How Tony Gadd turned the tide

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Journal of the British and International Golf Greenkeepers Association
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Bill Fox – Head Greenkeeper
Moortown Golf Club, Leeds

Bastion T* is quite simply the best selective weed killer I’ve ever used!

Neil Cleverly – Head Greenkeeper
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Rimidin* MAFF 05907
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Using Rimidin* for the past year I found disease spraying intervals to be extended to 3 months.

Ron Butler – Head Greenkeeper
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A no-nonsense team of greenkeepers get to grips with half a dozen compact tractors, to find out if a smaller size means a reduction in capability. The verdicts may surprise you. Pages 42-51

A moving experience

With the crumbling countryside nibbling at the edges of his golf course, Tony Gadd was charged with the mammoth task of moving inland and leaving some holes open for play. Pages 10-13

Seed or turf

Mike Canaway looks at what’s best for new greens which have to be ready in a hurry and Peter Hayes examines the top grasses. Pages 15-19

St Andrews gets set for ’95 Open

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WE SAY

Win the ICI Premier Greenkeeper Award and visit San Francisco

Judged by your peers to be the best of the best is a rare achievement in itself. But for the winner of the 1994 ICI Premier Greenkeeper Award, that achievement will turn into an unforgettable experience with a place on the BIGGA trip to San Francisco for the 1995 GCSAA Exhibition and Conference. You'll enjoy legendary American hospitality and VIP treatment all the way.

ICI Professional Products' Roger Mossop, left, with the 1993 winner, Gordon Irvine

Other prizes in this most prestigious award include: ★ a weekend for two at a top London hotel, with tickets for a West End show of your choice ★ a weekend for two at the Aldwark Manor Hotel, York ★ ... and all section nominations will receive a memento of the occasion, courtesy of the sponsors, ICI Professional Products.

Entry forms are available from Headquarters or your Section Secretary.

Each section of BIGGA will consider the entries and one nominee will represent each section in a regional final, where in a course visit by representatives of ICI and BIGGA, they will walk the course and have an informal discussion with the nominee.

The five regional finalists will receive a further course visit and will be interviewed at Aldwark Manor prior to a banquet and presentation at BIGGA HQ on 5 December 1994.

Closing date for entries is April 30, 1994 – so don't delay, enter today!

Managing membership

M embership is at the very heart of BIGGA. There is strength in numbers and from 1987 onwards our membership has shown consistent growth. I am often asked just what I consider to be our membership potential and this is a difficult question to answer. In any professional body there will always be only a given percentage of those entitled to join who will actually apply for membership, the remainder citing any number of reasons for a negative attitude. Within BIGGA we now have some 50% of all eligible greenkeepers in membership so membership matters should continue to focus our minds.

The good news is that at the time of writing 763 applications have been received from potential new members for 1994. Conversely, after a membership drive which has stretched since mid-November, we entered March with approximately 1,500 current members still to renew. These have been chased from headquarters with a good response and the next chasing will be at regional and section level. When all is said and done we will look to increase on our 1993 closing membership figure of 5,162. In this year of review, we have the opportunity to look at our membership rates and categories. As far as subscriptions are concerned there are clearly two schools of thought – those who feel that subscriptions should be increased in line with the needs of a professional association and the benefits available, whilst there are those who feel that subscriptions should be kept at present levels both from an economic viewpoint and because they see these levels as most likely to pull in new members. There is always scope to change membership categories but changes need to be made judiciously and only to meet clearly defined areas of need.

What of golf clubs and their attitudes to BIGGA membership? The majority of golf clubs now have an insight into the benefits of BIGGA membership for their employees and as such encourage membership. Not all greenkeepers respond to this encouragement. Other clubs take an opposite view, still seemingly threatened by an association which they see akin to a trade union. Nothing could be further from the truth. Through their representation on the GTC, the Home Unions have agreed to encourage membership of BIGGA and one hopes that the message will get through to those clubs who adopt an insular and sometimes hostile attitude. What justification can there be for a greenkeeper to feel that his employment might be threatened should he join a professional association whose educational and training programmes will ultimately make him much better equipped to perform his role within his golf club? Some golf clubs indeed still actively oppose greenkeepers seeking training and qualifications fearing that they will then move onto better things.

Let's have a look at the value members get for their membership. First, let's clearly establish that membership for those renewing in 1994 came at a rate of £1 per week or less. From receipt of a monthly magazine to insurance and legal benefits and numerous educational opportunities, this is surely outstanding value for money. It is an old but very true adage that you only get out of something what you are prepared to put in but for the keen and committed individual, his membership allows him to play a full role at section, region and national level, to pursue a number of educational options to his career benefit and enjoy the camaraderie and social aspects of BIGGA whilst being backed by a professional association intent on improving the status, training and conditions of service for its members.

The two schools of thought on subscriptions are matched by two schools of thought on who should pay those subscriptions. Club or individual member that is the question. Many are the arguments on this score with those seeing membership of BIGGA as a reasonable part of their employment benefits to be funded by the club, whilst others feel that the individual paying ensures that greater value is placed on membership and there is increased commitment to the Association. What of the renewal process? Non-receipt of the membership invoice, lost in the washing machine, chewed by the dog – there are many intriguing excuses made for late or non-payment. Like most, greenkeepers do not like parting with their money before the last possible moment. So from Headquarters' viewpoint there has to be recourse first to the Constitution and second to a penalty. The annual subscription shall be due and payable on the first day of January each year... No member of the Association whose subscription is in arrears by one calendar month shall participate in any of the advantages or privileges of the Association, vote on any question or compete for any prize. That applies after 31 January. After this any member still to renew has the magazine withheld and by the end of March they are deleted from membership. I wonder just how rigorously the constitution is implemented at region and section level in this regard. It certainly needs to be as, like other organisations, late payment for BIGGA means reduced cashflow.

I hope I have triggered some thoughts on a subject which is the very life-blood of the Association. We do not claim to have the ideal membership systems, categories or subscriptions. We remain open to suggestions on where improvements and changes can be made. This year we will be reappraising the administration and computerisation of membership. I would welcome any views or comments you may wish to put forward.

BIGGA Staff Profile CLARE DOUGLAS Membership Services Officer

Clare was one of 36 students to successfully gain a place on a newly-established retail marketing degree course at Manchester Polytechnic – from 10,000 applicants! Now Clare is using her skills to help build BIGGA's membership and her day to day role includes marketing to gain new members and dealing with any queries that may occur.

