, screened river run gravel or crushed stone of 6 to 10mm diameter should be selected for covering the subgrade to a minimum settled depth of 100mm (4in). The proper sized crushed stone or gravel must be obtained to prevent migration of the sand into the gravel or stone bed and thereby preserve the integrity of two distinct layers: the upper high-sand mix over gravel or crushed stone. This drainage layer functions in the rapid lateral movement of gravitational water to the drain lines. Also, the porous crushed stone or gravel base prevents the upward capillary rise of salts from the soil base into the root zone. During installation, the crushed stone or gravel is typically dumped from the delivery trucks on the perimeter and then distributed over the construction site by a small, tracked crawler tractor, being careful to avoid driving over and crushing the drain lines.

Coarse Sand Zone

A 50mm (2in) deep layer of washed, screened, hard, angular coarse sand of 1 to 2mm diameter is carefully spread over the drainage layer. The specific size of the sand particles must be within 5 to 7 diameters of the underlying crushed stone or gravel. Thus, if 6mm stone or gravel is used, the particle size of the coarse sand zone should be not less than 1mm in diameter. This coarse sand zone has two key functions: (1) To prevent infiltration of the high-sand root zone mix into the spaces between the drainage layer particles and (2) To create a perched hydration zone of plant available water immediately above the drainage layer in the lower portion of the high-sand root zone mix. The distinct interface between the coarse sand zone and the upper 300mm (12in) of settled high-sand root zone mix disrupts the continuity of surface interfaces among the particles and the downward movement of water. When the perched hydration zone above the interface approaches water saturation, the force of gravity overcomes the interface perched effect and the excess water is released downward.

Installation of the coarse sand zone is best accomplished manually, taking care to not mix the sand with or into the drainage bed. The coarse sand is dumped from the delivery trucks on the outside perimeter, and is typically moved across the crushed stone or gravel by wheelbarrows over a path of plywood boards. This thin coarse sand layer presents some difficulties in installation. However, this intermediate zone is critical to the overall concept and is a modest long-term investment compared to turf failure and

ULTIMATE GREEN

rebuilding costs if improperly constructed.

Substitution of a nonbiodegradable screen-like material for the coarse sand intermediate zone has been proposed. Problems have been observed with these geofabrics which tend to become clogged to the extent that they are impermeable to water and may cease to drain. However, a more open, non-filter mesh or netting may be used between the intermediate coarse sand zone and the drainage layer when using gravel to provide a stabilizing effect during construction. This netting should not be necessary when using angular crushed stone due to the stability of this material.

Ringling the Perimeter

Polyethylene sheeting should be permanently inserted as a vertical barrier between the outer native soil and the root zone mix. This barrier prevents lateral water transfer into the adjacent dry soil, which would cause perimeter turf water stress. When the sheeting is extended 100 to 150mm (4 to 6in) above the surface during construction, it will also function in preventing erosion of unwanted soil onto the construction area.

Root Zone Mix Installation

Quality control is the key to successful execution of root zone modification. All root zone mixing should be completed off the construction site, termed off-site mixing. Although it sounds good, in practice the procedure of in-place rotary tilling of the organic and/or soil components into the high-sand component has not been successful. Every truck load of each component in the soil mix, as well as the gravel and coarse sand, should be checked at delivery to ensure that the specifications are met.

Off-site mixing includes soil shredding, screening to remove any objectionable stones, and addition of the specified proportions of each mix component. Because of the narrow range in acceptable limits of the physical properties, it is very important that the laboratory recommendations be explicitly followed in mixing the components of the root zone mix. Upon confirmation that the root zone mix has met the specifications, it is transported to the construction site and dumped around the perimeter onto the coarse sand zone. A small, crawler tracked tractor with blade then pushes the mix over the area being careful to avoid crushing the drain lines. Be sure the unit is operated with its weight on the root zone mix. This reduces the chance of disturbing the lower construction profile.

Caution: Use of wheeled tractors causes rutting and they are more likely to crush the drain lines than are tracked vehicles. Grade stakes placed in a grid pattern at 3 to 4.5m (10 to 15ft) intervals will aid in constructing the final contours to the specified root zone

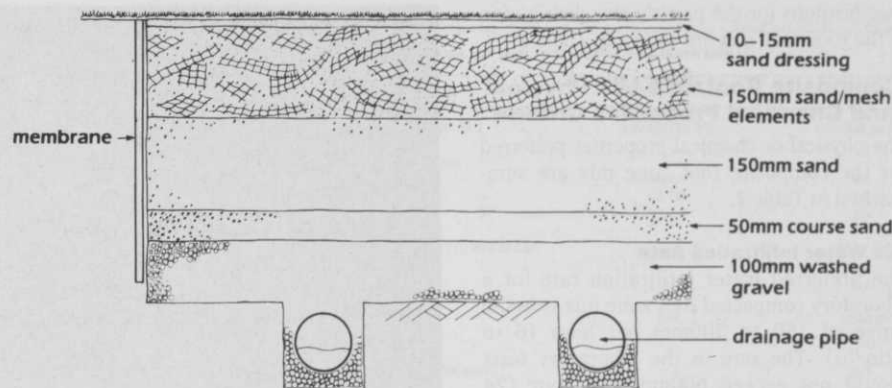


Diagram indicates typical Texas-USGA green construction incorporating mesh elements in sand rootzone. Note membrane to prevent sideways migration of water/clays from surrounding soil structure

depth. Success has been achieved by carefully selecting the components of the root zone mix and by careful adherence to the construction guidelines.

Texas-USGA Root Zone Mix Specifications

One of the greatest problems encountered in maintaining turfgrasses is soil compaction. This pressing together of the soil particles into a more dense mass results in impaired drainage of excess water and a loss of proper aeration needed to provide oxygen for healthy root growth. As a consequence, there is a general decline in turfgrass health, vigor, and recuperative ability following turf injury from wear stresses.

Soil compaction and the resultant negative effects can be minimised by selection of a high-sand root zone of the proper particle size distribution and associated key physical and chemical characteristics. The result is minimum proneness to compaction, adequate drainage of excess gravitational water, and proper aeration to provide needed oxygen for root growth and related soil biological activity.

However, such high-sand root zones are very droughty due to poor water retention capacity unless a perched hydration zone, such as achieved through the Texas-USGA Method, is utilised in the construction specifications. In addition, high-sand root zones tend to have a low cation exchange capacity, thus, the leaching of essential plant nutrients is a greater concern, particularly during the initial years following construction. This potential problem can be minimised through the use of slow release nutrient carriers and/or the timely use of foliar feeding techniques.

Composition of the 300mm (12in) settled depth of root zone mix should be selected based on specific physical tests conducted in a reputable physical soil test laboratory. The test report specifies the particular materials and the percentages in which they are to be mixed. The desired characteristics for a

Texas-USGA Method root zone mix are given in the following paragraphs.

Component Descriptions of Root Zone Mix

It is important that the three components selected for the root zone mix be free of toxic levels of materials such as heavy metals, persistent crop herbicides, and industrial organic chemicals. Minimal amounts of soluble salts, boron (B), and sodium (Na) are preferred.

Sand Component

Angular, hard, washed, screened silica sand is strongly suggested. Avoid high pH calcareous sands. The preferred sand component particle size is: 100 percent below 1mm (18 mesh), 65 percent below 0.5mm (35 mesh), 25 percent below 0.25mm (60 mesh), and 5 percent below 0.075mm (20 mesh). Note: the mesh sieve size refers to the US standard of the United States Department of Agriculture (USDA).

Organic Matter Component

It is suggested that the organic matter source selected be well decomposed and have no more than 15 percent ash or mineral content, preferably less than 10 percent mineral content. Examples include peat humus and reed-sedge peat. The organic material should be shredded to ensure mixing uniformity, but not to the degree that the material is pulverized thereby causing reduced soil water infiltration.

Soil Component

A sand, loamy sand, or sandy loam topsoil is suggested. The soil should be shredded to ensure mixing uniformity and should be screened to remove stone and other debris.

Composite Root Zone Mix Particle Size Distribution

It is suggested that the root zone mix contain less than 25 percent particles smaller than 0.25mm (60mesh), and contain less than 5 percent silt and 3 percent clay. The suggested

IN SEARCH OF THE ULTIMATE GREEN

specifications for the particle size distribution of the root zone mix are shown in Table 1.

Composite Rootzone Mix Physical and Chemical Properties Criteria

The physical or chemical properties preferred for the composite root zone mix are summarised in Table 2.

Mix Water Infiltration Rate

The preferred water infiltration rate for a laboratory compacted root zone mix is in the range of 150 to 300mm per hour (6 to 12in/hr). The rate in the laboratory tests should not exceed 600mm per hour (24 in/hr). The upper limit in the water infiltration rate is designed high enough to account for the normal on-site reduction in infiltration rate that occurs during the first 3 to 4 years due to increases in roots and organic material.

Mix Aeration Porosity

An acceptable total pore space volume is between 40 and 55 percent. The preferred distribution would be 22 percent capillary and 25 percent noncapillary pore space. Noncapillary pore space should be not less than 15 percent. The measurements are made on a root zone mix that has been allowed to percolate water for 8 hours and then is drained at a tension of 400mm of water.

Mix Water Retention Capacity

An acceptable laboratory-established 400mm water retention capacity would be between 12 and 25 percent by weight on a 105 to 111°C-oven dry soil basis. The available water in the soil is estimated to be that held at a tension of 400mm of water, which is the approximate distance from the surface to the drain line. The preferred water retention capacity is 18 percent, or 1.5mm of water held per 10mm of soil.

Mix Bulk Density

The preferred root zone mix should have a bulk density of 1.4 grams per cc; with a minimum acceptable bulk density of 1.2 and a maximum of 1.6 grams per cc.

pH

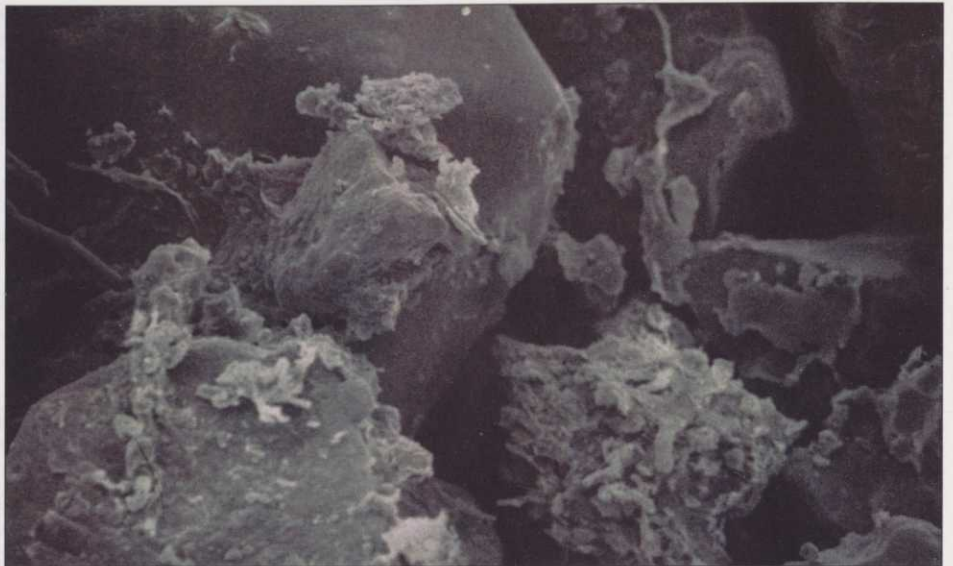
The acceptable pH range is 5.5 to 8.0, and the preferred pH range is 6.0 to 6.5.

Soil Salinity/Electrical Conductivity

The acceptable range is less than 4 millimhos per cm, with the preferred range being between 0 and 1.

Soil Sodium Level

The acceptable range is an exchangeable sodium percentage (ESP) of less than 15, with the preferred being a minimal sodium level.



Above: Electromicrograph of mature rootzone with mesh elements showing clay platelets on soil particles but not bridging between, allowing soil pore structure to remain open.

Below: Electromicrograph of mature rootzone without mesh elements, showing clay platelets covering soil particles and bridging pore structure. This inhibits water infiltration.



Root Zone Mix Analysis

The starting point in selection of a root zone mix involves obtaining detailed physical and chemical descriptions of the components being considered for a root zone mix and how they respond when mixed in various combinations. One or more representative samples of each sand, organic matter, and sandy soil component under consideration for use should be submitted to a reputable laboratory.

The primary laboratory physical determinations made are the particle size distribution, bulk density, and mineral composition. The next laboratory step is to combine various proportions of the sand, organic matter, and sandy soil, based on physical determinations. These trial mixes are compacted and then evaluated for water infiltration rate, moisture

retention, bulk density, and pore space. Mixes are made and tested until one is found that conforms to the standards. Recommendations as to the relative volume of each component to be used are then given.

The crushed stone or gravel for the drainage layer and the coarse intermediate sand also should be tested for particle size diameter to assure that the root zone mix does not wash down and block the drains.

In addition to recommendations concerning the appropriate sand, organic matter, and soil materials and their mix proportions, a description of the chemical properties of each material is needed. Included are the pH, total salts, and levels of phosphorus (P) and potassium (K). A sodium (Na) analysis is occasionally needed.

Submitting Soil Materials for Testing

A laboratory physical analysis requires a minimum of 8 litres of sand, and 4 litres each of organic matter, soil, intermediate coarse sand and crushed stone or gravel. If there is a choice of sands, organic materials, and sandy soil, send samples of each along with a note indicating a preference based on cost, accessibility, and quantity available. The laboratory will attempt to use the preferred, most cost effective materials in the recommended root zone mix.

Representative samples of the materials must be collected. If the materials are stocked, make sure to composite several samples dug from within the side or top of the stockpile. Materials near the edge or on a sloping surface may not be representative. Make sure that a prospective vendor will have sufficient stocks of uniform materials over a long period so that if there is a delay of a few months, the materials available at the time of construction will be the same as the original samples tested. All samples should be packaged separately and securely. Strong plastic bags inside cardboard cartons or metal cans are most satisfactory. Use plastic labels inside the package and also to mark the outside of the package.

Construction Plan

Proper construction usually involves an extensive subsurface drainage system, specialised root zone modification, and subtle surface drainage contours. It is a critical aspect, since improper construction due to cost cutting results in higher long-term maintenance costs, problems in maintaining a quality playing surface, frequent loss of turf, and costly reconstruction. The steps in construction are:

1. Survey and stake
2. Construct subgrade
3. Install a subsurface drainage system
4. Modify root zone:
 - (a) Construct drainage layer
 - (b) Construct coarse sand zone
 - (c) Mix and install specified root zone
5. Install irrigation system
6. Finish surface contours
7. Plant
 - (a) Soil pH adjustment, if needed
 - (b) Fertilisation based on soil tests
 - (c) Plant
 - (d) Post-plant care

Throughout the world tens of thousands of greens have been constructed this way during the past 30 years as it has many advantages.

High-Sand Root Zone Advantages

While there have been a number of high-sand content root zone specifications proposed, many being modifications of the

Table 1: Suggested guidelines for particle size distribution of the Texas-USGA root zone mix

Gravel	Very Coarse	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt and Clay
> 2 mm	1 - 2 mm	1.0-0.5 mm	0.50-0.25 mm	0.25-0.10 mm	0.10-0.05 mm	< 0.05 mm
Maximum 3% Ideal 0%	Maximum 7%		Minimum 50%		Maximum 17%	Maximum 3% clay 5% silt
Maximum		Desired range		Maximum		
Not more than 10% of total		65% Minimum 75% Optimum		Not more than 25% of total, preferably 10% of total		

Table 2: Suggested physical and chemical guidelines for the composite root zone mix

Physical or chemical property	Units	Acceptable range	Preferred
Infiltration rate of compacted mix	mm per hour (in./hr.)	150-600 (6-24)	150-300 (6-12)
Aeration porosity:	% by volume		
Total pore space		40-55	47
Noncapillary pore space		15-30	25
Capillary pore space		15-25	22
Water retention capacity	% by weight (mm H ₂ O/10 mm of soil)	12-25 (1-2)	18 (1.5)
Bulk density	gram/cc	1.2-1.6	1.4
Soil reaction 6.0-6.5		pH	5.5-8.0
Soil salinity (electrical conductivity)	EC x 10 ⁻³ (millimhos/cm)	< 4	0-1
Soil sodium	ESP	< 15	—

Texas-USGA Method, they tend to be deficient in sound science with inadequate fundamental research to support the concept. Many proposed root zone mixes are only slight modifications of the Texas-USGA Method, but they result in significant changes from a practical soil physical performance standpoint. Among all these proposed root zone mixes, none have proven nearly as successful and reliable under a diverse range of climatic and soil conditions throughout the world as the Texas-USGA Method. The advantages of a high-sand root zone of the proper particle size distribution include:

1. Resistance to compaction problems.
2. Favourable soil water infiltration and percolation rates.
3. Increased effective precipitation due to reduced surface runoff.
4. Enhanced aeration that provides adequate oxygen for root growth.