Before joining the Association, Clare was a graduate recruitment officer at Sainsbury's head office in London and worked for Yorkshire Water in their customer services and personnel department. Clare saw her move to BIGGA as an "interesting opportunity" to use her degree.
One step beyond course manager

What's the next step after course manager? Operations manager is the answer. And Kevin Munt, course manager at Buckinghamshire Golf Club, has just been appointed operations manager there.

This expansion of duties will involve him in all aspects of club management and operation.

He said: "This is an exciting challenge for me having been involved in the club's development since day one. It is wonderful to be given the chance to play a greater role in an operation that I have vested the last four years of my career to."

Kevin, 36, added: "This is a great reflection on the educational system developed by the Association in the last seven years. I hope that my appointment will give incentive and help to other skilled course managers who wish to step into overall golf club management. Hopefully it will also serve as a target for young people entering our profession. There are now great opportunities in the golfing world for people who are willing to study and work hard at their careers. In fact, thanks to the standards set by BIGGA and the GTC, it should be far easier for managers to step from the golf course into the club-house rather than the other way around."
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Pre-tax loss for Ransomes

Grass machinery manufacturer Ransomes has reported a loss before tax of £8.9m despite a turnover of £165.8m, six per cent up on '92.

The operating profit before exceptional items was £5.3m, but exceptional charges of £5.8m to cover restructuring costs which we will incur in 1994.'

Part of the company's new direction includes the consolidation of four divisions into two distinct groups: a consumer division and commercial division. Ransomes' rationalisation plan also includes the closure of the American head office and warehouses in America, France and Germany, and about 100 redundancies, including the elimination of several senior administrative management positions.

"Corporate administrative officers have been removed, and we will insist on a much more hands-on operation style," stated Mr Wilson.

He added that since the 1989 acquisition of Cushman and Ryan brands, very little had been done and the decisions made were not effective. "New management is now in place and wasting little time bringing about change," he said. "We have already achieved a lot in the first two months of this year but much still remains to be done to make us the low cost producer in our industry, and to convince customers that they should choose Ransomes products. We have made a promising start to 1994 with sales up on last year and with a number of new products being introduced to the market. We must strive for continuous improvement in our business."

``Pocket checklist' for greenkeepers

A new pocket information leaflet for BIGGA members is now available. Sponsored by the suppliers of Farmura and Blazon products, the '18 Ways-to-a-Better-Spray' booklet has been specially designed as a pocket checklist reminder for spray operators to consider after they have followed the Codes of Practice and properly calibrated their spraying equipment.

The full-colour leaflet is divided into three sections providing the operator with six important reminders before spraying commences, six points to consider during application and six checks to complete after the operation has finished.

All BIGGA head greenkeepers and course managers will be sent a copy shortly. Additional copies are available from HQ.

A free electronic stopwatch and a new Hardi AML 200 Unitflex Sprayer are the prizes in the Farmura/Blazon 'Better Way-To-Spray' campaign running until June 30.

To qualify, you will have to order one outer of Blazon Spray Pattern Indicator from a Farmura products distributor and you will be sent a stopwatch to assist you in calibrating your spraying equipment.

In addition, the purchasing golf club's name will be entered into a national draw with the winner being presented with a new Hardi 200-litre trailer sprayer complete with 6m boom, PTO drive and diaphragm pump.

Ten Hardi K15 Knapsack Sprayers will be presented to the runners-up. Tel: 0233 756241.

Flying Divots

IndyCar superstar Nigel Mansell has quit as president of Dartmouth Golf and Country Club, Devon. Rumours that this had anything to do with the BIGGA National Golf Tournament being staged there in August are completely unfounded. Nigel said he is too busy testing and racing in the United States to carry on as president. He will, however, keep his 7.5 per cent stake in the club.

A full preview of the tournament will feature in next month's issue, but greenkeepers intending to compete should contact BIGGA HQ as soon as possible to secure accommodation as Dartmouth is a popular holiday destination in August.

Britain came third in the table of foreign country attendance at the GCSAA's 1994 International Golf Course Conference and Show in Dallas. Of the 1,309 foreigners from more than 50 countries at the American equivalent of the BTME, 100 were Brit. Cream of the crop surprisingly, came top with 467 attendees while Japan was second with 169. Mexico was fourth with 84 and then Germany with 48.

More than 15,000 Americans visited the three-day show and 3,398 sat in on the 55 seminars.

Next year's show is scheduled for February 20-27 in San Francisco.

Bournemouth-based Agriland's new sales manager for the south of England is Adrian Long, a qualified greenkeeper and a former student at Askham Bryan College, York. He gained his greenkeeping experience as deputy head at Oslo Golf Club, Norway, and as head greenkeeper at Schonenberg Golf and Country Club, Zurich, Switzerland.

The 900 members at Bishop's Stortford Golf Club clubbed together and bought the freehold of the course. Now they will have to build a clubhouse as their present building is on a site where developers want to build 20 homes.

Nicklaus takes the high road

Jack Nicklaus has his eye on a site on the Bonnie banks of Loch Lomond, next to the troubled Tom Weiskopf designed course which is due to open next year.

Nicklaus is reported to have taken his sons Gary and Jack Jr to look at the land during a recent visit to Europe. If he goes ahead with the project, it will be his fifth course in the British Isles, following St Mellion, Mount Juliet, the Monarch's at Glenelgues and The London Club (which officially opens in July).

The Weiskopf-designed course has been sold to Lyle Anderson, an American businessman, after going into receivership last year. It is expected to open next year with the 220-year-old manor house being converted into a clubhouse.
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WAVERLEY STREET, HULL HU1 2SJ.
This 240-acre farm and parkland estate surrounding Ramside Hall Hotel near Durham is being turned into a golf complex with course manager Roger Shaw coordinating the project.

He started working for the developer, Michael Adamson of Ramside Estates, last September, but construction of the 27-hole course and practice facility only started last month (March). It is hoped that they will start seeding the fairways and greens in May and that the course will be fully constructed by September, with the opening planned for spring '96.

By then, says designer Jonathan Gaunt, you should find "an unusually mature, well-integrated golf course which is exciting to play and a delight to walk through." He says the views over the surrounding landscape are "delightful".

Much of the course's mature look will stem from the well-established oaks and beeches already on the estate. However, 50,000 extra trees are to be planted in consultation with the Forestry Authority. "Indigenous trees and shrubs will be used to extend and recreate habitats for abundant local wildlife which will thrive in the large areas of rough between fairways, so that even while the new course is establishing, the site will retain a maturity that many take years to establish," says Jonathan.

The main course is a 6,800-yard par 72 layout which aims to be testing without being intimidating or penal, by offering options instead of hit-and-hope obstacles. The features encouraging strategic play include a number of lakes and streams (which also tie in to the drainage and irrigation systems for the courses), sensitive but not over-prolific bunkering, and the careful planting of the new trees. The nine-hole course has a par of 35 and is aimed at the less experienced golfer. The complex will also have a 1,500m sq chipping and putting green and a golf academy playing out to a 300-yard practice range with various featured targets.

Before Roger joined this project he was course manager at Bran-cepeth Castle GC, also near Durham. He'd been there for ten years and brought the tired and out-of-condition Harry Colt designed course back to life. Prior to that he was head greenkeeper at Darlington GC for eight years and he served his apprenticeship at Billingham GC.

He brought in designer Jonathan Gaunt, whose credits include a 27-hole complex in Denmark and the Chesfield Downs Family Golf Centre in Hertfordshire.

The construction team is headed by Ian Martin and Bob Hornegold and backed up by agronomist David Stansfield of PSD Agronomy. Drainage is by MJ Abbott of Salisbury and the irrigation system was put in by Par 4 Irrigation of Ripon.

The plan is to build the north of England's largest and best equipped leisure facility, including a clubhouse to open simultaneously with the golf course, and to offer "five star quality at three star prices".

Unhappy choice for Scottish clubs

Three Scottish clubs are having a gun held to their heads - give up the most popular tee times or face a rent rise of 400 per cent or more.

Lord Wemyss' Wemyss & March Estates are building two new golf courses in East Lothian - at Gosford Park and Craigielaw Stading - with a 150-room hotel and 50 houses. The hotel will be finished before the courses, so the lord wants prime times for guests at three of his other courses in the area - not only until the new courses are built, but also afterwards.

The three existing courses - Longniddry, Kilspindie and Musselburgh - face rent increases of 50 per cent anyhow, but it could be ten times as much if they don't give up the peak tee-off slots of 8-10am and 2-4pm seven days a week.

Longniddry has been told its rent will go up from £17,000 to £25,000 if it agrees to give up these tee-off times to the landlords, but it will go up to £60,000 or £70,000 a year if it doesn't. It is understood that Kilspindie Golf Club and the district council which sub-lets the course at Musselburgh are in a similar situation.

• Golf course owners who are having trouble selling their courses could always do what one American is planning. Jack Ridge is going to give his 124-acre course to the nearest the pin on October 9. He is charging a $2,000 entrance fee and limiting numbers to 3,000 entries - giving him $6 million. The chosen hole at Bob O Link is the 145-yard 6th, which is fronted by water. The contest will be held over six days with the four closest each day advancing to the final, where they will get four shots to bag the 6,430-yard course.

The new head greenkeeper at The London Golf Club's Ron Kirby-designed International Course is 26-year-old Steven Jones. Steven moves to the course, to look after the colonial bent/restore greens, from the Oxfordshire Golf Club, where he was foreman/irrigation technician. He replaces Simon Grand who has gone to keep the new Lydd Golf Club.

Steven will report to Stephen Marsden, who is now the golf courses superintendent at The London Golf Club, which will have a grand opening in July.

• Gary Cook, 29, has taken up the head greenkeeper's job at Enmore Park, Bridgwater. He was previously at Annenhill, Kilmarnock.

• Phone-Poulenc Environmental Products has appointed three new distributors: RE Rushbrook & Son, Suffolk; Gem Professional, Lancashire; and Amenity Land Services Ltd of Shopshire.

• Inter Seeds Limited of Inkberrow, Worcestershire, has gained BS 5750 Part 2 as wholesalers and distributors of amenity grass seeds, wild flowers and fertilisers. Tel: 0386 793135.

• The British Association of Landscape Industries (BALI) has accepted an invitation to join the CBI Council, the governing body of the CBI.

FLYING DIVOTS

THE LONDON GOLF CLUB

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• The British Association of Landscape Industries (BALI) has accepted an invitation to join the CBI Council, the governing body of the CBI.
With a crumbling coastline nibbling at the edges, Barton-on-Sea Golf Club had little choice but to move inland. Course manager Tony Gadd tells Cedric Johns how he handled the task—and kept 18 holes open for play throughout.

When Tony Gadd was appointed course manager at the Barton-on-Sea Golf Club, his brief was simple and straight to the point. Call-in a contractor or manage the project yourself, he was told. Given the choice, Tony decided to put his reputation on the line. He opted to plan and control events, using his experience and judgement to achieve the success his new employers had spent years planning for.

The project? To rebuild, extend and revitalise a 95-year-old clifftop golf course threatened by a crumbling coastline, move it inland and turn it into a modern, 27-hole complex, complete with brand new clubhouse; at a total cost of £2 million.

Apart from the importance of selecting a group of reliable subcontractors, this entailed planning the movement of tens of thousands of tons of soil, pegging-out three nine-hole loops, recycling spoil to build features, updating drainage, extending the irrigation system, overseeing progressive seeding and turfing, coping with all the relevant paperwork, maintaining phased work schedules—and making sure that each stage was completed to budget.

Anything else? “Yes”, said the club’s management committee, “It is essential that you keep 18-holes open for play at all times.” Some brief, some welcome back to this country! Prior to joining the Hampshire club, Tony had spent a decade out of the country gaining invaluable experience helping to build and manage golf courses in Africa and central Europe.

During that period of his life, he learned to cope with arid heat and tropical downpours (which washed away entire fairways) in the Ivory

A moving experience
Coast and the teeth-chattering contrast of mid-European winter temperatures plunging to -20°C or more.

In Germany, melting snow and continuous rains combined to flood his Schloss Weitnburg course to the point where, as the waters subsided, trout were discovered swimming in the bunkers.

On the face of it then, Tony Gadd's move to the English south coast appeared to offer many advantages; a pleasantly mild climate, a team of professional sub-contractors at his disposal plus the bonus of established support in the shape of a six-man team led by head 'keeper Bob Parsons.