The primary problem now developing is not the underground limitations of poor drainage and lack of aeration characteristic of the finer textured root zones, but rather the divoting and turfgrass wear of above ground shoots. Under an ever increasing intensity of traffic stress, this latter problem eventually leads to turf thinning and bare areas. The use of improved turfgrass cultivars with (a) more rapid shoot growth rates, (b) a greater green biomass, (c) higher proportion of sclerified tissue in shoots, (d) better recuperative potential, and (e) disease resistance has partially solved this problem.

The next step is to incorporate an effective method of stabilizing the high-sand root zones, while retaining a favorable environment for turfgrass root growth. That's why Samuel Sifers and I have been assessing the use of randomly orientated, interlocking mesh elements

domly oriented, interlocking mesh elements, such as those made by British firm Netlon.

The polypropylene mesh elements consist of discrete 50 by 100mm (2 x 4in) rectangular elements, with open ribs extending from the perimeter. The square aperture between the individual ribs of the mesh element is 10 by 10mm (0.4 x 0.4in) or 100mm² (0.16 in²). The open ribs extending from the perimeter of each mesh element facilitate an interlocking structure of multiple elements in a randomly oriented matrix. The result is a unique three dimensional matrix of a relatively fixed, but microflexible nature, which ensures that the mesh elements remain in a stable position within the root zone. The turfgrass roots intertwine the mesh element ribs to secure a strong turf anchorage effect. The rectangular shape and specific size of the mesh elements selected for these investigations are based on extensive studies comparing a range of alternative shapes and sizes in terms of the most effective configuration for overall soil stabilization.

Five key studies have been conducted since 1985 at College Station, Texas, including two long-term field investigations. The findings revealed these benefits:

- enhanced soil stabilisation especially in sandy soils and on steep slopes;
- improved load-bearing capacity;
- better resistance to surface rutting and deformation;
- reduced divot size;
- enhanced divot opening turf recovery;
- reduced lateral cleat turf tear;
- enhanced turfgrass rootzone - improved water filtration rate, soil water percolation rate, soil moisture retention and overall turfgrass health.

There was also less compaction and a reduced potential for black layer problems, especially on fine textured high-sand root zones.

These qualities mean that mesh elements are suitable for use not just on greens but also tees, buggy paths and for bunker and grassy mound banks.

Around the Green

Keeping in touch with news and comment from the regions

CENTRAL SCOTLAND

The first real frost of the season did not help head greenkeeper Graeme Downie and his staff prepare Braehead GC for our final golf tournament of the season. But the sun did eventually break through and the course was in first-class order by the time the 50 section members and guests teed off.

The sun didn't last too long, however, and we ended up with a day of blustery showers. Nevertheless, everyone appeared to enjoy themselves, especially the winners:

Best nett agr spring and autumn – J Ellis, Glenbervie, 148; best scratch – W Whitfield, Stirling, 71; best nett – R Hadley, Pitreavie, 69; class 1 – 1, M Laing, Aberdour, 69; 2, N Morrison, Leven, 75; class 2 – 1, J Gray, Haggs Castle, 71; 2, F McNeill, Braehead, 71; Patron's Prize – K Brunton, Souters, 75; Guest's prize – A Morrison, Leven, 72; Braehead Presentation Glass – W Whitfield, Stirling, 71.

Our sincere thanks go to Braehead GC for extending us the courtesy of their club and for the presentation of a beautifully engraved whisky glass, to club captain Val Buchan and secretary Paul MacMichael for joining us on the day, and a special thanks to Val for presenting the prizes in the evening. The hospitality in the clubhouse was excellent, thanks to Dave and Janette who were kept going all day providing first class fayre and drink.

Graeme Downie and his staff deserve a special thanks for all the hard work they put in on the morning of the tournament getting the course ready, despite the frost. Well done lads!

The quiz night which followed the golf tournament was quite successful with everyone joining in the 'spirit' of things, which made some of the answers rather interesting. It is intended to hold a further quiz night during the winter months, when wives and partners will be most welcome.

The next major event will be the BTME at Harrogate next month, which more and more members of the section are making an event not to be missed, and where they can renew old friendships and make many new ones. As usual the Scottish Region is running a coach for this event, so if you wish to go and have not booked your place yet, get in touch with Elliott right away as there may still be a few places left.

A date for your '95 diaries is Thursday April 13 when the Spring Tournament/Hayter Challenge qualifying round will be held courtesy of Aberdour GC.

As we near the end of another year I would like to thank everyone who has supported the section in '94, with special thanks to all our friends in the trade for their assistance in organising lectures/demonstrations etc on our behalf and for their continued support of our golf tournaments.

Here's wishing everyone every success in '95.

JOHN CRAWFORD



EVENTS DIARY

December 1: Scottish Region North Section one-day conference at Craibstone Estate, Bucksburn, Aberdeen

January 23-24, 1995: National Education Conference, Harrogate

January 25-27: BTME '95, Harrogate International Centre

SURREY

Unfortunately our Autumn meeting, due to be held at Burhill GC, had to be cancelled through lack of support.

Ian Kerry has very kindly supplied our section with a coach for members wishing to attend the BIGGA Turf Management Exhibition. Members who are interested should contact Derek Walder on 0737 246088 as soon as possible.

Congratulations go to Euan Grant of Effingham GC upon winning the Toro/PGA European Tour Student Greenkeeper of the Year award, representing Plumpton Agricultural College.

A second winter lecture has now been arranged for February 13. The lecture, to be given by Watermation, will be held at Walton Heath Artisans Club.

A reminder to members wishing to receive an entry form for the annual Gentleman's Dinner – please return application slips as soon as possible to avoid disappointment.

On behalf of the Surrey committee, I wish you all a Merry Christmas and a Happy New Year.

DAVID GIBBS

DEVON AND CORNWALL

Our first meeting of the winter season was held at the excellent venue of Dainton Park GC by kind permission of the owner, David Wood.

The day started with our golfing members playing a stableford competition over the superbly presented course for the DO Hunt Trophy. Non-golfing members were treated to their customary course walk, guided by host greenkeeper Buster Lewer.

After an excellent lunch Don Hunt of Roffeys presented the prizes he had donated for the morning DO Hunt Trophy to: 1, Steve Milne (Exeter) 40pts; 2, Tony Gooch (Torrington) 33pts; 3, John Parr (Exeter) 31pts.

Our congratulations to Buster Lewer and his lads for having the course in excellent condition.

Our afternoon educational talk on 'Anthracnose and Take-All Patch' was presented by Neil Baldwin of Service Chemicals. Neil's talk was most informative and has set a very high standard for our forthcoming meetings to follow. Our sincere thanks to Neil for making the long journey to Devon and for his superb talk.

The raffle rounded off a most successful day, with thanks to all the trade who donated prizes to the raffle table. Our thanks to Don Hunt and Roffeys for donating the morning's prizes and to Mr Wood and all Dainton Parks staff for making our day such a success.

There are still a few places left on the region's 1995 trip to Harrogate and BTME but you need

to hurry as places are going fast. To recap, the Westurf-sponsored trip includes return coach travel from your nearest pickup point, three nights b&b and entry to all seminar sessions for only £99 per member. Wives are welcome at only £75 excluding the seminar sessions. For more details please contact Gordon Child on 0803 844056.

Wishing you all a Happy Christmas and a prosperous New Year and I will hopefully see you all at Fingle Glen on Wednesday January 11.

RICHARD WHYMAN

BERKS, BUCKS AND OXON

Our Autumn Tournament at Temple GC once again proved popular. Unfortunately I could not make it on the day but judging by feedback the course was in excellent condition as usual. Thanks to all staff for preparing it and to the catering staff for the excellent food.

First overall were S Lamb and S Cook (Donnington Valley) with 87pts on countback from T Chester and M Fuller (Wimer Hill). Best am score came from C Mitchel and K Moddy (Maidenhead); best pm was P Clark and C Davis (Hillingdon). Longest drive – J Elton. Nearest the pin – N Edwards.

The final of the Rigby Taylor fourball was held at Mill Ride GC. Thanks to Gordon Irvine for hosting the event. Result: D Goodchild and I Rose (Ellesborough) beat R Wooten and B Payne (Burnham). Thanks to Roger from Rigby Taylor for organising the event and providing all prizes.

A football match between Bucks and Berks ended with Berks making berks of Bucks, winning 3-2. Thanks to Kimble cricket and football club for allowing a bunch of greenkeepers to hack up their pitch. Apparently the losing team has to return with Verti-drain and topdresser to return the pitch to some sort of normality.

Hopefully this match is just the start of a series between the three counties so anybody willing to represent Oxfordshire please contact me on 0491578147 (European rules do not apply – all nationalities welcome).

That's all folks, except to wish everybody a Merry Christmas and a Happy (hic!) New Year.

LINDSAY ANDERSON

AYRSHIRE

Results from the Autumn Outing: Texas Scramble – 1, Kevin Brunton, Brian Inglis, Dale Norquay, David Wilson, 61-4.4= 56.6; 2, George Brown, Martin Lothian, Jimmy Johnstone, William McMeikan, 63-4.4= 58.6; Stewarts Trophy – New member, David Nelson 96-24=72; Visitor, Gordon Moir 83-6=77; trade, Brian Inglis 75-1=74; Rigby Taylor Trophy (class III) – 1, Jason Buxton 90-20=70; 2, Jim Paton 102-19=83; 3, Jimmy Johnstone 101-16=85; Scottish Grass Trophy (class II) – 1, Jim Devlin 86-11=75; 2, Derek Wilson 87-9=78; 3, Duncan Gray 89-10=79; Richard Aitken Trophy (class I) – 1, George Brown 77-5=72; 2, Harry Diamond 83-5=78; 3, William McMeikan 85-7=78; Scratch – Brian Finlayson 76.

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SOUTH WEST

Two more team wins over recent months have meant that the section has made a clean sweep in all team matches this season, something which is not normally achieved. Congratulations to team captain Dave Neale on his successes and team organisation for each event.

The first of the latest successes came at St Pierre against the South Wales section. Played in excellent weather on a picturesque course, victory was gained by a margin of six matches to two with some good golf being played by many to achieve this. It was pleasing to note that the after-match attendance was well supported for the presentation, so rounding off a very enjoyable day. Thanks to Peter Lacey for his organisation, to St Pierre for courtesy of the course, and to the Welsh lads for their hospitality. Future events against the Welsh section will be organised on an alternate basis with a venue not too far over the bridge being chosen in England for next year.

Our annual match against the South Coast, at Marlborough GC, was played in rather blustery cool conditions. The winning margin was somewhat closer at three matches to two. An enjoyable day included a first-class meal provided by the stewardess. Thanks to Dan Dobie and his staff for producing a course in fine condition, to Marlborough for course courtesy, and Bob Cully and his team for their participation. Next year's venue has been the choice of the South Coast and will be Lee on Solent GC.

The education continues throughout the winter with BTME in January and a lecture and round of golf to be arranged as a section event in the early months of the New Year. PA1, PA2, first aid and chainsaw instruction courses are all ongoing too. Interested? Then phone me on 0272 793127 for further details.

To round off it just remains for me to wish you a Happy Christmas and thank everyone who has supported the section in 1994 to make the year a success.

KEVIN GREEN

SOUTH WALES

The weather was splendid and St Pierre was in good condition for the annual match, South Wales versus the South West section. Despite a few hiccups, the day went well and was thoroughly enjoyed by all, but especially Kevin Green and his team from the South West, who cleaned up!

Not only did they manage to win back the trophy by winning six of the eight matches but with thanks to Paul Ferragut and Nigel Pring they won the longest drive and nearest the pin competitions as well.

My thanks to all who took part but especially David Gladwin/Adrian Panks and Windsor Marks/Julian B Jones who were our only winning pairs.

Our sincere thanks to all at the St Pierre Golf and Country Club for allowing us the use of the course, for their hospitality and for feeding us so very well, to Avoncrop and Rod Feltham for their support and sponsorship, and to the South West team for making this annual fixture so competitive and enjoyable.

The region's annual workshop at Cannington College was on Health and Safety at Work, with Jon Allbutt and Richard Newman. The attendance could have been much better than it was for this important topic, but nevertheless it was an enjoyable and very informative lecture. We thank both Richard and Jon for their efforts in this ever decreasing minefield of information.

Around the Green



The South Wales section's winter evening lecture programme is well under way at Pencoed College, Bridgend. Unfortunately I was unable to attend the first lecture – Dr W Rees' paper on soil science: "To help or hinder?" – but I understand a very informative and amusing evening was had by all. I was also glad to note the attendance was good, hopefully though this can still improve.

It was good to see so many locals supporting Celtic Mowers' annual open day at Margam Park, despite the weather. Both Kim and Sue were very happy with the steady stream of people that showed interest throughout the day, despite the mad rush come lunchtime (some things never change). Celtic Mowers have broadened their horizons so to speak and now stock a large range of chemicals, fertilisers, grass seeds as well as their ever increasing machinery range, so if you haven't visited them for some time they're worth it.

Have you booked your seat on the coach to Harrogate yet? The region is again offering an unbelievable opportunity for you to attend the BTME at Harrogate for £99. You will all have received an application form for this offer, take advantage of it! Contact Gordon or Marion Child today and reserve your space.

Congratulations to Steve Price, formerly of St Mellons GC, Cardiff. Steve, who spent eight years there, took up his new appointment as course manager of Keith Morgan's Kings & Queens courses at Usk on November 14. We wish him well and look forward to him hosting

one of our competitions in the near future.

If you have any queries or would like more information, call me on 0792 233923 or 0850 716403.

PETER LACEY



CLEVELAND

Harry Lees has resigned from the committee of the Cleveland section. Harry is a founder member and has been a hardworking and active member. He has also been our chairman for three years. He remains, however, a member of the section.

George Malcolm, another founder member, is to end his long stand on the Board of Management. He has been the national chairman of both BIGGA and the old BGGA and has served for 15 years on the national committee. He is a very active and energetic figure and is a valued member of the Cleveland section and committee. Well done, George.

Dinsdale Spa's pond at the 14th has been greatly deepened by Tony Mears and his staff, and Chris Powley has been made up to first assistant.

There will be a meeting on training, with the GTC's David Golding, and BIGGA's education officer Ken Richardson on February 16 at Darlington GC. On March 16 there will be a lecture on organic feeds at this club.

Once again Bowes and Raine of Darlington are sponsoring a coach to the BTME in Harrogate in January. See you all there!

Results from the Autumn Tournament at Middlesbrough Municipal GC: 1, A Sussell, J Seaman 41pts; 2, B Walker, J Beresford 40pts; 3, M Callahan, A Goodchild 40pts; longest drive – Bob Lawton; nearest the pin – Alan Goodchild.

Event sponsor Alan Goodchild was presented with BIGGA inscribed glassware in appreciation of his support to the section.

Thanks to Ian Holloran and staff for excellent course presentation, to Norman Sheddson of Aitkens for marking the score cards and to the following for their support: Zeneca, Rhône-Poulenc, Ryton Sand Co, Aitkens, Middlesbrough MGC, Billingham GC and Alan Goodchild.

BRUCE BURNELL



LONDON

The final of the summer knockout, played at Highgate GC, was between Richard Andrews/Russell Ling and Dick Dunne/me. The opposition were playing on home territory and the standard of golf was very good. We managed to take the match to the 20th hole but the pressure was too much for us with Richard and Russell jumping in to win the game. I might add that Richard played excellent golf and his score for the 18 holes was a gross 69 which was 9 under his handicap. I would like to thank Gem Professional for sponsoring the event and providing the prizes.

The regional seminar attracted a good attendance from our section, but it was very disappointing from the other sections around the area. I would like to thank our speakers and congratulate them all on their presentations. I would also like to thank Oaklands College for their hospitality and the excellent facilities that were on offer. The day could only be successful with the support from the trade and we thank you for your help and contributions that kept the cost to a minimum for all the delegates that attended.

We will be running a number of winter workshops and details will be sent out. Please remember to keep me informed – you can phone me in the evenings on 081 9595629.

TONY DUNSTAN



NORTH WEST

In October I had the privilege of playing in the Kubota Challenge at The Belfry, as one of the BIGGA team. The Challenge comprises four teams – BIGGA, Golf Club Secretaries, Golf Foundation and the English Golf Union. The competition, played over two days, has been going 14 years with the greenkeepers winning 11 times. But this year, I'm afraid, we could only manage second place with the Golf Foundation scoring their first win since the inception of the competition.

The golf was played very competitively but in the friendliest of spirits, making the game most enjoyable. The course was in great condition thanks to Derek Ganning and his staff and, I must admit, not as frightening as I expected, but with some fantastic holes. I would like to thank Kubota for a most enjoyable two days, with never-ending meals, a very welcome watering hole on the 10th tee, for showering us with gifts but most of all for giving us the opportunity to play this magnificent course and to meet the other people involved in the golf business.

Now onto North West business. I think I should try to arrange some lectures for the section on map-reading. The reason is that only 13 greenkeepers turned up for our AGM at West Derby GC and seven of these are on the commit-

tee. I can only assume that the other 300 or so members got lost on the way as I received no phone calls offering apologies for not being able to attend. Seriously though, members are not obliged to attend the AGM but it is important that members take some interest in the running of the section, and the way to show it is to attend the AGM. The committee decided to serve on for a further year and were voted on en-bloc. The N/W section committee, therefore, is: Chairman – P Pearse; Secretary – B Cross; Treasurer – B Moss; Vice-chairman – C Sheehan; Committee – H McAddey; W Merritt; S Oultram.

Prior to the AGM, Clive Hegginsbotham of Zeneca gave us an interesting talk on problems caused by rodents on golf courses, and the way to eliminate them. Rats especially are the cause of damage to many buildings by chewing through electrical cables, causing fires and costly rewiring work. They also carry diseases which are harmful to humans. Blindness and death are possible. Perhaps we should spend as much time looking for traces of rats as we do for leather jackets and fusarium. Certainly food for thought. I would like to thank Clive for giving us his time and apologise for the poor response to his most informative talk.

No winter lectures have yet been arranged, but in March we will have a seminar at Tytherington GCC. Dates and times will be included in the 1995 fixture list. Little else to say other than to wish you all a very Merry Christmas and prosperous New Year.



BERT CROSS

NORTHERN

The Autumn Tournament took place at our chairman's course, Aldwoodley GC. This event was sponsored by our friends FG Adamson's. Many thanks to them for their support. I must also thank our chairman, Phillip Taylor, and his staff for preparing the course for us. I was informed that the course was in superb condition and was enjoyed by all who took part. Unfortunately I cannot give you any results as my fellow committee man, Dennis Cockburn, has gone on holiday and did not leave the results. I can only say thank you to all the other sponsors on the day and I hope to see you all at the Christmas golf and AGM.

I welcome to the section new member Paul Sleight, the new head greenkeeper at South Cliffe GC, Scarborough. Any information you require, please phone 0274 568128. May I take this opportunity to wish all our members a very Merry Christmas and a Happy, Prosperous New Year.



PAT MURPHY

NORTH SCOTLAND

The final new member of the year to welcome is Barrie Edmond from Aberdeen, a student at Elmwood College in Cupar. The total section membership is 207 but we have lost quite a few from last year even allowing for natural wastage. We must try to hold onto everyone next year and increase with more new members.

We have just been through 'Demonstration Season' with some really good days out courtesy of our friends in the trade. I must mention Huntly's head greenkeeper, Derek Green, winning the golf part of the Morayshire Tractors day at Skibo. He also won the Inverurie Open earlier in the year. Not bad for a guy who reckons he must be the shortest hitting five-handicapper in golf. All I can say is he must be a heck of a good

Around the Green



putter! Seriously though, these days are a great idea, giving us greenkeepers a chance to see all the new products in action and meet up with fellow members. By the time this article is being read many of us will have seen the new electric mower from Ransomes with no engine and no hydraulics. What next, we ask?

Skibo's Alick Mackay is on the move to become head man at Macrihanish down on the Mull of Kintyre. We wish him well. His place will be taken by Andrew Mackay from Royal Dornoch, whose father is the current deputy at Skibo.

Next stop BTME at Harrogate. Section members will note that I have been persuaded to speak at one of the seminar sessions. What other excuse do you need to come along, if only to heckle? Seriously though, I hope to see as many of you as possible at Harrogate for what I'm sure will be a great week.

Finally, I would like to wish all members and friends everywhere a Happy Christmas and prosperous New Year. Let's hope 1995 is another great year for BIGGA and everyone involved with the Association.



IAIN MACLEOD

EAST OF ENGLAND

My apologies to you all for the lack of reports this year. Our secretary, Michael Finney, was getting married and also changing jobs to Rigby Taylor. Early November I took the job on temporarily until elections at the AGM. I would like to thank Michael for his work this year and good luck in his new job.

That brings me on to the AGM which takes place at Toft GC, near Bourne on December 7. You should have received your minutes by now and I look forward to a good turnout this year.

Quite a lot to report on the competition side. Events were attended fairly well considering some late notifications. The Peterborough Garden Machinery Trophy at Burghley was won by M Finney (Elton Furze). The Purdey Trophy at Stoke Rochford and Rigby Taylor Trophy at Woodhall Spa were won by C Macdonald (Newark). The Lambs Lawnmowers Trophy at Belton Woods was won by S Cogan (Belton Woods).

The East of England against Secretary's Association match ended in a 7-1 defeat for us due to a weakened side of 11 greenkeepers to 16 secretaries because of late notification. All who took part in the competition enjoyed themselves. The one win came from myself.

Section members Fred Cobb (Newark) and myself (Eyebury) qualified for the Midland team playing at Pannal in the Hayter Final. The team finished a respectable second and I came second in category 1 and missed the gross prize by one shot. The Midland team have done well over the last few years, winning it once and coming second twice.

My thanks go to all the clubs and staff involved in the above tournaments for allowing us courtesy for the season's competitions and

thanks to all the sponsors, especially for our last event at Belton Woods where there were some superb prizes thanks to Lambs Lawnmowers, Devere Hotel Group, Chandlers, Aitkens and Rigby Taylor.

The only new member to welcome to our section is Ian Ross from Scotland who has joined Newark GC.

For our winter lecture programme we are hoping to organise a trip to John Deere and hold a seminar at Kenwick Park with guest speaker John Hacker. More details soon.

And, finally, if you have any information of interest to other members please contact me on 0733 260297 or write to me at 9 Loder Avenue, South Bretton, Peterborough PE3 9AB

GRAEME MACDONALD

MID ANGLIA

The Lodgeway fourball final was played over 30 holes, once again at Bocket Hall GC. A perfect autumnal day ensued, much to the relief of the finalists, contrasting with last year's downpour. It was a pleasure to witness the majestic splendour of Bocket Hall once again, and the closely contested match which went to the wire. With the match all square after 18 holes, the afternoon play saw Ronan McKeown of Arkley GC and Ken Bunting of Ashridge GC overcome the two Marks, Whittle and Ellis of Mentmore GC by a margin of 3-1.

Thanks go to Bocket Hall for courtesy of the course and to John Wells and his team for a course in superb nick. Also, we must thank Chas Ayres and Lodgeway for laying on a superb day and for their continued support of an excellent competition. We look forward to next year's event, eagerly. It also looks hopeful that we can secure Bocket Hall for our Autumn Tournament in 1996, so everyone can have a chance to play this superb course.

Our Autumn tournament this year was played over the 18-hole Rosebury Course at Mentmore GC. Our thanks go to David Murphy and his company, Driving Force Leisure, for sponsoring the day and providing the prizes. Thanks to other members of the trade who supported us on the day and donated prizes for the raffle. The course itself held no fear for most of the 30 players, as high stableford points were scored. Four players managed 37 points and, after a count-back, this was the final outcome: 1, Gavin Simkins (Mount Pleasant GC); 2, Mark Whittle (Mentmore GC); 3, Robert Pearce (Welwyn Garden City GC). Chas Ayers also had 37 points.

Thanks to Phil Quarumby and his team for providing us with excellent greens and course, and although the weather was murky the whole day this did not detract too much from enjoying the setting and golf course. We appreciate the hospitality shown to us by Mentmore and thank the catering staff for the excellent meal.

The AGM followed the prizegiving which I presided over, being my last duty as chairman of the section. A healthy balance sheet was submitted by John Wells, our treasurer, and the secretary, Gerald Bruce, reported that membership was still rising both at section and national levels. The current figure for the Mid Anglia section is 222 members and 5,548 nationally. I'm sure that you all must know of other greenkeepers who are not members of BIGGA, so I would suggest you encourage them to join. The more members we have, the stronger the Association will become as a force to be reckoned with in the game of golf.

The following officers were elected to form the committee for next year: Chairman – Chris

Brook; Vice chairman – Stewart Boyes; Secretary – Gerald Bruce; Fixtures Secretary – Richard Saunders; Treasurer – John Wells; Regional representative/magazine – Paul Lockett; Regional representative – Ronan McKeown.

All these appointments run to the next AGM with the exception of the chairman which is a two-year post. Please note the change in fixtures secretary to Richard Saunders, and ensure all entry forms for golf events are sent to him and not Chris Brook. Richard's address will be printed on the forms for next year.

I will continue to represent the section at regional board level, along with Ronan McKeown. The regional board consists of five sections – Mid Anglia, Midland, East Midlands, East of England and BB&O. It also has two representatives who sit on the Board of Management of BIGGA. If any member of the section has anything they wish to raise about BIGGA or related issues, then the facility is provided to take anything all the way to the top, if it is sent to me in writing first.

Finally I would like to thank all my committee for their support over the last two years during my reign as chairman – Gerald, John, Chris, Steart, Ronan and Richard. When I first took over as chairman it was my desire to provide the members with as many different and varied courses for golf events, and I hope I have succeeded in that. A priority was to maintain the excellent way the section has been run to date and again in that I hope I have been successful. It has been an honour to serve as chairman and I wish my successor, Chris Brook, good luck for the next two years.

The section is in very capable hands and its success and strength is not just based on vocational circumstances, but by friendships which have developed and will, I'm sure, continue in the future.

PAUL LOCKETT

EAST MIDLANDS

Congratulations to our ten members who represented our section in the annual East Midlands v Midlands tournament. This was only the second time we have won the trophy in ten years. I would like to thank our sponsors for the day, Rigby Taylor, and Leek Wooton GC for their hospitality. Our winning team was: Richard Barker, Pete Forshaw, Paul Tatlow, Dave Leatherland, Steve Goode, Stuart Swann, Jamie Bedford, Antony Foulds, Mark Bindley and Gavin Robson.

I would also like to thank all our sponsors for their support to our section throughout the year and to all the golf clubs for their courtesy and hospitality towards us.

Three dates for next year's diary – Spring Tournament May 16 at The Notts GC, Hollinwell; Autumn Tournament September 11 at Kedleston Park GC; and snooker and social evening March 1 at Willie Thorn's in Leicester. Anybody who would like to attend this evening can ring me on 0533 890301 and I will forward them a form.

I would also like to wish all section members a very merry Christmas and a prosperous New Year.

ANTONY BINDLEY

SOUTH COAST

Numbers were a bit down for our Autumn Tournament at Dudsbury GC but it was a fine sunny day and a good time was had by all. Results: 1, Paul Jackson; 2, Mike Yorston; 3, Shaun White, 4, Martin Woodrow. As always we are very grateful to our sponsors Vitax and Avoncrop for their sup-

Around the Green



port and to the staff at Dudsbury for the condition of the course and looking after us so well.

Our annual match against the South West, played at Marlborough GC, ended in defeat, 3-2. Our thanks go to the staff at Marlborough for looking after us so well and especially to Kevin Green for organising the event. Next year the match will be held in Hampshire at Lee-on-Solent GC.

Our next event is at Brockenhurst Manor GC on Thursday January 12. Gordon Child, our regional administrator, will be coming in the afternoon at 2pm to talk about training in the modern greenkeeping industry. This is a very important subject and everyone interested in the future of the industry should be there.

The section is organising a workshop to be held on Thursday February 16. Entitled 'Working Together' it is being run by Frank Newberry who is one of the country's top management training consultants. Some of you may know him from work he has done for BIGGA at Aldwark Manor. The purpose of this workshop is to train greenkeepers in the arts of team building and dealing with people (committees etc). The committee feel that this is particularly important in view of recent events within the section. We are very limited on the number that we can take for this workshop so please register early. Send for details by writing to me at 45 Constable Close, Sholing, Southampton SO19 1EN.

At a recent committee meeting it was decided to establish an education committee for the section consisting of the NVQ industry assessors. This committee will co-ordinate the assessing of NVQ level 2 candidates and will be working closely with Sparsholt College who are represented on the committee by Bob Dennis and Bob Young. The committee consists at present of Kieron Daly, Ed McCabe, Martin Summers, Jeff Drake, college representatives and myself. Anyone with sufficient experience wanting to train as an industry assessor is more than welcome to contact the committee.

At the same meeting Peter Marsh, Eric James and John Payne expressed a desire to stand down from the committee. Between them they have devoted many years tireless work to the section and nationally and we are greatly indebted to them.

ALAN MITCHELL

NORTH EAST

Our autumn competition at Tyneside GC was a great success despite a few regulars who couldn't make it. On behalf of the section I would like to thank Steve Pope and his staff for preparing the course and also the committee for granting us the courtesy.

A big thank-you to the following golf clubs which provided donations to the prize table – Whitburn GC, Newcastle Utd GC, Whitley Bay, Ponteland, Beamish Park, Arcot Hall, Warbworth, Alnmouth Village, Consett, Swarland Hall and Stocksfield – and to the trade: Rigby Taylor, Stewarts, Border Services, Turfcare, Ryton Gravel, Rickerbys and Greenlay.

The winners were: best gross – D Sharkey, South Shields, 71; best nett – C Parkinson, Ponte-

land, 74-5=69; Greenlay Cup for best nett 0-11 h'cap – G Baxter, South Shields, 79-9=70; Fewsters Shield for best nett 12-28 h'cap – A Wright, City of Newcastle, 94-21=73. Other leading scores: M Gunn, Tyneside GC, 77-6=71; J Hutton, Consett, 74-3=71; S Pope, Tyneside, 82-10=72.

Congratulations to M Harvey who has been appointed head greenkeeper at Heworth GC. He was formerly first assistant at Tynemouth GC. Glen Baxter has been promoted from first assistant to head greenkeeper at South Shields GC.

David Sharkey, formerly an assistant at Ryton GC, has been appointed first assistant at South Shields GC. Tony McLure, who shares the over-35s Mid-English Amateur Championship title, has been appointed head greenkeeper at Whickham GC.

And what about Mal Lathan regaining the Netlon Trophy at the National Tournament at Dartmouth? Well done!

On behalf of the section I would like to wish George Atkinson all the best on his retirement. George was an active member of our committee for the past 12 years. A dinner was held recently at Stocksfield GC for him and it was nice to see some of the younger greenkeepers there as well as the local trade. It was agreed that George would be made an honorary member of the section and be made more than welcome at future competitions.

October saw the clash of the NE against the old enemy, the East Lothian section, at Westerhope GC. Again thanks to Russ Black and his staff for the presentation of the course. The greens were beautiful. Although we had only ten men it meant that the last two matches were going to be difficult, one against two, but Russ Black and David Dalby didn't get hammered. A special mention to young Paul Heinlin and Alan Harrison, four down with four to play and gaining a half. The overall result was in the North East's favour, 3.5-2.5, so we regained the Stewarts Cup.

A special mention also to Stewarts for not only providing the meals but also the prizes both to the winners and runners-up. Thanks to Alan Miller and John Geddes of Stewarts, Edinburgh.

JIMMY RICHARDSON

MIDLANDS

Following the survey carried out some months ago with regard to section events, in particular winter lectures, Ivan Beetstone has now arranged our first winter lectures using the subjects that came out top. The lecture will take place at Walsall GC on January 12 and start at 6.30pm.

The programme is as follows: 6.30-7.15pm – Thatch and compaction by Andy Cole of the STRI; 7.30-8.15pm – Installing, maintaining and updating irrigation systems by Graham Francis and John Sheppard of Turf Irrigation Services.

I must say that the response to this survey was very poor, specially when considering that members only had to tick off the subjects they felt important and send back using a self-addressed envelope. 350 were sent out and only 50 returned.

The annual match took place recently between the East Midlands section and ourselves, sponsored by Rigby Taylor. The match was played at the Warwickshire, of which everyone spoke very highly. Many thanks to Howard Middlebrooke and his staff and also to the Warwickshire as well for a wonderful day. The day was slightly spoiled by the fact that the East Midlands beat us, well done lads!

Mike Hughes beat Paul Loffman in the singles knockout recently. The match, played over 36

holes, was a close fought battle with Mike eventually winning 2&1.

Finally, can I thank everyone for their support during the last 12 months and wish everyone a Happy Christmas and prosperous New Year.

DEAN CLEAVER

SHEFFIELD

Firstly I would like to wish David Milbourne all the best in his new position as head greenkeeper at the new Waterton Park GC near Wakefield which is due to open next year, and to Pat Heaney who has taken up the position at Cavendish GC. We hope you enjoy your new challenge.