The reality was different! The Barton project turned out to be the biggest challenge of his life, he told me. "But I don't regret a moment of it."

One of Tony's main headaches was - and still is - wind erosion. During one particularly stormy night, high winds blowing in off the sea shifted an inch of carefully laid seeded soil. Within days, freshly sanded bunkers turned a pale shade of green.

"I didn't use covers. If I had, they would only have ended up floating in the bay."

Storm-force winds are not the everyday norm at Barton but the Solent channel can be fickle. Light winds suddenly turn into squalls gusting to a strength four or five; enough to cause soil movement.

When this happened, Tony and his team had to forget whatever they had planned. For a period, raking, over-seeding, light rolling and watering were daily necessities.

Yet just a few paces further inland, where the course was extended away from the crumbling cliffs, heavier farm soil resisting the affects of the winds threw-up another challenge. Weeds.

Classified as Grade 'D' farmland, the soil was alive with camomile, white flowering clover, plantains and a botanists' book full of other species. On top of that, the owner, a local farmer had, in Tony's estimation, only paid lip service to drainage. "That was a whole new ball game," he commented with a wry smile.

Water was an important priority. Acknowledging his scant knowledge of the technicalities of irrigation system design, Tony readily agreed to let ISS (Irrigation Contracts) take responsibility for this aspect of the development.

They had installed Barton's original system; they knew the ropes. "We had to plan and re-plan the new system depending on the various stages of construction and seeding," says Gary Parker, whose company adapted and extended old with new over a twelve month period.

In addition to setting-up a temporary pump station, repositioning pipelines and re-assessing application rates on a weekly basis, the ISS installation team was not helped when the odd JCB dug-up newly laid pipe or, in one heart-stopping escapade, pulled up what seemed like miles of cable!

There was a time when even Tony admitted he was desperate for water - for seeded fairways not included in the irrigation plan. "I was seriously thinking of hiring bowser but then it rained - and rained."

Talking of seeding, Tony told me that he planted a traditional mixture of fescue and creeping bent on the greens and tees, pre-mixed fes-
The new club house at Barton-on-Sea

BARTON LOGISTICS
Rebuilding the Barton-on-Sea golf course involved the following statistics — according to Tony Gadd's records; dated May '91—June '92.

Earth: 250,000 sq yds moved
Stone: 5,000 tons used for drainage and stone carpets
Water: 2.5 million gallons stored in six lakes of varying size
Machinery: five bulldozers, eight slewing excavators, one mini-digger, two JCB wheeled excavators, one wheeled shovel, four 22-ton dump trucks, two continuous trenchers, five agricultural tractors
Fuel: 24,167 gallons of diesel
Labour: 43 operators — plus one water diviner

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John Deere — two 358 greens mowers
Huxley — one 358 for toes and approaches
Ransome — one 180D for surrounds
Brouwer — one hydraulic 5-gang mower for fairways
Huxley — one trailed gang mower
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John Deere — one bunker rake
Ransome — one bunker rake

In addition to the above, a (very old) Ransome 171 model is used for verticutting.

IRRIGATION
27 greens, tees and approaches — Toro
650 independent head control sprinklers, computerised AquaFlow control system designed, installed and maintained by ISS (Irrigation Contracts) Ltd.

Accidents: None

COURSE EQUIPMENT

CUSHION CUTTERS
John Deere — one bunker rake
Ransome — one bunker rake

In addition to the above, a (very old) Ransome 171 model is used for verticutting.

RANSOMES
Ransome — one 24in motorised mower
Auto Certes — Three motor mowers
Allen Flymo — four brushcutters

ERS
Ransome 171 model is used for verticutting.

WATER: 2.5 million gallons stored in six lakes of varying size
Stone: 5,000 tons used for drainage and stone carpets
Water storage was another vital consideration. This problem was part and parcel of the thinking which lay behind the excavation of a large ornamental lake alongside the new clubhouse.

But this was not any old ornamental lake. It features an island green — the 18th when played in competitions — surrounded by something like two million gallons of water. Before it was filled, the ISS installation crew lined it with a pressure resisting PVC-based liner.

Interestingly, a water diviner was brought in to help source natural supplies. He quickly found an underground lake which, with a nearby spring, provides enough 'liquid gold' to keep both the ornamental lake and five other, smaller lakes dotted around the golf course and its perimeter, full.

Not that water was at much of a premium this winter! For the first time in recent memory, the course was closed for 16 days after a couple of months' rainfall fell in a matter of days. Even the free draining cliff top soil couldn't absorb that amount. It was then that the prevailing wind — the cause of many other troubles, suddenly became a friend indeed...

From day one, Tony Gadd kept club members fully informed about the progress of the extensive work taking place. 'There were a few grumbles but generally speaking, we achieved our dual objectives of creating a new golf course and keeping 18 holes open for play — without any major disasters,' he says.

Traffic is heavy at Barton. They (the members) are a hardy breed, I was told. Many play seven days a week and but for an 8am start embargo, popular opinion has it that some of them would be out there at sunrise.

What do the members think of Tony Gadd? Without exception, all those I asked — from management and club captain downwards, undoubtedly have a healthy respect for what he — and his greenkeeping team — have accomplished.

When Richard Branson — he of Virgin Airways fame — dropped in (by personal helicopter) to officially declare the whole project open, last September, Tony and his team were given a special mention coupled with a vote of thanks. But then, that's the way they do things at Barton-on-Sea.
The challenge of a lifetime

Always a keen golfer, Tony Gadd was playing off 2 at the New Zealand Golf Club, West Byfleet, Surrey as a youngster, but quickly realised he couldn’t afford to become a pro. “Family finances would not stretch that far,” he remembers.

Instead, he walked out of his banking job - “I hated being walled-in” - to study engineering “while playing as much golf as was possible.”

This combination led Tony into greenkeeping. He became an assistant at the New Zealand Club specialising in the maintenance of the club’s tractors, mowers and the like.

Moving on to Fulwell, South London, Tony later joined the John Lewis partnership, who were involved in the construction of a new course at Winter Hill, Cookham, Berks, in the mid-70s.

At Cookham, Tony teamed-up with Winter Hill’s head groundsman, Pat Ainsworth. Describing Pat as a “great greenkeeper who put me on the right road,” Tony learned much about golf course management.