Our November lecture was given by Rufford and our thanks go to Peter Jefford of Rufford for an interesting and informative afternoon which was enjoyed by all. This lecture was also the section's AGM which was well supported. I hope we can keep up the numbers for the remainder of the winter. The section AGM was quite an eventful one this year.

The committee is: President – AK Arnold; Chairman – N Maltby; Vice chairman/treasurer – D Milbourne; Secretary – R Ullerthorpe; Comp secretary – I Collett; other members – R Graham, J Lax, S Hird and E Monie.

Barry Heaney has had to stand down from the committee this year to undertake the great honour of being chairman of BIGGA in '95. We wish Barry a very successful year and offer any help he might need.

Also at the AGM it was passed that any members wishing to play in section golf competitions next year must attend at least two winter lectures or give reasonable cause for not attending to secretary R Ullerthorpe. Please also remember to wear a jacket, collar and tie at all times while we are guests at Rotherham GC.

For October's lecture I must thank Graham Walker and Gem for the talk. Unfortunately I was unable to attend as I was on holiday but I understand it was an interesting afternoon.

Stan Quinn, chairman of green at Rotherham GC, would like to express how impressed he was by the high standard of applicants for the head greenkeepers job at Thrybergh and wishes to thank everyone who applied and to congratulate BIGGA.

Our February lecture on Thursday the 2nd will be given by Neil Thomas and BIGGA's new education officer Ken Richardson, so please let's have a full house and support our chairman Barry Heaney.

A Happy New Year to you all.

IAN COLLETT



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Education update

BY KEN RICHARDSON



Developing success of management courses for 1995

Supervisory and Management Courses

The 1994 series of Supervisory and Management courses is now complete. From the feedback that we have received from delegates, we feel that we have got the format of the courses about right.

Andrew Barber said: "Even though the subjects were new to me, I enjoyed the course. The speaker, Brin Bendon, was excellent. The way he approached the subject seemed to bring the best out of the delegates. His skill and manner were much appreciated."

Hamish Stephen said: "I can honestly say I have learnt a lot from the course."

Stuart Dent told us: "I thought the subjects were well thought out."

Peter Gee concluded: "Brin gave a very good course with some very good handouts. I think it is a very good idea to bring in high profile greenkeepers into the last session. David McIndoe gave a well presented and informative session. The day on computers was also very useful."

To hear greenkeepers discussing 'Belbins Team Role Inventory' and to watch and join in role playing exercises was also an educational experience for me. With some slight modifications, we will be running another series of 4 weeks courses next October.

Delegates to this year's courses have expressed a strong interest in attending management courses at a regional level, to reinforce the knowledge gained at Aldwark, and we are looking at setting these up for February/March '96. Additionally, we will be offering regional Health and Safety courses during the first two weeks of October 1995 (see BIGGA in Focus for details) and we are looking at holding a level 4 management course.

The 4th module of next year's course – Managing Information – already has seven delegates registered. If you wish to attend next year or send a member of your staff make a note in your diary for 1995 that the Aldwark Manor courses will start on October 23 or, better still, contact me and reserve a place.

National Education Conference

Details of some of the speakers at the National Education Conference and BTME seminars are given on pages 13–19 of this issue. The programme has been designed to be topical and, hopefully, slightly controversial. Places are selling fast so make sure that you send in your application TODAY, to make sure of your place.

National/Scottish Vocational Qualifications

The GTC are continuing to have discussions with the Industry Lead Body, the Council for National Vocational Qualifications, the Scottish Council for Vocational Education and other related industries to refine the content and standards for greenkeeper qualifications. N/SVQs give recognition that a candidate can 'do the job' at work and that he/she knows the reason for doing the job (underpinning knowledge). To make the system work, there needs to be a network of assessment centres and a pool of trained assessors. Currently, both can mainly be found in colleges but, gradually, more greenkeepers are being trained as assessors and the GTC have asked a number of golf courses to become assessment centres. N/SVQs will not go away, but to make them work needs your involvement and support. If you wish to become a work based assessor or require more information, either contact me or David Golding at the GTC.



Braid in Scotland

Chris Boiling visits two James Braid designed courses to see what jobs the greenkeeping staff can look forward to this winter

Golfers in the Edinburgh area are spoilt for choice. I certainly was last month when I was looking for an escape from Scots-Turf.

There are so many fine old courses within minutes of the bypass, many around 100 years old and many designed by the

great James Braid. Which one to choose? In the end I decided to visit Broomieknowe and Craigmillar Park, one a parkland course, the other a heathland course that's slowly being turned into parkland. Both are kept by enthusiastic young teams.

Since the weather was cold and wet I left my clubs in the car boot and took out my notebook instead – and went and had a cup of tea with the young head greenkeepers. My aim was simple, to find out what, if anything, they

were planning to do this winter.

Broomieknowe

Broomieknowe is a relatively new course in the area. It is only 88 years old.

The head greenkeeper, Hamish Brough, 36, has been doing a lot of construction work. But he's not complaining: "It's the part I like best because it's the most interesting and challenging."

They've been busy building because a bypass robbed them of half the 5th green (so they had to

build a new one further forward) and half the sixth fairway (so they had to turn a par 5 into a par 3 to allow golfers to play 18 holes while the course was rejigged).

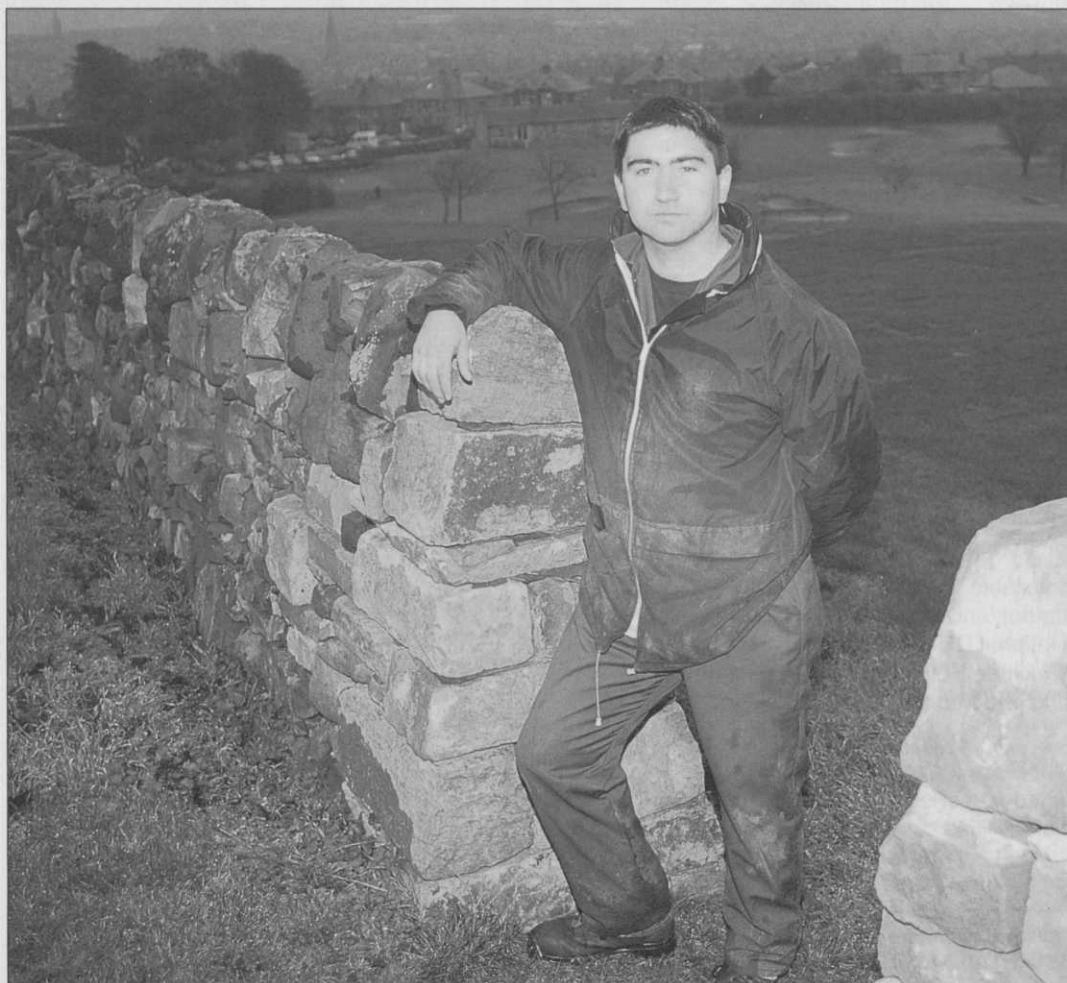
The club bought an arable field adjacent to the course and Stewarts, working to a Hawtree design, built four new greens, four sets of tees, one full fairway and two half fairways.

Once phase 1 had been completed, the greenkeeping staff put in a tender for phase 2, to develop the existing bottom field holes and marry them with the new greens and tees. This started two years ago and involved removing hedges, bunkers and greens, and building new tees and greens – while keeping 18 holes open for members.

The new course opened in May. When I stopped by they were just completing the final part of phase 2 – planting 380 trees to help define the new fairways. 2,000 whips were also to be planted between the larger trees and 1,000 beech whips where to be put in the beech hedging where it had been damaged by rabbits.

With only a few weeks to complete the task, Hamish and his team of four (three of whom are qualified) were very busy. But they were doing it properly, stressed Hamish, the head greenkeeper there for the past six years. All the holes had been dug down to a good depth and the subsoil broken up. Mushroom compost, which had been ordered in the summer and left to rot, was put in the holes along with some tree and shrub fertiliser "to make sure they've got a good start".

Trying to meet their end of November deadline, the Broomieknowe staff could only



Pictures: bottom left, Stephen Sinclair by Craigmillar Park's main feature – the wall that runs through the middle of the course.

This page: Hamish Brough by the 4th green at Broomieknowe. The old barn in the background is where he keeps his fertiliser and ChemSafe.

do the basics on the course. There were a lot of leaves lying around and annoying the golfers but this, I was told, had nothing to do with the tree work. Their five-year-old Amazone Groundkeeper was being repaired.

Once the trees had been planted, the next job was to plant some Astroturf. Hamish had bought 400 sq yd of it and planned to put strips of the former five-a-side pitches down to make paths near the 1st and 5th tees. "We went down to Portobello to lift 100 sq yards of artificial turf. They were selling it for £1.50 sq yd but they were keen to get rid of it so we ended up getting 400 sq yd for the price of 100 sq yd," explains Hamish, who started as an apprentice at Gullane in 1979 and has also worked as head greenkeeper at Mortonhall near Edinburgh and at a course in Australia for a year.

Other winter work involves releveling or taking tiers out of several tees. They will use a turf-cutter and rotorvator on the back of a tractor for this before seeding them. "The tools that we have now make jobs like releveling a tee very simple. We can relevel a 500 sq yd tee in a week," he said matter-of-factly.

This is all in addition to the normal winter aeration work on fairways and greens.

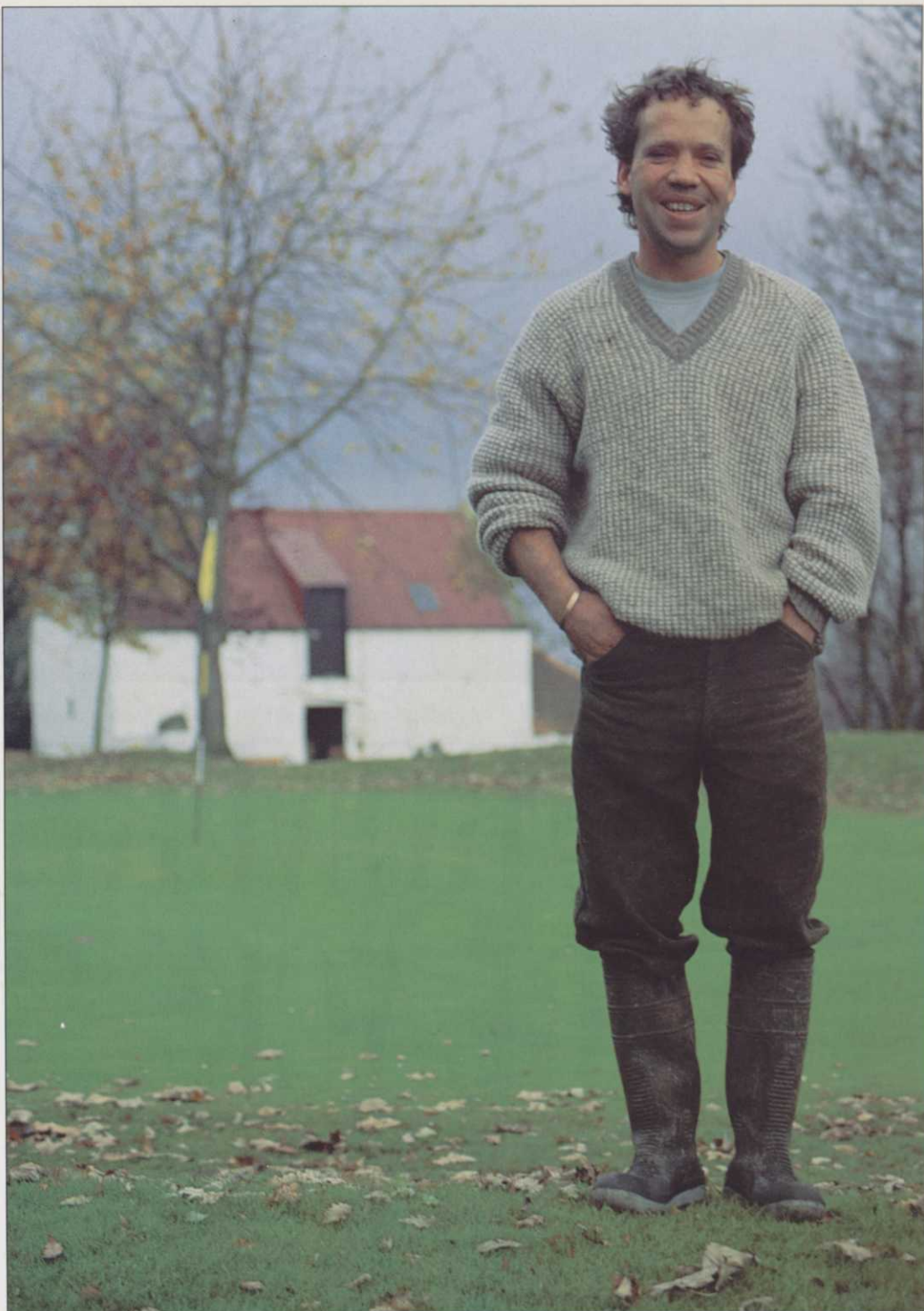
"If there's time after all this we'll build a tee on the 15th."

But what, I asked, will you do if it's really wet?

"Bash on."

Craigmillar Park

Craigmillar Park, which is only a couple of miles from the city centre, is one of several clubs in the area preparing for its centenary. This means head greenkeeper Stephen Sinclair and his three-man



team will have a relatively quiet winter.

They will mainly be tidying up and doing aeration work.

Stephen, 24, a former Toro/PGA European Tour Student Greenkeeper of the Year finalist, has been at the course since he left school in '86 and was made head greenkeeper last year. He would like to remodel a large bunker on a par 3 because it hides the green and encourages golfers to hit big into nearby property. But the club don't want any major changes before next year's centenary celebrations.

Instead the biggest job they've got to do is returfing four tees. "They're really uneven," says Stephen. They also plan to pea-gravel some pathways and to

improve the clubhouse area. "We've got to try to make it more pleasing to the eye," he says.

The biggest problem he has to contend with, he believes, is thatch on the greens. "The greens were overfed and overwatered, kept green and lush for the members in the past. We've got them round to our way of thinking now – firm and fast greens. We've done a lot of topdressing since I took over. I try to do it every month during the summer."

They also use an intensive aeration programme, including Verti-draining last year, hollow-coring twice a year, slitting the predominately *Poa* greens weekly and the tees fortnightly all winter. When I called in on them in November they were still cutting

the greens three times a week with a raised head ("just to keep them rolled"). Tees are cut every couple of weeks and the fairways left. "The growth is unbelievable, we're cutting fairways first week in March."

Later that month he would like to hollow-core the greens but he can't spoil the putting surface.

"The problem is we've got a high-ranking amateur tournament the first week in April – the Craigmillar Park Open with Walker Cup points available."

All this talk of golf made me want to get out and drive some balls into the wind. But there was no time for that, it was time to return to ScotsTurf and let these greenkeepers get on with their work...



Ransomes' chief executive Peter Wilson (pictured above) explains how the company has gone from red to black since he and new chairman John Clement took over a year ago

FROM RED TO BLACK TO GOLD



Ransomes has been cutting more than grass during the past 12 months. Its workforce has been cut by 12%, several senior management positions have been eliminated, and the American head office and warehouses in America, France and Germany have been closed.

Ransomes, Europe's leading manufacturer of grass cutting machinery, has been ill for several years, culminating in a loss of £8.9m last year. But chairman John Clement, who took over in October '93, says the company is now "out of intensive care".

With the cuts and a rationalisation programme, a new leaner, fitter company has emerged, bringing with it a host of new, competitively priced products. So the future looks healthy for the company that made the world's first lawn mower way back when the French Revolution was making the headlines (1832).

The problems started in '89 when Ransomes paid around £95m for Cushman Ryan. As Europe's no1, the \$140m per

annum US market was an obvious area for expansion. Also by getting in there, it would open the door to other markets such as South East Asia where American architects rule, specifying machines they're familiar with at home. Buying the Cushman and Ryan brands, leaders in their sectors of the market, instantly made Ransomes a major player in the US market.

"So they did the right thing, in my opinion," says group chief executive Peter Wilson, who joined Ransomes a year ago, "But they paid a high price."

The high price wouldn't have been a problem if they'd done something with the brands. But they didn't.

Then the recession hit and Ransomes lost £12.6m in three years.

A boardroom shake-up saw former Unigate and Littlewoods director John Clement take over as chairman and ex-BTR and Northumbrian Water executive Peter Wilson replace Bob Dodsworth as chief executive.

They quickly and dramatically turned things around. In the first six months of this year turnover rose 14% to £102.1 million and profit was up to £11 million.

"We took out the very expensive top layer of management (including the managing director, finance director, US president and vice presidents) and promoted people from within," says 49-year-old Mr Wilson. "The

amazing thing is the success we've had so far this year has all been achieved without recruiting any new people. So it's really like taking the lid off the pot and allowing people to express themselves."

Another amazing thing is that this success has been achieved before many of Ransomes' latest products have made a contribution. Although many of these products – such as the lightweight Fairway 250 and all-electric E-Plex triple greens mower – were in the pipeline, the new team have speeded up product development and new product introductions. "So there are a lot of good new things still to give us a good contribution," Mr Wil-



son points out, adding: "And we've got a lot more products in the pipeline. This coming year is going to be a very, very good year for us in terms of new products."

One of the new products, due to be launched at the '95 GCSSA show in San Francisco, is a walk-behind mower for the American market. Apparently American superintendents prefer wider machines with horseshoe-shaped handles and more aggressive bed-knives.

This machine, like its other products, has been produced by listening to end users, distributors and dealers. Asking them if their needs are changing, if they have any problems or suggestions.

"We try not to develop a product unless people want it. It used to be that our development was engineer or manufacture-driven. Now it is definitely customer driven. So before we start we take a lot of notice of what people want us to put into machines."

Once they have consulted with greenkeepers and dealers about what machines or features they would like to see, Ransomes builds a prototype. This is shown to groups of greenkeepers and their comments are noted. A pre-production batch is then built and demonstrated before the product goes into production.

At Ransomes' factories in England and the USA they use Computer-based Numerically Controlled (CNC) machine tools of different types for accurate and economic machining of components. These CNC tools include memory-learning robots and flexible machining centres, capable of self-diagnosis and unmanned running.

High-tech gear is also used in the development of products,

including Computer Aided Design and computer-controlled test rigs which operate 24 hours a day, seven days a week so that components and machines can be subjected to a lifetime's wear in a matter of months.

"There is no doubt that new technology has speeded up the process of introducing Ransomes products to the market place. It has increased the versatility of design and manufacture and been an immeasurable aid to improving cost-efficiency," according to Chris Macgowan, the commercial division's sales and marketing director.

'We're pleased to be involved with BIGGA and support them'

But do these improvements in cost efficiency mean cheaper products, we wondered?

"We offer value for money. Too often we see people looking at two machines and saying 'Ah, this one's a much lower cost'. My answer is 'Yes, but this one (the Ransomes) has got a lot more benefits'," says Mr Wilson.

Which is why their machines can be seen at many of the top courses, including Augusta National and The Belfry.

And the new products are attracting a great deal of interest from clubs which have traditionally bought other brands. The super quiet E-Plex which draws power from eight 6-volt batteries is certainly attracting a lot of

interest from clubs in resort and residential areas and there is a back order of 200 machines in the US. With 40 years experience of electric vehicles at Cushmans to take advantage of, Ransomes is well placed to lead the way with other electric machines.

Peter Wilson also believes Ransomes is setting the industry standard with its Fairway 300, Groom Master bunker raker, Ryan aeration equipment and Cushman Turf Truckster.

"One of the criticisms of Ransomes in the past was we didn't have a full range of golf equipment. Now we do. I think now we have the newest and the most innovative, most up-to-date range of golf equipment of any company in the world," says the 22-handicap Hexham GC member.

In the UK they claim to have 35-40% of the golf market. In the US they have just 1%. "But with the new machines I think we can take a very large percentage of that market," comments Mr Wilson.

This new-found optimism sees Ransomes moving back from a silver key member of the Greenkeeper Education and Development Fund to a Golden Key member, alongside business rivals Hayters, Jacobsen and Lely UK Ltd.

"We're pleased to be involved with BIGGA and support them. We are THE British company and we think it's right that we should have as strong a position as we can. The stronger the financial position of the company the more we are able to do."

As long as they don't run ads like they used to when they launched the world's first lawn mower. The copy for that machine stated: "This machine is so easy to manage that persons unpractised in the art of mowing may cut the grass... with ease"; "...more than double the work may be done with the same manual labour that is requisite with the scythe."

Support grows for Golden/Silver Key Circles

BIGGA's Education and Development Fund goes from strength to strength. New members for 1995 already include Amenity Technology and Rhône Poulenc as Golden Key members and the Association's insurance brokers, Fenchurch, as a Silver Key member. Additionally Ransomes have announced that they will be upgrading their membership from Silver to Golden Key status (see opposite).

Commented executive director, Neil Thomas: "This is great news and significant in the fact that the fund is now beginning to have a major impact as knowledge of it spreads and greenkeepers are beginning to receive practical benefits to assist in their education and training."



"Our plans for 1995/96 include developing a local training initiative with two day residential courses planned for our regions. These will only be possible through the ongoing growth of the Education and Development Fund. The fund is now three years old and with the pending announcement of additional company members for 1995, it is clearly of major significance for the future training of greenkeepers. With continuing industry support from our Golden and Silver key members, greenkeepers can look forward with optimism to the development of training opportunities which would not have been possible without the establishment of the fund."

The fund currently has 11 members. In the past this money has been used for videos, such as 'Raising the Standard in Spray Application' and 'Keeper of the Green' (in conjunction with the GTC), and for the 'On Course Field Guide for Major Diseases and Pests of Fine Turf'.

We would like to see just the one show

Ransomes would like to see one show for the turfcare industry. But while BIGGA and the IoG continue with their shows Peter Wilson says Ransomes will continue to support them, and he made it clear Ransomes do not intend exhibiting at the new show proposed by P&O Events.

"Ransomes would like to see one show for the industry, one show we can support in a big way rather than having to support a number of shows to a lesser extent. But while these various shows are in existence we need to spread our resources to be in them." He stressed, however, this does not include the new show.



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See us
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by Dr David Lawson, soil chemist, STRI, Bingley

Through education, word of mouth and personal experience (good and bad), greenkeepers are becoming more discerning in their use of fertilisers. All greenkeepers know that you can't simply apply any old fertiliser product at any time of the year and expect to obtain a top quality turf surface. However, there are a number of questions which are still frequently asked by greenkeepers and a selection of these are summarised below, along with some questions which perhaps greenkeepers *should* be asking about fertiliser products.

How much fertiliser is needed on the golf green?

There is an immensely wide range in the requirement for nitrogen fertiliser on golf green turf. On older courses with green rootzones constructed from the indigenous loam soil, the fertiliser demand is relatively low. In some cases 8 g/m² of nitrogen (N) applied each year is adequate. This would be provided from a 8:0:0 fertiliser applied at 50 g/m² twice during the growing season. In most soil-based greens however, the nitrogen requirement is about twice that shown above so that the 8:0:0 product would be applied on four occasions during the growing season.

On recently constructed greens where the physical properties of the soil have been improved by the addition of sand the requirement for fertiliser N is substantially increased and will range from 20-30 g/m² of N each year. The actual amount applied will depend on the amount of soil present and the length of growing season.

As to whether other nutrients such as phosphate, potassium, magnesium or trace elements need to be applied depends on soil tests. However, as a general rule most soil rootzones have no need for any fertiliser nutrient other than nitrogen and it is only on sand-dominated rootzones that there need be any concern about other nutrients especially with regard to magnesium and trace elements.

If soil tests do indeed show a

nutrient such as phosphate to be insufficient for fine turf growth then the amounts required in fertiliser to rectify the situation are small. For instance phosphate deficiency can be prevented by the application of 2 g/m² phosphate (as P205) in a single dressing. This would be adequate for at least one year.

Should fairways be fertilised?

In the majority of cases there is no need for regular applications of fertiliser to fairways. No greenkeeper wants to be mowing the fairways every couple of days. Regular applications of fertiliser will also lead to a change in the botanical composition of the fairway turf. Along with an increase in annual meadow-grass content, agricultural grasses such as perennial ryegrass will start to dominate the sward. Moreover lush growth will reduce the "run on" normally obtained from drives.

However, there may be cases in spring where growth does appear to be particularly weak and cover becomes thin. In such situations a one off fertiliser application will be of benefit. On tee walk off areas and green approaches where there is heavy wear it is advisable to apply a single spring nitrogen dressing each year.

What about the tees?

If constructed from the same rootzone material to the greens, the tees should receive similar

amounts of fertiliser.

Does the type of fertiliser used make any difference to turf quality?

Yes. The type of nitrogen used will have a major effect on many aspects of turf quality. There is no doubt that ammonium sulphate is the best nitrogen source for fine turf and should make up at least part of the fertiliser nitrogen. However, its continual use on sand-dominated rootzones will lead to over acidification and so other less acidifying materials should also be used. Such materials include liquid nitrogen fertilisers, most slow release sources and organic fertilisers such as hoof and horn meal.

Where fertiliser is applied infrequently (eg. fairways and surrounds) the form of nitrogen fertiliser used is not so important.

So what is so special about ammonium sulphate?

It has been known for decades that ammonium sulphate as the main nitrogen source will reduce disease, weeds (including annual meadow-grass) and discourage earthworm activity. No other nitrogen source (apart from ammonium phosphate) has been shown to have the same beneficial effects.

It is certainly worth asking the fertiliser rep what the nitrogen in his product range is derived from.

With the hammering courses

take during the winter is there a need nowadays to be applying autumn-winter feeds?

Certainly golf is now played all year round, often under the most severe growing conditions and the turf must be able to recover. However, turf growing on unameliorated soil receives enough nitrogen from the soil's natural reserves during autumn and winter so that there is no need to be applying any more. On sand dominated rootzones it is often advisable to apply two or three small doses of nitrogen during mild spells. It is advisable to apply no more than 2 g/m² of N at this time of year and a useful way of applying such small amounts evenly is through liquid fertilisers. Alternatively a granular product with a low N analysis can be applied.

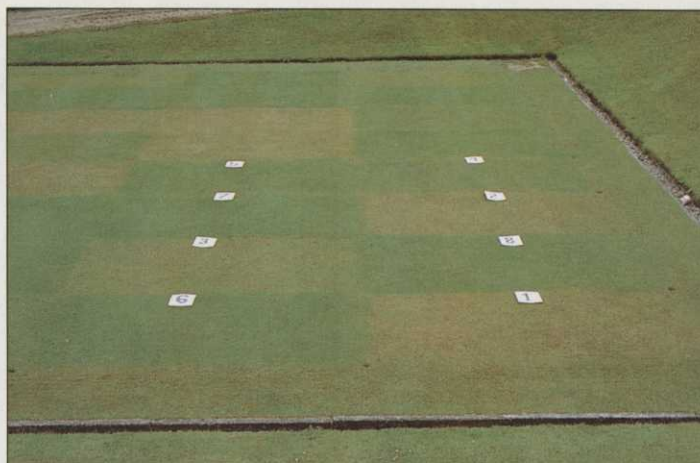
What about all these slow release nitrogen fertilisers?

There is no doubt that many of the products on the market do have a good long term release ability. For this reason they may be useful as a part of an overall fertiliser programme but, used alone, some products may have a detrimental effect on turf quality compared with ammonium sulphate-based products. This has in fact shown to be the case with the IBDU and ureaform types of slow release nitrogen. However, these products can be used successfully (as can the coated

Question time for FERTILISERS

FERTILISERS

Check this out:
Fertiliser trials
at the STRI in
Bingley



forms) on less intensively managed areas such as surrounds. They are also extremely useful as nitrogen sources for seed beds and turf beds.

Is it possible to supply enough nitrogen to turf from liquid

fertiliser?

Yes, it can be done but it depends very much on the individual product and just how much nitrogen it contains. They are more usefully employed as part of a fertiliser programme where most of the nitrogen is supplied

through solids with a high ammonium sulphate component.

Many fertilisers contain magnesium. Is there really any need for it?

Most rootzones, including those with a high sand content, contain more than enough magnesium for fine fescue bent turf. Visible symptoms of magnesium deficiency in grasses are rarely, if ever, seen. Unfortunately there has been a scare over the apparently low concentrations of magnesium found in some golf green soils. The soil tests used are primarily based on agricultural situations and are not strictly relevant to golf turf. However, application of magnesium will not cause any harm to the turf.

In greens with very high levels of soil phosphate what is the best way of producing a decrease in the concentration?

Many of the older golf courses do have exceedingly high concentrations of soil phosphate in the greens. The reason for trying to reduce the concentration is the relationship between phosphate and annual meadow-grass ingress in the turf. This is not a particularly important factor in the invasion of meadow-grass and there is certainly no need to take panic measures to try and "be rid of"

the phosphate. So long as it does not necessitate a major change in the management programme a few tips may be useful in reducing the level of available phosphate.

Firstly, don't apply phosphate-containing fertiliser.

Secondly, if the soil is not already acidic use an acidifying fertiliser (ie. containing ammonium sulphate). In acid soil conditions a significant proportion of the soil phosphate becomes "locked up" and made unavailable to the turfgrasses.

Thirdly, apply iron. The iron forms insoluble compounds with the phosphate again making it unavailable to the turf.

Lastly, if possible use a top dressing material which is very low in its phosphate content. Remember that as far as annual meadow-grass establishment is concerned the surface of the soil (or thatch) is of most significance. If the concentration of phosphate here is kept to a minimum then seedling establishment can be reduced. This can be achieved over time by the regular application of a low phosphate top dressing material. Indeed after a number of years a rootzone will be established with very little phosphate at the surface, but with adequate reserves at depth for the requirements of the fescues and bents.