When the chance came, Tony applied for, and obtained, the head ‘keepers position at the 18-hole Kingsdown Club, at Box, a delightful small village near Bath. Three and a half years later, in the early ‘80s, Tony joined the King Norton (Birmingham) Golf Club, “To sort out thatch problems. It was 1 1/2ins deep in places!”

That accomplished, he joined Golf European Construction, a move which led him to Africa and the Ivory Coast.

“I was appointed - by the president of the Ivory Coast government - to manage the construction of new courses designed to attract tourists.”

During his five-year spell in Africa, Tony was responsible for building and developing the Yamoussoukro and Abidjan courses.

In 1987, Tony moved to Germany and became involved in the construction of Golf Klub Schloss Weinburg, Stuttgart, an 18-hole plus 9-hole academy complex.

Now a family man with two young children, Tony decided that perhaps it was time to come home.

That decided, he was appointed course manager of the Barton-on-Sea golf club, Hampshire, in 1991. His first objective? “To take an ageing 18-hole clifftop course into a new era of golf.”
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Heriot & Bardot

Favourite bentgrasses for fine, close grown turf outscore* the usual

Although ‘Highland’ browntop bent is generally acceptable for most UK situations, for very fine turf such as golf and bowling greens the STRI now advises finer and denser cultivars like Heriot and Bardot.

HERIOT 7.7
BARDOT 6.5
HIGHLAND 4.8

* The STRI 1994 list shoot density figures.
Mike Canaway of the Sports Turf Research Institute looks at what's best for new greens which have to be ready in a hurry.

With increasing commercial pressure to bring newly established golf courses into play as quickly as possible, it is often no longer feasible to allow long periods for greens to establish following sowing. Temptation, or indeed the necessity, is to use mature turf for establishment of new greens to minimise the time needed before play can take place. However, the use of mature turf carries with it risks.

Modern methods of golf green construction involves the use of rootzones with a very high sand content, for example in the USGA method of green construction, or indeed sometimes pure sand, to provide free-draining conditions and hence the ability to play even after heavy rain. Importation of turf onto such rootzones brings with it the indigenous soil on which the turf was grown and with it the risk that fine silt and clay particles within this soil will cap the sand rootzone, much reducing its capacity to remove water from the surface.

An experiment carried out a few years ago at Bingley with football type turf showed that even turf grown on pure sand could cause a great reduction in infiltration rates due to the importation of an organic layer at the rootzone surface. On golf greens such layers can become buried by applications of top dressing to present an intractable problem in subsequent years. A further risk is that weed grasses such as annual meadow-grass, present in the turf production fields, will also be imported along with the turf. Ways of minimising
Why do we get these gross differences in water infiltration rate at this stage, although some differences were observed these were statistically not significant one from another. (NB: key to the experimental treatments in the diagram as follows: NL = normal seeding, HR = high rate of seed, CO = Coronet Turf, TSS = turf grown on sandy soil, THS = turf grown on heavy soil, WT = washed turf.)

In 1990 and 1991 we carried out an experiment at Bingley to compare different establishment methods for newly laid golf greens, including seeding at two seed rates, the use of mature turf (2 grades), the use of washed turf and juvenile turf (Coronet Turf). The effects of these different establishment methods were studied on grass ground cover, annual meadow-grass ingress, playing quality in terms of hardness and green speed and water infiltration rate of golf green turf established on a sand rootzone.

The experiment was carried out on a pure sand rootzone overlying a gravel drainage carpet, the rootzone consisted of 250mm of medium-fine sand overlying 50mm coarse sand, which formed a blinding layer above the gravel drainage carpet. The aim of the experiment was to simulate conditions where a newly laid golf green was intended to be brought into use as soon as possible. Therefore we aimed to impose artificial wear using a “wear machine” fitted with golf spikes just four months after seeding or laying of turf on the new greens. The construction was done in the early part of 1990, final seedbed preparation taking place in mid-April 1990. Alginure soil conditioner was applied to aid moisture retention and also to supply micro-nutrients. A proprietary fertiliser was applied to the seedbed. This contained a slow release form of nitrogen (IBDU) to prevent or reduce the potential leaching losses of nitrogen from the seedbed. Both the Alginure and the fertiliser were raked into the upper 50mm of the seedbed.

After this the different experimental treatments, which comprised different methods of establishment of golf green turf, were applied to the experimental area. These were:

1. Bent/fescue mix sown at 35 g/m². This mix contained 40% Chewings fescue, 45% slender creeping red fescue and 15% browntop bent split between two cultivars, ‘Barfoed’ and ‘Highland’. 2. The same seeds mix sown at 100 g/m² – a much higher than normal rate.

3. Coronet Turf. This is a commercially available product and it was grown on a netted, organic soil-less mulch and delivered typically at 6-8 weeks after sowing. The plastic mesh netting was incorporated by the grower to facilitate lifting and handling of the juvenile turf.

4. Turf grown on sandy soil. This was a mature turf sown with a mixture of 50% Chewings fescue and 20% browntop bent. On delivery it comprised about 50% bent, 40% Chewings fescue, 8% dead matter and traces of meadow-grass species. The soil attached to the turf was defined as a sand in textural classification.

5. Turf grown on heavy soil. This was a mature turf which consisted of delivery of 65% fescue, 15% bent, 7% annual meadow-grass and 1% smooth-stalked meadow-grass, the remaining 12% comprising dead matter and bare ground. The soil attached to this sod was described as a clay loam, ie a heavy soil, comprising 35% sand: 33% silt: 32% clay.

6. Washed turf. This was the same turf as described in (4) above, but with much of the soil removed by washing using high pressure water jets.

The trial was given intensive maintenance to encourage the grass to establish as quickly as possible with a target date for the start of “play” four months after the initial sowing and laying of the turf.

Much data was collected from the trial as mentioned above, however, in this article I want to draw attention to the effects of the different treatments on the ability of the turf to remove water from the surface, ie. water infiltration rate. Clearly the purpose of a sand-based green is to provide free-draining conditions. If the turf supplied caps the rootzone then clearly much of the effort which has been put into the golf green construction has been wasted. The diagram, right, shows the water infiltration rate at three different stages during the experiment.