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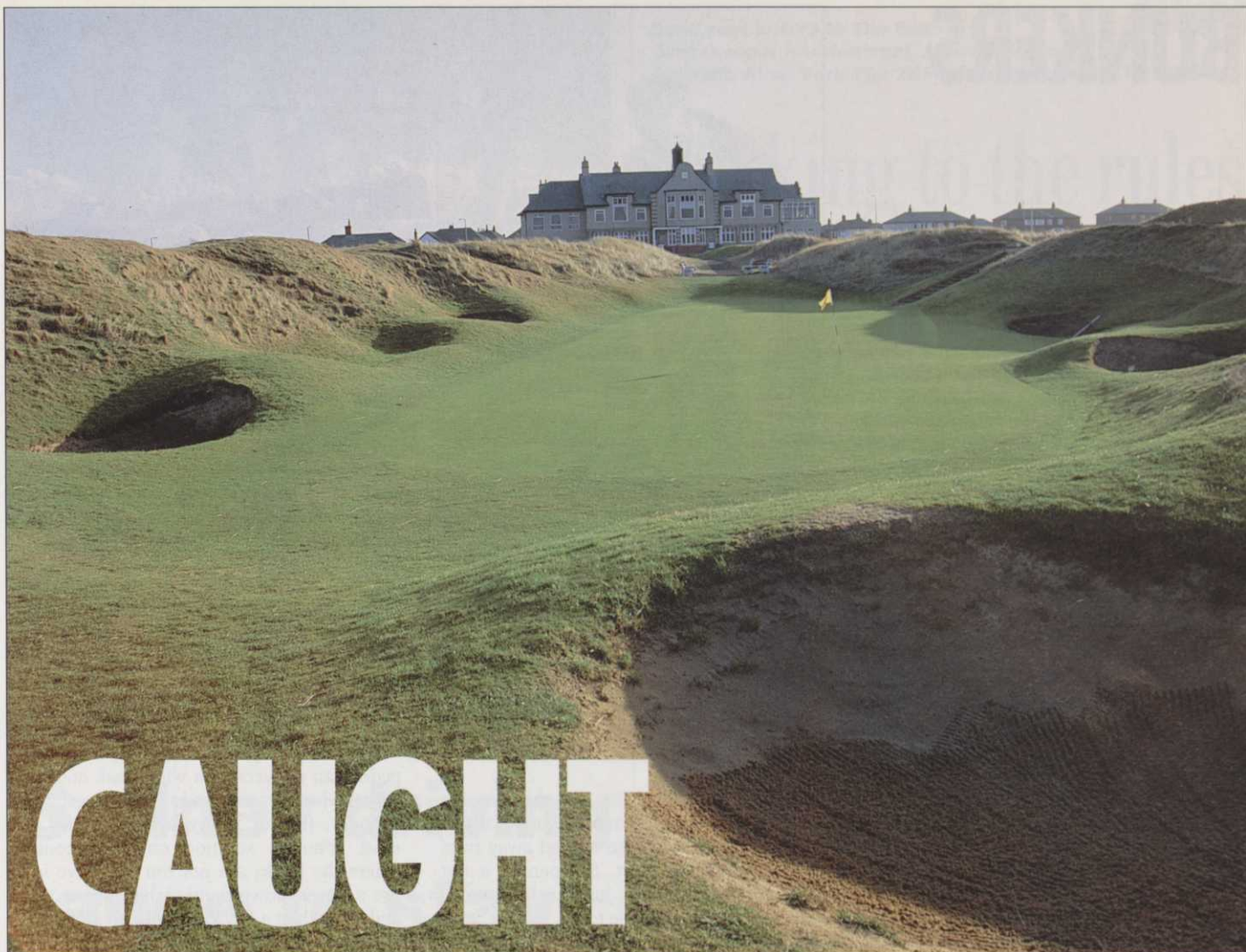
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The 9th green at
St Annes Old Links.
Below: the 12th green

CAUGHT IN THE SAND

Hugh Tilley explores bunker maintenance

Perhaps to the golfer bunkers or sand traps are the holes you love to hate, but for the greenkeeper they are expanses of sand which require attention and maintenance – exactly how much attention depends upon the standard set for the course. Perversely if standards are high then members will use the rake provided, but where the surroundings are scruffy there is little incentive other than to get out.

Some of this maintenance work can be mechanised or at least be aided by power tools such as a brushcutter, nevertheless there is inevitably some handwork which is often easier and quicker, and almost certainly cheaper than with machinery. Maintenance of bunkers arguably starts with (daily?) raking and extends through (weekly?) edge trimming to more radical occasional tasks such as adding or redistributing sand, decompacting or draining.

There is no real substitute for the hand bunker rake and although all the main manu-



facturers sell motor rakes these, manoeuvrable as they are, still leave handwork to be done in the places that the machine cannot reach. Of course on many courses it will be possible, perhaps even desirable, to remodel bunkers so that they allow the motor rake to

be used to maximum effect – and some courses have such large expanses of sand that the job has to be mechanised. If switching is the morning priority rather than raking sand then perhaps a run around with a motor rake as second priority makes best use of time –

BUNKERS

rather than taking a TMV (i.e. Cushman, Huxtrik or Workman) around as it does allow a quick rake around of much of the sand, unfortunately some motor rakes are slow in comparison to a TMV or ATV. Of course the motorised machine has the advantage when the sand needs moving around or greater penetration is called for.

Trimming round the edge of bunker is probably more of a problem for most greenkeepers and if there is an ideal machine which works for every situation it has yet to be publicised. Most courses seem to prefer to use a brushcutter, well 'prefer' might be the wrong word as it may be truer to say that they have found nothing better or more cost effective and accept its shortcomings. There are a number of powered edgers but most are designed for the grass edges in parks and around flower and shrub borders. Most are made to run around the level top edge of the turf or even on a kerb, and not all bunkers have flat level edges (and none have kerbs!), nor are these edges smooth which can be a problem. Many of these edgers use a flat vertically rotating blade, which on some models can be turned to cut non vertical edges and perhaps this is essential for the less geometrical designs of golf courses. Both two and four stroke engines are to be found powering these implements and if there is any preference perhaps it should be to the four stroke because of the very real danger of inadvertently running two stroke engines on pure petrol. Sand is a classic abrasive thus not only will blades wear rapidly, but if the engine air intake filter is not extremely effective, sand dust generated by working will get in and considerably reduce its life. If the operator feels that he needs a mask then he should ask



Terry Holmes,
head greenkeeper
at Lee Park Golf
Club, Merseyside,
with a Dixon &
Holliday Hover Hood

questions about the engine. For this reason a number of clubs use knapsack brushcutters which puts the air intake up and away from most of the flying dirt. Sharpening a flat blade should be simple, just put it in a vice and take a good sharp file to it.

Last year saw an edger introduced with a monofilament line head, and this looks as if it may be a safer and better option. As it is very light, manoeuvring it around the edges should be simple although the wheels are small. Several other edge trimmers use slow rotating or semi-rotating blades arranged to provide a shearing action, and while this provides a machine which does not stir up the dust, the first question must be on the life of blades when used in highly abrasive situations.

The conventional brushcutter has the option to fit a range of heads and blades such as monofilament line or nylon, flat or multi tooth blades, and while certain operators seem to have specific preferences, the main differences seem to be their perception of safety. All need to be used with some protective clothing, to feet and eyes in particular, but ears and shins shouldn't be forgotten. If your normal supplier cannot offer suitable protective clothing and a full range of head/blade options perhaps you should look for one who does offer a complete service for the machine, – some dealers see small power tools as a diversion from their main task of selling mowers or tractors. There are also a few brushcutters which use a scissors action head.

The biggest practical problem with a brushcutter is that it is not designed for cutting in the places and at the angles where greens meet sand. It may not be possible to cut these edges with the machine slung on its harness with the operator's hands on the handles in the normal way, although most machines allow the positions of handles and hook to be adjusted. Using these implements

in this way may raise questions about safety. These constraints do not apply to knapsack brushcutters as the flexible shaft allows the head to cut high or low without effecting the balance of the machine or operator, thus provide him with greater flexibility to cut where he wants. The same head and blade options are available as for conventional brushcutters, however there are less dealers or distributors supporting these machines, possibly because of their greater cost and they are seen as being a more specialist tool.

Maybe not part of bunker itself but equally pertinent to it are any surrounding grass banks and if these are more than a 10% slope they should be outside the ability of the normal mower. Some areas may be accessible by some of the wider fairway mowers reaching out with a wing, or if there is a lot of steep work it may be possible to justify one of the pedestrian mowers with wide track and individual wheel drives – and of course a suitable cylinder, flail or rotary head. Perhaps the most common solution on most courses where the banks are not too extensive is to use a hover mower, and if the slope is steep and more than a few yards long to attach it to a rope, this is another practice which gives rise to concern over safety, but why no manufacturer has made a remote stop option baffles me – it should be easy. Another option is to use a brushcutter or knapsack brushcutter and although many greenkeepers may find the difficulty of getting a neat even finish excludes this as an option it may be worth experimenting with differing heads and skids. Alternatively one importer of knapsack brushcutters manufacturers his own hover hood to fit his machines and although this does not have the same working width as a normal hover mower it does keep the operator in full control – and it gives an equally fine finish.

Tees and greens get drained, bunkers seldom do, perhaps because it is anticipated that sand will always drain naturally, however as every greenkeeper on heavy land knows any depression in the ground will collect and retain water unless there is a permeable layer or drains underneath the sand. Bunkers may not be heavily trafficked however breaking up the subsoil may be required to allow water to soak away. Several small deep aerators are available which allow the greenkeeper to shatter the ground from about two foot up, equally it is possible to use earth augers or drills – although this will not be as effective as a shattering blast of compressed air. Other more radical and more permanent possibilities include putting in drains, either with pipes or gravel bands, however the problem is often one of level – water won't run up hill – it has to be pumped, and I have yet to hear of anyone installing a wind pump to drain a bunker, although no doubt such would be a very 'interesting' feature – and a hazard in its own right.



Chris King, first assistant at Shirehampton Golf Club, with a Nikken knapsack brushcutter

Send your letters to The Editor,
Greenkeeper International, Aldwark Manor,
Aldwark, Alne, York YO6 2NF or fax them on 0347 838864



High flyers collect awards

Here they are – Langside College Glasgow's first HNC in golf course management graduates posing after a ceremony at Strathclyde University. Flanked by lecturers Margaret Hamilton and Colin Urquhart, the students are: (back row)

John Robertson, Stephen Hogg, James O'Neil, Thomas Hindmarch, Hugh Logue; (front row) Iain Barr, Gino Garfagnini, Alex Blacklaw, Brian Porteous, and Paul Brannan. Andrew McDowal and Mark McBride also qualified.

INTERNATIONAL OUTLOOK

Sydney driving range to stay open all hours

Australia's first central city golf driving range is being developed in Sydney. Situated in the heart of the central business district, the 46-bay complex will operate on a seven day and night basis. It has four levels of undercover parking, a bistro/bar, putting

green and a large retail shop that opens onto Pitt Street.

◆ A new nine-hole course is due to open this month at the Honichi Golf Leisure Club in Shenzhen, China. The 18-hole course that opened there two years ago now supports 1300 members, with most of these coming from Hong Kong, 45 minutes away by motorway. Work on another nine holes is due to start in March. A lodge, hotel and cottages are also being developed and should come on line in the next two years with funding coming 50/50 from Japan and China. There are now 38 clubs in China with 26 of them opening within the next 18 months.

◆ Naples (Florida) National Golf Club's superintendent, Gary Grigg, has been nominated for the presidency of the Golf Course Superintendents Association of America and should take over the post at the GCSAA International Golf Course Conference and Show in San Francisco, California, February 20-27. He is currently the vice president.



■ Lee-on-Solent Golf Club assistant head greenkeeper Stephen Pellatt has been named as top student on the Sparsholt College greenkeeping phase II/level 2 course. Stephen, 30, was also a regional winner in the Toro/PGA Student Greenkeeper of the Year Award.

Sticking to the rules

As product manager for worm control products at Rhône-Poulenc Environmental Products, I would like to explain our situation to the greenkeeper pleading for a wormkiller in last month's issue.

We try very hard to understand customer requirements and realise that chlordane, at the time, must have come close to the ideal solution to the problem of worm control. We, therefore, understand the concerns over its loss of use.

Paradoxically, many of the features of chlordane that users deemed ideal were exactly the same features that led to its withdrawal of approval by MAFF. For example, long persistence and broad spectrum activity.

Due to the long residual nature of chlordane we as a company would be wasting money trying to develop something similar. The registration would fall at the first hurdle.

We work within a very tight regulatory framework, perhaps the strictest of any industry, even pharmaceuticals. This is because we are concerned with the safety, not only of the end user, but also the general public and the environment as a whole. Constantly trying to satisfy both customer requirements and the regulatory authorities is a very difficult task.

Bearing in mind both customer and regulatory requirements, we as a company believe we have the best products on the market in Twister Flow and Castaway Plus.

If anyone requires further information on our worm control products or would like to provide us with further customer feedback, please call us on 01277 301114.

Jonathan Hill, product manager, Rhône-Poulenc Environmental Products

Disappointing

I have just received the November issue of *Greenkeeper International*. I must say I find the content disappointing.

We must remember that BIGGA is an association of greenkeepers and not golfers. The amount of space in the magazine featuring golfers exceeds matters that are relevant to greenkeepers. The

amount of goodwill and sponsorship from leading machinery manufacturers that is poured into golfing events would be better being diverted towards the GTC.

To obtain the status that the greenkeeping profession rightly expects will not be achieved by imposing a glossy image, it will come about by the efforts of fully trained professional greenkeepers maintaining courses to high standards.

David Ward, course manager, Royal Porthcawl GC, Mid Glamorgan

● Editor's note: I was disappointed with the November issue as well, but not for the same reason. November and December are traditionally our smallest issues. I had a great deal of material I wanted to get in but only a limited number of pages to play with since we work on a 50/50 editorial/advertising split. The article by Dr James Beard, published this issue, was planned for November but there was so much news and information for the members (and to recruit new members) that I couldn't fit it in. Only two of the 27 editorial pages featured golfers – and they were greenkeepers competing in a prestigious tournament at The Belfry. Incidentally, the three golf competitions we cover in detail – the Hayter Challenge Tournament, the ICI National Tournament and the Kubota Challenge are all sponsored by companies that give a great deal to greenkeeper education via BIGGA's Education and Development Fund (see BIGGA in Focus, page 7).

Invaluable

I would like to convey my thanks to everybody involved in organising and running the management courses that I have attended over two weeks at Aldwark Manor.

I feel that I have been looked after in every way and the knowledge that I have gained is invaluable and will help me in my day to day running on the golf course. It has made me look at greenkeeping in different ways and has given me room for thought. I particularly like the Belbins team role.

I shall look forward to coming back to do the other two courses.
Doug Fernie, Epsom GC

GREENKEEPER

THE COLLEGES AND THE

The Greenkeepers Training Committee (GTC) are continually reviewing the approved status of colleges offering greenkeeper training courses.

The directory shows colleges offering courses to craft, supervisory and management levels, but it must be stated that until the GTC review is completed only the green coded colleges are approved to train greenkeepers beyond craft level.

The introduction of vocational qualifications into industries, has caused the colleges

to re-think their training policies and the GTC will be issuing guidelines for the golf greenkeeping industry as to which colleges employers and their staff should be supporting.

Until the report is complete, anyone with a query regarding greenkeeper training should contact the Greenkeepers Training Committee at Aldwark Manor, Aldwark, Alne, York YO6 2NF, telephone 0347 838640.

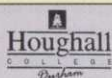
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ASKHAM BRYAN COLLEGE Askham Bryan, York YO2 3PR. Contact Christine Biglin, registrar. Tel: 0904 702121. *Full time courses:* National Certificate – Horticulture; National Diploma – Amenity Horticulture; Higher National Diploma – Horticulture (golf management options). *Part time courses:* NVQ Level 2, City & Guilds Phase III and IV Greenkeeping.



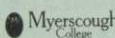
CITY COLLEGE MANCHESTER Wythenshawe Park Centre, Moor Road, Manchester M23 9BQ. Contact Peter Riley/Martin Webb. Tel: 061 957 1526. Day Release and Full Time courses leading to NVQ Level II Amenity Horticulture with the Greenkeeping option.



HOUGHALL COLLEGE Durham College of Agriculture and Horticulture, Houghall, Durham DH1 3SG. Contact Tony Milan. Tel: 0191 386 1351. *Full time courses:* National Certificate in Horticulture/Greenkeeping and Groundsmanship – 1 Year; National Diploma in Horticulture Turf Option – 2/3 years. *Part time courses:* Greenkeeping and Sportsturf Management Level II – Day Release; C&G Phase III Enterprise Management – Afternoon Evening. *Short Courses:* Health & Safety Legislation; Turfcare; Machinery and Mechanisation. All courses contribute towards NVQ Levels I and II.



KIRKLEY HALL COLLEGE Ponteland, Northumberland NE20 0AQ. Contact Dr Ron McParlin. Tel: 0661 860808. NVQ Level II with greenkeeping option. Day release or block release – one to two years.



MYERSCOUGH COLLEGE Myerscough Hall, Bilsborrow, Preston, Lancashire PR3 0RY. Contact Martyn Jones. Tel: 01995 640611. *Full time courses:* National Certificate in Groundsmanship and Greenkeeping – 1 Year; BTEC National Diploma in Turf Science and Sportsturf Management – 3 Years; BTEC Higher National Diploma in Turf Science and Golf Course Management – 3 Years (Both these courses include one year's paid industrial experience). *Part time courses:* NVQ Level II Greenkeeping; Phase III Supervisory Management; Phase IV Business Management; Certificate and Diploma in Turf Irrigation (in conjunction with BTLIA). A range of short courses including FEPA etc.



REASEHEATH COLLEGE Nantwich, Cheshire CW5 6DF. Contact Dennis Mortram. Tel: 01270 625131 Fax: 01270 625665. *Full time:* BTEC First Diploma Horticulture (Sportsturf Option) – 1 year. BTEC National Diploma Horticulture (Sportsturf Option) – 2 years. BTEC Higher National Diploma Golf Course Management – 3 years. *Part time:* NVQ Level I Greenkeeping – Day Release. NVQ Level 2 Greenkeeping – Day/Block Release. NVQ Level 3 Greenkeeping – Day/Block Release. C&G Phase IV Greenkeeping – Block Release. IoG National Intermediate Diploma in Turf Culture – Day Release. IoG National Diploma – Day Release. *Short Courses:* FEPA Chemical Safety; Safe Lifting; Chainsaws; Off-Road Vehicle Driving; First Aid.



BROOKSBY COLLEGE Brooksbys, Melton Mowbray, Leicestershire LE14 2LJ. Contact Anne Hurt. Tel: 0664 434291. *Full time courses:* National Certificate in Horticulture, Greenkeeping and Sportsturf Management. *Part time courses:* Day Release training to NVQ Level II in Amenity Horticulture – Greenkeeping option. The course is based around the GTC Training Manual. Short courses also available in Horticultural Machinery and Arboriculture.



BROOMFIELD COLLEGE Morley, Ilkeston, Derby DE7 6DN. Contact Admissions Officer. Tel: 0332 831345. NVQ Level I and Level II Amenity Horticulture (Greenkeeping) Block Release course. Two years duration presented in 12 one-week blocks following guidelines of GTC Training Manual. NVQ Level III gained by 9x 3-day blocks, or APL service.



CAMBRIDGESHIRE COLLEGE Milton Centre, Landbeach Road, Milton, Cambridgeshire CB4 6DB. Contact Martin Grimmins. Tel: 0223 860701. Part time – Day Release over two years leading to NVQ Level II (Greenkeeping Options), including the GTC Training Manual requirements. Autumn term commences September/October 1994.



DE MONTFORT UNIVERSITY LINCOLN Caythorpe Court, Caythorpe, Grantham, Lincs. Contact Neil Rowbottom on 0522 522252 or Student Services, telephone 0400 272521. Day Release NVQ Level II. NCH with Greenkeeping. National Diploma in Horticulture with Greenkeeping and Turf Management options. National Diploma in Golf Studies pending approval.



RODBASTON COLLEGE Rodbaston, Penkridge, Stafford ST19 5HG. Contact Nigel Foskett. Tel: 0785 712209. Courses offered: Craft Level NVQ Level I, II and III. Day Release. Duration: Over two years, each of weeks duration (September – June). Registration Date: Please contact the College.



WARWICKSHIRE COLLEGE Moreton Morrell, Warwick CV35 9BL. Contact Chris Gray. Tel: 0926 651367. Greenkeeping courses – day release – NVQ Level I; NVQ Level II; NVQ Level III; NVQ Level IV; IoG courses – National Practical Certificate; NVQ Level II, National Intermediate Diploma in Turf Culture; Full time two year BTEC National Diploma in Horticulture (with option in Turf Culture); *Professional updating courses include:* Groundsmanship, Machinery Maintenance and Repair, Managing Conservation Areas, Plant Identification, Hedgelaying, First Aid, FEPA Spraying Courses, Chainsaw Courses.



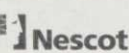
BRINSBURY COLLEGE North Heath, Pulborough, West Sussex RH20 1DL. Contact Keith Harrison. Tel: 0798 873832. *Full time courses:* New Entrant to Greenkeeping Course – 36 weeks. NVQ II Greenkeeping option plus core. Approximately a third of the course is delivered on college's and local golf course. *Part time:* Day Release to NVQ II level. Both full time and part time students with work both to the NVQ II work book and the Greenkeeper manual. NVQ Level II (National Technical Certificate) with Inst. of Groundsmanship manual may be delivered as an evening course. NVQ Level III Greenkeeping. ND Landscape Studies (Option – Sportsturf Management). *New courses and qualifications:* National Technical Certificate (IoG), National Practical Certificate (IoG), Intermediate Diploma (IoG), National Diploma (IoG).



HADLOW COLLEGE Hadlow College of Agriculture and Horticulture, Hadlow, Tonbridge, Kent TN11 0AL. Contact Keith Backhouse. Tel: 0732 850551. NVQ Level II and Level III Part-time Day Release over two years with two periods of Block Release. Level II in Amenity and Groundsmanship Courses with Day Release. Centres at Hadlow, Canterbury and Maidstone.



MERRIST WOOD COLLEGE Worplesdon, Guildford, Surrey GU3 3PE. Contact the Academic Registrar. Tel: 0483 232424. NVQ Levels I, II, III and IV Amenity Horticulture, Greenkeeping and Sports Turf Specialism. Part time... one day per week for 35 weeks commencing in September. Full time National Diploma and National Certificate in Greenkeeping and Sports Turf Management, subject to validation.



NESCOT North East Surrey College of Technology, Reigate Road, Ewell, Epsom, Surrey KT17 3DS. Contact Dr S Shaw. Tel: 081 394 3099/3111. NVQ Levels I, II and III in Amenity Horticulture (Greenkeeping options) Training and assessment for the Greenkeepers Training Manual. Part time, Day Release. Duration: Two years to Level II. FEPA Spraying Courses.

MIDLANDS

SOUTH EAST

ER TRAINING

E COURSES AVAILABLE

GREENKEEPER
International

KEY TO COLOURS

Currently GTC approved as Regional Training Centres, offering courses at Craft, Supervisory and Management levels

Currently GTC approved for training courses up to Supervisory level

Currently GTC approved for training courses up to Craft level only

Pending GTC approval for all courses

Please note that all college details on these pages were provided by the colleges themselves.

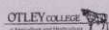
Greenkeeper International takes no responsibility for accuracy of information provided.

Contact the colleges direct for prospectuses and comprehensive information.

SOUTH EAST



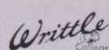
OAKLANDS COLLEGE Oaklands Campus, Hatfield Road, St Albans, Herts AL4 0JA. Contact Ian Merrick. Tel: 01727 850651. Part time courses leading to NVQ Level II Greenkeeping, evening courses leading to City & Guilds Phase IV Business Management. One year full time NC Greenkeeping & Sports Turf Management. Courses start September 1995.



OTLEY COLLEGE Otley College, Otley, Ipswich, Suffolk IP6 9EY. Contact Student Applications. Tel: 0473 785543. Full time courses: BTEC National Diploma - Sports Turf Management. National Certificate in Horticulture, option in Sports Turf Technology. Part time NVQ 2 Golf Greenkeeping and NVQ 2 Groundsmanship, NVQ 3 Sports Turf Management. IoG Intermediate and Final Diplomas (Evenings). NVQ Horticultural Mechanics. FEPA Courses PA1, PA2, PA6. Otley College ★ Developing individuals ★ Achieving more.



PLUMPTON COLLEGE Lewes, East Sussex BN7 3AE. Contact David Blackmur. Tel: 01273 890454. Full time courses: BTEC First Diploma (Greenkeeping Option). Part time courses: NVQ Level II - Amenity Horticulture Greenkeeping Sportsturf and Sportsground Maintenance Level III - Block and Day Release; City & Guilds Phase III - Enterprise Management, Greenkeepers Supervision - Block and Day Release; City & Guilds Phase IV - Business Management - Day Release. NCH Full time with a greenkeeping bias. (Subject to approval).



WRITTLE COLLEGE Chelmsford, Essex CM1 3RR. Contact Dai Edwards. Tel: 01245 420705. Fax: 01245 420456. Part time courses include: NVQ Levels I, II, III and IV Sportsturf & Greenkeeping. Day Release. Includes training and assessment of Greenkeepers Training Manual. Full time courses include: BTEC First Diploma (1 year), BTEC National Diploma with Option in Sportsturf and Golf Course Management, 3 year sandwich course; BTEC Higher National Diploma with Option in Golf Course Management 3 year sandwich course, BSc (Hons) Degree course in Landscape and Amenity Management. Short courses for FEPA, Irrigation, Fork Lift Trucks, Chainsaws and First Aid also available. Associate students welcome, progression routes identified, accreditation of prior learning possible.



CANNINGTON COLLEGE Cannington Bridgwater, Somerset TA5 2LS. Contact Nick Rigden. Tel: 0278 652226. BTEC First Diploma. BTEC National Diploma in Sportsturf and Golf Course Management. BTEC Higher National Diploma Golf Course Management (inc. European Studies). NVQ Level 1 and 2 Golf Greenkeeping. NVQ Level 3 Greenkeeping and Supervisory Management. NVQ Level 4 Greenkeeping Management. FEPA Training, Chainsaw Certification, Off Road Vehicle Certification, Golf Course Engineers Course.



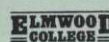
HARTPURY COLLEGE Hartpury House, Nr Gloucester GL19 3BE. Contact D. Kirkham. Tel: 0452 700283. Fax: 0452 700629. Courses: NVQ Level II and III in Amenity Horticulture, NVQ Level III Greenkeeping and Sportsturf Management, 1st Dipl Horticulture, NC Horticulture (Amenity & Decorative) Dipl Supervisory Management, ND Horticulture (Amenity & Decorative), HND Land Use (Amenity Horticulture), HND Land Use (Greenkeeping & Sportsturf Management)



SPARSHOLT COLLEGE Sparsholt College Hampshire, Sparsholt, Winchester, Hants SO21 2NF. Contact Bob Young. Tel: 0962 776441. NVQ Level 2 Greenkeeping Practice, NVQ Level 3 Greenkeeping Supervision, City & Guilds Phase III Enterprise Management (last year to be offered), City & Guilds Phase IV Management Studies, GTC: Greenkeeping Certificate, GTC: Certificate in Golf Course Supervision, FIPA: Short Courses, Chainsaw: Short Courses. All courses, other than Phase IV, are offered on Block release. Full residential facilities available.



DUNDEE COLLEGE Old Glamis Road, Dundee DD3 8LE. Contact Graham Carr. Tel: 01382 834834. Fax: 01382 858117. Courses offered: SVQ Units at Level I and II linked with GTC Training Manual; SCOTVEC HNC Units in Horticulture; SCOTVEC HNC Units on Golf Course Management (available as Flexible Learning). Duration of courses 36 weeks from September/October each year. Attendance full-time, block release and day release. Short courses including "Use of Pesticides" available on demand. Registration June and August.



ELMWOOD COLLEGE Cupar, Fife KY15 4JB. Contact Carol Borthwick. Tel: 01334 652781. Fax: 01334 656795. Craft Level courses. Block-release and full-time, following SVQ Level II and the GTC Training Manual. Six week specialist modular programme (January-February), including Golf Course Construction, Pesticide Application and Plant Protection Procedures. Distance Learning supervisory course, with one week in College. SVQ Level III available from September 1995. HNC/HND Golf Course Management available as full-time, day-release and distance learning. FEPA, COSHH and Health & Safety short courses also.



KYLE AND CARRICK DISTRICT COUNCIL Burns House, Burns Statue Square, Ayr KA7 1UT. Contact Lesley Keenan. Tel: 0292 281511. SCOTVEC National Certificate in Greenkeeping - Day Release up to three years. Students can enrol at any time.



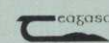
LANGSIDE COLLEGE GLASGOW Langside College Glasgow School of Horticulture, Woodburn House, Buchanan Drive, Rutherglen G73 3PF. Contact Colin S Urquhart. Tel: 041 647 6300. SCOTVEC National Certificate - 3 years day release or 1 year full time. Higher National Certificate in Golf Course Management - 2 years day release. SVQ Level II Amenity Horticulture with Greenkeeping options plus a range of NC and HNC Horticulture programmes including G SVQ Level III. Short courses on a range of subjects including Tractor Operations and the Safe Use of Pesticides can be negotiated.



OATRIDGE COLLEGE Ecclesmachan, Broxburn, West Lothian EH52 6NH. Contact Steve Miller. Tel: 0506 854387. Full and part time courses: Higher National Certificate in Golf Course Management; National Certificate in Greenkeeping; National Certificate Modular and Scottish Vocational Qualification Level I and II. National Certificate in Hort. Machinery. Short specialist courses - including safe use of chemicals, operation of greenkeeping machinery.



GREENMOUNT COLLEGE Greenmount College of Agriculture and Horticulture, Antrim, BT41 4PU. Contact Geoff Jenkins. Tel: 0849 462114 Fax: 0849 428201. Day Release course in Greenkeeping and Sports Turf Management. Two year course leading to NVQ - and a Certificate in Greenkeeping for those completing additional working practices/tasks as specified by the Greenkeepers Training Manual. Course runs from September-May.



TEAGASC COLLEGE Teagasc College of Amenity Horticulture, National Botanic Gardens, Glasnevin, Dublin 9. Contact Pat Suttle. Tel: 0103531 371 636. Phase II Greenkeeping - Block Release two weeks, three times per year. Phase III Greenkeeping - Block Release, one week, three times per year.



PENCOED COLLEGE Pencoed, Mid Glamorgan CF35 5LG. Contact Peter Gillard or Richard Browning. Tel: 0656 860202. Day Release courses in Greenkeeping and Sports Turf at Introductory, Technician, Supervisory and Management Levels, incorporating the Training Manual of the Greenkeepers Training Committee.



WELSH COLLEGE Welsh College of Horticulture, Northrop, Mold, Clwyd CH7 6AA. Contact GM Wright. Tel: 0352 840861. Fax: 0352 840731. Full time courses: ND - Golf Course Construction Option - equivalent to NVQ Level III. NEBSM - equivalent to NVQ Level III. BTEC First in Landbase Golf Greenkeeping NVQ Level II. Part time course: Phase 3 Greenkeeping Management - equivalent to NVQ Level III. NVQ Level IV from Autumn 1993 (if available). NVQ Level I and II Greenkeeping. Short courses: Pesticide PA1, PA2, PA6, 1-3 day courses (training and testing); COSHH Assessments; Safe lifting and carrying; PICKUP courses. Home study learning at NVQ Level II Option Greenkeeping.

SOUTH WEST

SCOTLAND

Northern Ireland

EIRE

WALES

Out with the old and in with the new? Michael Bird draws up a list of what's new for '95

As clubs prepare and finalise budgets for the coming season, greenkeepers will find that there is no shortage of innovative and interesting machinery set to make its commercial debut on British turf.

Some may have been at work for a season or more already, most likely on North American courses, while others will have been on trial during 1994 with selected greenkeepers in Britain and continental Europe.

Whatever the preparations for launch onto the UK market, no machine will be suitable for every course. Turf conditions, climate, maintenance regimes, staffing levels, required standards, purchase price, running costs and a host of other factors must always be considered before making the final purchase decision.

Whenever possible, selection should be made with the help of a demonstration. If appropriate and practicable, the item should remain on the course for a few days so that its performance, ease of use, maintenance requirements, running costs and general suitability can be better assessed.

One machine which attracts more attention than most others is the greens mower. Plenty has been written already about the Ransomes E-Plex – the first all-electric greens mower in the world to go to work commercially.

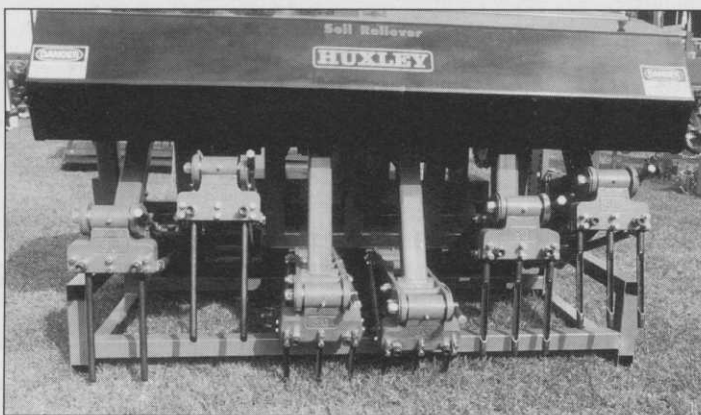
To prove that it is not abandoning the concept of conventionally-powered greens machines, Ransomes has introduced the Greensplex 160, available with either a 16hp petrol or 17hp diesel engine and equipped with "traditional" hydrostatic transmission, power steering and hydraulically-driven reels.

The company says that the Greensplex has been developed with continuous input from greenkeepers to provide a precision cut, excellent manoeuvrability and maximum ease of operation and servicing.

Key features of the machine are three steerable cutting units (9 or 11 blades) with an overall mowing width of 1.6m (62in) and minimum cutting height of 2mm (5/64in), variable mowing speed settings, an uncluttered driver's platform with column-mounted controls, in-situ backlapping and a kick pedal for lift, lower and engagement of the cutting units.

Already proven in the USA, the Greensplex 160 is expected to win the approval of many golf greenkeepers in Britain thanks to its exceptional ease of use and maintenance.

Coming to a course near you ... soon



Huxley Soil Reliever

The latest greens mower offering from John Deere is the walk-behind 220 model, which has a 60cm (22in) cut and is equipped with a 3.7hp petrol engine, 11 blade reel and choice of standard or tournament bedknives, the latter giving a cutting height down to 2.8mm (7/64in).

The machine's loop-style handlebars incorporate an "operator presence system" with the on/off switch and mowing controls conveniently located to hand. Attachments includes a vertical cutter and rotary brush.

Jacobsen's Greens King 418 has a narrow 46cm (18in) cut designed specifically for work on severely undulating greens without scalping. The walk-behind mower has an 11-bladed reel capable of cutting down to 2mm (5/64in).