Four months after sowing, in August 1990, the different plots of golf green turf were considered ready to receive artificial wear treatments using our wear machine fitted with golf spikes. Infiltration rate measurements were made using an apparatus known as a double ring infiltrometer. The results showed that the different methods of establishment had no significant effect on infiltration rate at this stage, although some differences were observed these were statistically not significant one from another. (NB: key to the experimental treatments in the diagram as follows: NL = normal seeding, HR = high rate of seed, CO = Coronet Turf, TSS = turf grown on sandy soil, THS = turf grown on heavy soil, WT = washed turf.)

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**SEED OR TURF?**

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**Why do we get these gross differences in water infiltration rate at this stage, although some differences were observed these were statistically not significant one from another. (NB: key to the experimental treatments in the diagram as follows: NL = normal seeding, HR = high rate of seed, CO = Coronet Turf, TSS = turf grown on sandy soil, THS = turf grown on heavy soil, WT = washed turf.)**
infiltration rate among turf treatments?

By December 1990 when the artificial wear treatments had been in progress for some time, a dramatic reduction in the infiltration rate of the green surface had occurred. From values in excess of 200 mm/hr before the wear treatment started, infiltration rates were reduced on all treatments but most dramatically on those treatments where mature turf had been used in the construction process. The water infiltration rate on the sod grown on heavy soil was reduced from 211 mm/hr to only 12 mm/hr in December 1990. The turf grown on sandy soil and the washed turf, statistically these differences were not significant. In studying the results for both December and May, there does seem to be some benefit in the use of washed turf if mature grades of turf have to be used. In the UK, turf washing has not become prevalent, but in other countries it is widely practised, for example in Australia. Perhaps the findings of this trial will encourage some of the turf growers to experiment with systems for turf washing.

The question remains: why do we get these gross differences in water infiltration rate among turf treatments. Part of the explanation is doubtless the mineral matter imported along with the turf as discussed above. However, one of the measurements which was made during the experiment was the depth of the organic and mineral layer at the surface present in the different turf plots at the end of the experiments in May in 1991. Thickness of this surface layer ranged from 3 mm thick in the seeded treatments (at the low seed rate) to 17 mm thick in the case of the turf grown on heavy soil. We found that the loss of water infiltration rate was strongly correlated with the thickness of this layer and its organic matter content. In other words, it is not just the importation of mineral matter which is important, it is also the importation of the organic matter at the soil surface which contributes to the loss of infiltration rate in the case of mature turf. The washing process not only removes much of the mineral soil matter, it also has the effect of root pruning and removal of organic matter as well and therefore this is the most likely explanation for the improvement seen in the washed turf. In the case of the Coronet Turf, because it is still at a juvenile stage, although it is grown from seed or from juvenile turf will also produce organic matter accumulates. In contrast, in turf production fields, this top dressing would not be carried out and furthermore in many cases clippings would be returned at least at some stages of the turf growing period, further aggravating accumulation of organic matter at the surface.

In conclusion, the use of mature turf for establishment of golf greens has increased greatly over the past 20 years and it seems likely on the basis of the results presented here, that we may actively be causing problems of our own making. Even if we use turf grown on very sandy soil, very large reductions in infiltration rate can occur even in a relatively short period of time. This could lead to development of other problems, such as black layer. The problem can be reduced by the use of washed turf or by the use of a juvenile turf where there is insufficient time for establishment using seed. The Coronet Turf had no detrimental effects on playing quality, apart from some initial softness which soon disappeared. Furthermore, it was completely free of annual meadow-grass contamination which was not the case with the turf grown on heavy soil. I do not want to create an alarmist impression with this article, suggesting that we should not use mature grades of turf for golf green establishment. There are many good suppliers of turf who go to great lengths to provide the best quality turf for golf green construction, both in terms of botanical quality and the soils used in production fields. Furthermore, in the short experiment carried out, the mature grades of turf did show the greatest durability in response to the wear treatments. What the experiment does show is how essential it is after golf green construction to carry out remedial action where mature turf has been used, due to pressure of time. Such remedial action could include intensive hollow-tine coring to remove some of the organic and mineral matter, together with sand top dressing to provide permeable channels for the movement of water and air into the profile.

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At the present time 14 grass species and 365 different grass cultivars are being evaluated at the STRI. These are tested for different uses in one or more of 20 separate grass trials. In total, there are in excess of 5,000 individual grass cultivar plots at the STRI. Data collected from the many grass trials are used to update the annually published Turfgrass Seed booklet which lists commercially available amenity grasses in order of merit for different uses. This booklet is widely distributed to many different users of amenity grasses. No greenkeeper should be without an up-to-date copy of this booklet.

Of the 365 different grasses in trial at the STRI, 192 are commercially available and listed in Turfgrass Seed 1994. Within this number there are 33 Chewings fescues, 25 slender creeping red fescues, 19 strong creeping red fescues, 13 browntop bents (including ‘Highland’) and 6 creeping bent. This gives the traditional greenkeeper a total of 90 different grasses to choose from for use on the golf course.

The Turfgrass Seed booklet also provides information on the performance of these grasses. This information should help the buyer of seed and turf to select the right grass types and cultivars for the intended use. For turf it is important that the grower has used the appropriate grasses and in this case, the greenkeeper ‘hopelessly’ will ask about the grass cultivars from which the turf has been grown before he completes his purchase. Turf can look very good at lawn heights of cut but very poor when mown down for a green. Please note that seeds mixtures containing better quality grass cultivars and turf grown from such cultivars may cost more than those which contain poor quality grasses. However, poor grasses will limit the performance of turf, irrespective of how well that turf is managed. Cheap grasses can become very expensive if they do not perform at the desired standard and as a result require extra maintenance or, in the extreme, need to be replaced.

In the Turfgrass Seed booklet there are three tables detailing the performance of red fescue cultivars, one each for, Chewings, slender creeping and strong creeping red fescues. Of these grasses only the better cultivars of Chewings and slender creeping red fescues are able to withstand the very close mowing and wear which a golf green receives. At the STRI we now advise that a mixture of Chewings and slender creeping red fescue is used in seed mixtures for golf greens, rather than the traditional 80% Chewings fescue, 20% browntop bent mixture. In this respect, we suggest that a mixture of 40% Chewings, 40% slender creeping red fescue and 20% browntop bent is used. To help readers of Greenkeeper International choose cultivars of Chewings and slender creeping red fescue for use in golf greens, I have compiled a table for those based on Turfgrass Seed 1994 ratings. This table contains the best 10 cultivars of each of these types of grasses. This information is presented in Table 1.