Power comes from a 4hp petrol engine with three belts providing traction and reel drive. Other features of the 418 are self-adjusting, tapered roller bearings on the reel, an automotive-type differential housed within the traction drum and the options of grooved rollers and a Turf Groomer.

The advantages of relief grinding precision mowing reels are regularly spelt out by cylinder manufacturers and the makers of the grinding machines designed to

keep cylinders in peak condition.

Relief grinding involves removing metal at a pre-determined angle from behind the leading edge of each cylinder blade to reduce the contact area between the rotating cylinder and the bottom blade. The result is less friction and wear, helping maintain a keener cutting edge and longer cylinder life.

Until now, relief grinding has normally involved constant attention from the engineer, repositioning the cylinder manually for each blade being relief ground. Supreme Mowing has changed all that with the introduction of an automatic relief grinding attachment for its Supreme System and Golf Leader cylinder grinders.

The device automatically rotates and locks the cylinder in place at the correct angle prior to each pass of the grinding stone along the individual blades, resulting in faster, safer and more convenient operation.

Rotary mowers are not usually considered as the first choice for precision grass cutting. However, the roller mower, with its height-adjustable rollers in front of and behind the blades, follows an identical contour-hugging principle to the greens mower making it ideal for close, even cutting of undulating areas such as the

semi-rough and other open areas of longer, more formal grass.

Dowdeswell has introduced an uprated version of its 2.4m (8ft) Roller Mower fitted with three blades in place of the previous four. The result is said to create improved air flow beneath the hood and a more even spread of material across the complete cutting width of the machine.

Suitable for tractors from 25hp to 55hp, the machine is also available with a 1.8m (6ft) cut width.

Helping to eliminate double-handling of materials while reducing the effort and manpower needed to refill top dressers and fertiliser spreaders is a new high-lift dump trailer from Ultra Plant of Dungannon, Co Tyrone.

The 4 tonne capacity trailer has a tipping angle of 50deg and a rear vertical clearance of 1.68m (66in) at full ram extension. Precise control of flow is achieved by a guillotine-action rear door and the unit is equipped with four flotation tyres. Options include hydraulic brakes, full road lighting kit and extension sides.

Soil compaction is a problem which needs to be constantly addressed if turf is to be maintained in peak condition. A new concept in deep tine aerification will be making its UK debut in 1995 following the appointment of Huxleys as UK distributor for the American-built Soil Reliever range.

Available in two working widths – 1.5m and 2m (60in and 80in), the Soil Reliever is able to work to a maximum depth of 40cm (16in) using 19mm (3/4in) solid tines. Other lengths and diameters are available in both solid and hollow-coring form, suitable for greens and fairway treatment. Tractor requirement is from 30hp.

Said to be the first walk-behind hollow corer capable of working deeper than 76cm (3in), the Greencare Coremaster 6/150 from Hardi has six legs each equipped with two tines. Working depth is adjustable from 12mm to 150mm (0.5in to 6in) to help alleviate compaction pans created by feet, equipment and years of treatment at a constant depth. Both 12mm and 16mm (0.5in and 0.6in) diameter follow corers are available.

Increased commonality of parts with other machines in the company's range has resulted from improvements made to the Lloyds Leda five gang trailed mower.

An all-hollow box section frame has enabled simpler fabrication while helping to increase strength and reduce weight. Lloyds has also added the option of nine-bladed welded cylinders to the four, five or six bladed units previously offered.

Golf centre plays safe

A 27-hole golf centre has been built at Leroch Farm, Blairgowrie, Perthshire.

The course is designed by John

■ Andrew Robinson has been appointed to the board of Rigby Taylor Ltd as divisional director with responsibility for Scotland. Mr Robinson joined Rigby Taylor as Scottish area manager in 1993 when Sports Turf Services Sales, the business in which he was a partner, was acquired by Rigby Taylor.

■ Sports Ground Irrigation Co, Hunter distributors for the UK and Eire, have appointed Sports Turf Services as sole Hunter distributors for Scotland. And Hunter Industries has appointed Barry Pedler as district manager for Europe, South Africa and the Middle East. He will be based in London.

■ Rockingham Castle Estates near Market Harborough, Leicestershire, will be the venue for the Drainage '95 exhibition on May 9.

Salvesen, who was also responsible for the new pay as you play course at Charleton, Colinsburgh, Fife.

Strathmore Golf Centre will also have a 10-bay driving range and practice ground, and a relatively small clubhouse. When demand justifies and finances permit the changing area and

lounge bar will be extended to incorporate full dining facilities, a larger bar area and pro shop. Jim Brown, 36, formerly course manager at The Deer Park, Livingston, West Lothian, is growing in the course single handedly this winter and will eventually head a team of four or five when the complex opens in spring '96.

ORAG acquisition expands Textron operation to Europe

US-based Textron Inc, a \$9.1 billion multi-industry company, has bought ORAG, the Switzerland-based golf and turf care equipment distributor.

"This acquisition enables Textron to expand ORAG's role to include market development, sales and distribution of our E-Z-GO golf cars and Jacobsen products throughout Europe," said Textron chairman and CEO James Hardyman.

"By maximising ORAG's sophisticated distribution network and experienced, in-country management teams, we will be better positioned to capi-

talise on market opportunities and expand market share in Europe," he added.

On the move

Graham Wissett, formerly deputy head greenkeeper at Llanwern, has taken charge of Lydney, a nine-hole course in meadowland overlooking the River Severn. One of 33-year-old Graham's first tasks will be moving the 9th tee to a new position to make way for a new by-pass alongside the course. Graham replaces Paul Gibson who has moved to Forest Hills Golf Club.

FLYING DIVOTS

■ Course manager Gary Munro has left Bedale GC to take charge of the course being built at Wynyard Hall near Billingham.



■ Allan Moffat has joined Risboro Turf as sales rep for South Bucks, Middlesex and Surrey. Tel: 0844 274127.

■ St Pierre Golf Club course manager Mark Proctor is currently conducting trials with British Seed Houses' Cobra creeping bentgrass. BSH says Cobra is ideal for greens that have become thin or badly worn.

■ Eagle-eyed readers who thought Liphook GC were advertising for a position that had already been filled failed to realise the obvious - we slipped up. Gordon Smith has not got the Liphook job, he is leaving it to replace retiring William Barrie at Swinley Forest.

Greenkeeper's Festive Puzzle

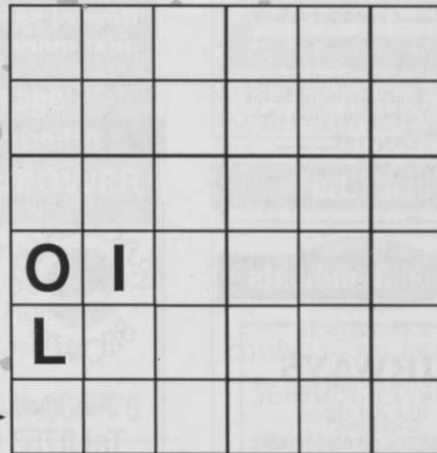
Can you insert these ten pieces into the grid in such a way that each vertical column contains a six letter word connected with Christmas and a seventh appears in the horizontal row indicated with an arrow. We've inserted one piece to start you off.

Last month's Crossword solution:

T	E	N	T	E	D	V	I	L	L	A	G	E
H	E	N	I	R	I	V	E	S	T	E	S	
S	T	N	E	W	D	E	R	O	V	I	N	A
L	N	R	R	A	T	H	I	G	H	E	R	
E	E	S	R	A	O	I	N	S	T	A	N	T
M	L	P	O	V	A	O	E	C	L	I	P	P
U	G	L	E	D	T	R		P	R	O	F	E
P	R	O	F	E	S	S	I	O	N	A	L	S

...and the winner is Mr Ronald Bunting, course manager at Kilmacoll Golf Club.

Compiled by Mark G Smith



Solve the puzzle and you could win either a BIGGA blazer (worth £87.95) or £50 in cash! Send entries to Festive Puzzle, Greenkeeper International, Aldwark Manor, Aldwark, Alne, York YO6 2NF. Closing date: January 3, 1995. First correct entry drawn after the closing date will win the prize. Photocopy your entry if you don't want to cut up your magazine.

Name:

Address:

If I win, please send me ☐ £50 cash or ☐ BIGGA blazer, size.....

Buyers' Guide

The most cost-effective way of reaching readers of Greenkeeper International. Simply ring Bill Lynch on 091 413 7218, Carol Dutton or Louise Lunn on 0347 838581 and ask about an alphabetical category listing: the cost starts from the equivalent of under £25 per month.

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Write down the names of the three ads where the £50 notes are located and send your entries on a postcard to: **Note the Notes Competition, BIGGA, Aldwark Manor, Aldwark, Alne, York, North Yorkshire YO6 2NF**, to be received by first post Tuesday January 3, 1995 (to allow for Christmas post). The first correct entry drawn after that date will win £50. *It could be YOU! Enter today - and Note the Notes!*

Judges' decision is final. Not open to BIGGA staff.

★ **An early Christmas present: the lucky winner from a bulging postbag last month was Mr N Beadle, course manager at Monmouth Golf Club. He scoops the £50 cash prize - very handy at this time of year! It could be your turn for success next month - get searching straight away!**

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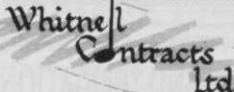
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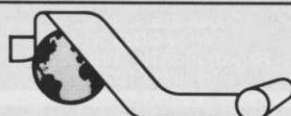


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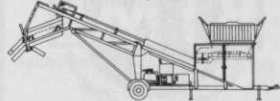
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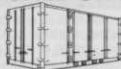


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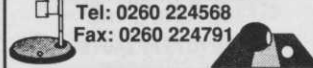
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Salary negotiable, no accommodation available.
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The candidate must have the ability to lead and motivate staff, works programming and a sound knowledge of health and safety requirements.

The person appointed will be expected to take over as head greenkeeper within three years.

Salary negotiable. No accommodation available.

Please apply with full CV to:
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Applicants must possess recognised qualifications plus an established career development in modern course management.

The ability to lead and motivate an established team of greenstaff and organise work programmes is essential.

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Apply in confidence with full CV to:

Hon Secretary, Stamford (Stalybridge) Golf Club, Oakfield House,
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Salary is negotiable depending on experience.

Applications in writing to include full CV
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The Secretary, Southerndown Golf Club, Ogmores Road,
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Golfclub Sinsheim Buchenauerhof, Germany

HEAD GREENKEEPER



required for a newly established 18-hole course with a 6-hole short course and a practice area consisting of a driving range, two putting greens and a pitch-and-chip area.

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No 3: David MacIndoe

Age: 40

What's he do? He's the very skilful course manager at Killarney Golf and Fishing Club in Eire.

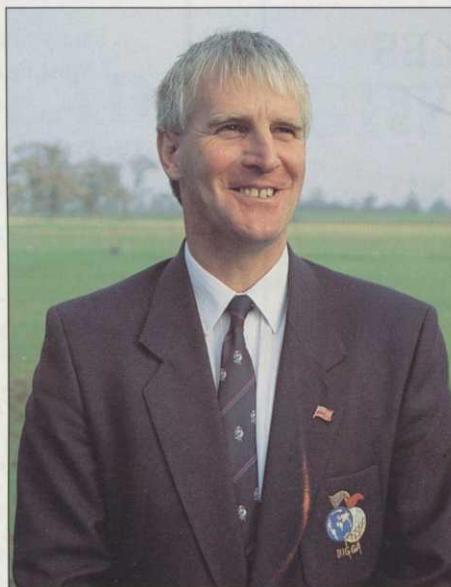
Why do you say skilful? Killarney is one of the world's top courses and David has been running the show for ten years. Killarney is also one of the wettest places in Europe – 80 inches of rain fell last winter from October to April – and David has just talked the club into spending about £460,000 on a new irrigation system.

That takes some doing. Yes, and it hasn't stopped raining since they started the work in October.

Why do they need it then? Insurance. As I've already said, Killarney is one of the top clubs in the world – it staged the Irish Open in 1991 and 1992 (with Nick Faldo winning on both occasions) and it is preparing to host the Curtis Cup, the ladies' equivalent of the Walker Cup, in 1996. The old system watered the greens; the new system will water the greens, tees and fairways of both courses. "It's an insurance in case we ever do have a drought," explained David. "There's a single pipe down the centre of the fairways. It's sensible to put it in when you're spending all the money on the greens and tees and you have to take a main through the course anyway." There are four pop-ups round each green and on a couple of the larger greens they're using fairway sprinklers. Plus there are two approach sprinklers. The Rainbird system with new Master 3 control system (the first in Europe) cost £405,000. Three storage tanks that can hold 47,500 gallons each, their bases and pump house take the total past £460,000.

How did he get the club to agree to it? David could sell sand to the Arabs, but he was also realistic. He knew he wouldn't get it the first time of asking, so he kept asking. "I've enough experience to know now that the first time you ask for something, especially a major expenditure, it will invariably be turned down out of hand. But if you keep coming back, do your homework right and present it properly, then eventually they have to listen to you." He first brought up the idea in '87. They said: "Can't we upgrade the present system?" He said: "Not really, we can improve it." So they said: "Improve it and we'll talk about it again." "So we spent a couple of thousand improving the system and two years later I went back to them and said 'You said come back to you in a year or so's time, here I am. We need this, we still need this.'" With heavy play and no rain, the tees were unmanageable. After three or four years of trying they eventually said go away and get some estimates. That's what he did two years ago. The committee sat on the estimates for two years before finally sanctioning the purchase.

You mentioned heavy play, how heavy? 130,000-150,000 rounds a year from the 1,700



members and 40,000 visitors a year.

You also mentioned heavy rain, how heavy? It's expected to be around 100 inches this year.

That must make managing difficult. "It's a constant battle to keep the courses cut and presented nicely," says David. Trying to organise topdressing and other maintenance practices is difficult. "The forecaster is my best friend. I never go a day without phoning him and getting a long-term forecast so I can plan when I might have a chance of doing a job."

What other problems does he have? Old deers.

Lady members are often the worst... No, d-e-e-r-s, as in Bambi.

Ahhhhhhhh. More *uggghhhh*, especially when they run full pelt across the greens. "They're not a big problem but they do cause us anxious moments especially at this time of year when they're mating – the stags do a lot of fighting for dominance. Thankfully they usually stay on the fairways. But occasionally they go on the greens. If they walk, it's not a problem – the small hoof marks are no worse than a pitch mark – but if they charge across the greens because they're being chased by a dog, then they can cause a lot of damage."

What sort of greenkeeper is David? He is a great believer in the traditional methods. "You can't overfeed and overwater through the summer and expect the course to take all the rain in the winter. The course has to get some chance to dry out," he told us. "And if it does dry out I let nature take its course and just use the watering system to keep it alive." His favourite machine is the Verti-drain. He uses it at least twice a year, but some greens are done four times. Without it he couldn't keep the course

playable. "If you can keep the top 3 or 4ins open, they will drain."

He also topdresses by hand. He's tried modern machines but when the course is wet and the ground is soft machines do more harm than good round the approaches and backs of greens.

It's easy for him to order his lads out with shovels... He goes out with them. His management style is very much hands-on. "I think in Ireland you have to, especially if you're a foreigner (he's Scottish). If I sat in my office all the time I don't think they'd have the same respect. You have to get out there and be alongside them. Not all the time but definitely some of the time. It's important to show them you can do the job every bit as good as they can."

How many lads does he have? He has a staff of 17 and says "they're a great bunch of lads."

Are they helping him conquer *Poa annua*? They're putting up a brave fight, but it's not a battle he can win. "When I was younger I believed there was no reason why you couldn't have a pure bent strand of green or 80-90% bent. But in my situation where you have extremely heavy play in a wet climate the bents just can't survive. I still try to get as much bent in the greens as possible and occasionally overseed with bent but at the end of the day the greens aren't getting any better. There's only so much traffic a green will take and once you get over that limit the good grasses are eroded away." When he arrived at Killarney the greens were 90% *Poa*. But, with good management, including intensive aeration, and less play in the winter, he got the bents to dominate. After a couple of years of arriving they were up to 75-80% bent, but over the past few years they've gone back to about 50/50. However, he's not conceding defeat. "If you give up the battle you may as well give up the job."

Is there anything the club can do to help? They've already taken the first steps – they've bought 80 acres of land for £1million and are negotiating for another 68 acres alongside it. The aim is to build a third course to satisfy the huge demand for golf in the area (Killarney has a waiting list of 400), but it will also enable David to rest a course during the winter.

Does he play on his courses? Yes, he's a four-handicap player and says it helps him "to relate to members' feelings about the course."

How did he get interested in greenkeeping? His next door neighbour was a greenkeeper.

Not to be confused with: Alec MacIndoe (his greenkeeping son at Stockley Park, Middlesex).

Least likely to say: "It's raining, I won't go out today."

Most likely to say: "Cheers!"



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