The performance of commercially available cultivars of brownfrost and creeping bent grasses are described in one table in the Turfgrass Seed booklet. However, this is divided into three sections, one each for: Agrostis tenuis – browntop bents; A. castellana – brownfrost bent (Highland); and A. stolonifera – creeping bents. Data from Turfgrass Seed 1994 for established cultivars of these grasses are presented in Table 2. At present the STRI advises that only the very best cultivars of A. tenuis – brownfrost bents are used in seed mixtures for golf greens.

Having selected an appropriate seeds mixture, there are two other factors which need to be considered: purity and germination. These factors are covered by the official seed regulations, which set legal minimum standards for germination and purity. For example, seed of perennial ryegrass, when sold, should have a minimum germination of 80% and an analytical purity (pure seed content) of 96%. Similarly, red fescue seed should have a minimum germination of 75% and an analytical purity of 90%. Such minimum standards may be acceptable in general use, but unacceptable for specialist uses such as golf and bowling greens. In such cases, a few weed grasses can dramatically increase maintenance requirements and as a result costs. They will also delay the establishment of a usable green. High germination rates are desirable as a greater number of seeds sown will initially contribute to the new sward. In addition, germination is often associated with vigour. Seeds with high vigour tend to germinate faster and grow more evenly. They also produce, as the name suggests, more vigorous seedlings, which are better able to withstand the arduous early days of establishment. Information regarding seed purity and germination should be supplied with the seed by all good seed merchants. Buyers of seed should ask for and be prepared to pay more for seed which exceeds the minimum certification standards, especially if their particular application demands a high quality finish.
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Chris Boiling meets up with BIGGA's new chairman, John Millen

BIGGA's new chairman, John Millen, appears to be a quiet, unassuming guy. Straightforward, salt-of-the-earth type. Someone who will give an honest day's work without exciting or surprising you.

That's the first impression. And as I watched him play golf at Walton Heath recently, it seemed that his game was an extension of his personality. Drives straight down the middle. Not that far, but then he's not a big guy. Nothing too exciting. All steady stuff. Getting on the par-4s in three plus two puts to keep to his 18 handicap.

Then, suddenly, this right-handed golfer pulls a left-handed club out of the bag and proceeds to chip up left-handed. His unorthodox cure for the shanks. I hadn't noticed that he'd been putting left-handed as well.

There is obviously more to this man than first appears. He's been a greenkeeper for 29 years, but he left for a while to become a trawler skipper. He spent seven years in Norway, working at a couple of the country's most prestigious clubs. Back home, he helped turn part of an egg farm into a "fun" course, designing, constructing and now managing the Weald of Kent. And it was his decision not to employ a pro at the club "because they take more than they give".

John Millen, 54, was brought up in Tenterden, Kent, on a farm with a nine-hole golf course. His father was head greenkeeper there for 12 years. "I worked on the golf course for a while, and the farm, but I didn't like the job. One of my interests has always been fishing and sailing. I got in with the local fishermen and took that up for a career," he recalls.

For 11 years he had his own trawler. Then he got married and as Britain entered the Common Market he could see the writing on the wall for fishing, so he returned to greenkeeping. He moved to Sutton Valence, just south of Maidstone, and has been there for the last 25 years. His first job back in the business was at West Malling Golf Club, joining as head greenkeeper as it neared completion. He stayed there for five years before a two-year stint at Norway's No 1 golf club, Oslo. Next he moved across country to Oustoen, an exclusive country club with a 12-hole course on an island in a fjord. He's been there for five years maintaining the course six months of the year, working on his wife's family's farm in the winter. The club was good to him, paying for him to go to Canada every year to study for a month. But he studied more than greenkeeping - man management and psychology grabbed his interest, and sharpened his managerial skills.

When John came back to England in 1985 he became the course manager at Canterbury Golf Club, about 30 miles from his home. During his five years there he became involved with greenkeeping associations, and especially in improving greenkeeper education and training.

While working at Canterbury, he went to a local parish meeting to hear objections to a new 120-bedroom hotel and 18-hole golf course to be built just down the road from his home. The local farmers and residents were against it, and John was about the only one to speak in favour of the project. Afterwards he got chatting to the owners, the Edwards family who have a 700-acre egg farm with 230,000 chickens, and offered to help. He started as a consultant to help them get planning permission, then helped with the design and specification of the 6,200-yard par 70 course. "I was getting more interested in this project than I was as head greenkeeper at Canterbury. I could see the opportunities there so I came to work full-time," says John. That was four years ago.

He oversaw the course's construction, manning the machines with two lads. Their aim was to keep the 125-acre site as natural as possible and easy to maintain. It would be a quality golf course for ordinary golfers at a reasonable price. They took in 1,000 members the first year and have settled on 900 now, of whom only three have single-figure handicaps. They had to put in a good drainage system because the course is built on heavy clay soil. The greens were built to USGA specs. Ponds and ditches were left and more lakes were dug for irrigation and to create features. And they're obviously attractive features as they attract 16,000 balls a year.

The club runs the shop itself and there is no pro on site. "If people want lessons they can go to the driving range nearby," says John.

The course attracted 270 societies last year and is booked by at least one society everyday this year from April 1 to the end of September. Last year 39,000 rounds were played there and John expects 41,000 this year.

His management skills have enabled him to put the right people in place to look after the course and all these visitors while he carries out all the obligations foisted upon the chairman of BIGGA. John should have a fair idea of what the job involves as he is an experienced association man. He was a board of management member of EIGGA, taking over from Dennis Ayling when he retired, and has represented the South East Region on BIGGA's board for the past six years, serving as chairman of the education committee and vice-chairman. Now he is the chairman for a year. A daunting prospect for a doer rather than a talker.

"I'm looking forward to it but I'm very nervous," he admits. "I'm more of a backroom person. I'm not an outward going person but being chairman is becoming more and more a PR job. You've got to be the person who goes out there and talks to members and the trade."

His boss, Andrew Edwards, thinks he'll do a good job because he does exactly what he says he will do - and within the budgets he's been given.

One of his major tasks will be overseeing BIGGA's review, which will include updating the constitution, the future location of headquarters and BIGGA's role in education.

"We've been on a rollercoaster of growth but we've never sat back and thought where we were going or where we wanted to go," says John. "We've built up a first-class management team at headquarters. We just need to get the education officer in place now. I think the sky's the limit for the Association. We've become financially viable and we've got the expertise there to meet the members' wishes."

So, he stressed, members need to make their wishes known to their section secretaries.

It's going to be a busy year for John, but he still hopes to find time for his wife of 25 years, Carolyn who's just taken up golf, his two grown-up daughters who are off seeing the world and his 12-year-old son, as well as his other interests - snow skiing once a year, squash twice a week, sailing in the summer and golf once a week "to socialise with members - I don't take it too seriously."

John was a 12-handicapper at 12 and I've got worse ever since". But he didn't do too badly at the Annual Gentlemen's Dinner tournament at Walton Heath, scoring 33 points for first place among the higher handicappers. The start of a successful year?

GK INTERNATIONAL April 1994 21
Preparation for next year's Open at St Andrews is under way.

Head greenkeeper Eddie Adams and his team have started revetting the 110 bunkers on the Old Course. This work is normally carried out on a three-year rolling cycle, but links supervisor Walter Woods wants them all done by next February.

"The whole world's going to be looking at St Andrews and we want to present the golf course in the best possible fashion," he told Greenkeeper International. The two largest bunkers - Hell and Shell - have already been done. It took a four-man team ten days to lay the 6,000 individual turfs that now make up the face of Shell bunker which blocks the entrance to the 7th green. 60-70 other bunkers - using almost five acres of turf - will be revetted during the season, taking advantage of the Sunday closure policy on the Old Course.

The sand will go in at the end of May, a couple of months before the Open so it has time to compact ("So the pro can feel it firm below his feet with only the top inch raked," says Walter).

Walter also plans to cut back on fertiliser and water this year (despite the new 357,000-gallon water tank, two new boreholes and the new wall-to-wall sprinkler system installed to water all the greens, tees and fairways on the four main courses and the greens and tees on the new Strathtyrum layout).

"We're trying to achieve a very dry surface because Poa annua doesn't like a dry surface," says Walter, BIGGA's first chairman. "When you're on a championship course, it's important you have the right types of grasses.

This year what we will do is try to drought out as much of the annual meadow grass as possible." That will probably leave patches, but the 37-strong St Andrews team will replace these using turf from the aprons and laying new turf there.

During the season Walter and Eddie will assess the situation daily. "We've got to keep a very strict eye on it because if we're creating drought areas we don't want to lose more than we want to," says Walter.

They will also be doing more aeration work this year. "The more aeration we can do this year, the less we'll have to do next year - we don't want to leave marks on the course before the Open."

The public will be playing on the championship tees this year to firm them up. "Lots of greenkeepers think that not playing on tees helps them. We have a different view - we like them being played on. The professional likes a good, firm, hard tee. And they've got to be level. So we put the public on them - we've got all winter to repair them. But at least we're taking the thatch out and we're firming them up."

The fairways will be checked constantly.
Tented village to go here – on the new practice range

set for ’95 Open

They won’t be fertilised or watered, and more grass will be allowed to grow. There will be extra divot filling to combat wear and tear and, in the winter, members and visitors may be asked to tee up on the fairways.

Walter wants the 6991-yard championship course to look like a true links course with yellowish fairways, revetted bunkers and fescue showing up on the greens.

“We don’t have much in the way of roughs, but what there is will be tidied up,” he added.

Other jobs they plan to do before next spring include preparing the paths for spectators and the galleries.

“We take advantage of the year before because we find it gives us more time to get things done. When the Open Championship comes we’ll just roll through that as if it were another week...”

The 124th Open will be the 25th at St Andrews and Walter’s fourth and last.

Clubhouse yields bonus

Work is well under way on a £3m clubhouse behind the 18th green of the New Course – the first visitors’ clubhouse to be built at the ‘home of golf’.

The two-storey building, which is due to open next spring, will feature sandstone walls and a pitched slated roof. On the ground floor there will be male and female changing rooms and showers while the first floor, with extensive views over the courses, will boast a lounge, bar and dining room. It will also have a balcony all the way round.

The foundation work for the 25,000 sq ft clubhouse yielded a welcome bonus for links supervisor Walter Woods. Hundreds of tons of good links sand has been dug up and is now being used for bunker filling and on the fairways of the new Strathclyde course, which will be officially opened this summer after a year of limited play.

Other developments in the pipeline are new maintenance sheds and a proper road system within the links to facilitate the movement of machinery and allow better spectator flow during the ’95 Open.

Although the new 5,049-yard Strathclyde course was built on essentially flat agricultural land, it has a links feel to it thanks to the man-made contours around the greens. Sand found during the construction of the clubhouse is being put on the fairways to add to the links feel.

Several thousand trees and bushes have been planted between holes 10, 11, 12 and the nearby main road into St Andrews. Further planting will be carried out as the course develops. This is in addition to the 3,000-6,000 whin and gorse bushes that are planted around the course very year.

The Eden Course, the first course to be closed under the Links Trust’s new policy of taking one course out of play each winter for maintenance, came back into play on March 1 after a three-month layoff. Work included returfing the 14th and 15th greens, extending tees, remodelling bunkers and tidying up the pond. At the 10th hole, the old railway line has been completely turfed over.

The tented village will be erected on the new 400-yard floodlit driving range, between the hotel and the 12 covered and 12 open bays which have attracted more than 50,000 users since it opened last July.

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An even spread

Michael Bird looks at fertiliser spreaders and how to make the best out of them. On Page 39, Chris Boiling meets a head greenkeeper whose problem is not so much how to use his fertiliser - but how to get it to his course...

The fertiliser spreader is probably one of the most under-valued machines on the golf course. Normally costing between £500 and £1,500, the spreader is responsible each year for accurately distributing fertiliser worth four or five times its value, and often more on a multi-course golf and leisure complex.

Apart from fertiliser, most modern machines can, with very little adaptation, handle sand, salt, seeds and top dressings, making the spreader a highly cost-effective member of the machinery fleet. Yet, all too often the machine is not maintained, adjusted or operated properly, leading to inaccurate, uneven spreading and a waste of time, effort and money.

Six key factors influence the ability to apply fertiliser accurately and precisely. They are the condition and setting up of the spreader, the type of fertiliser, operator skill, the weather and ground conditions.

It would be wrong to give any one of these points precedence over another, says Ted Crooks of independent advisory and test firm, Spreader Calibration Specialists (SCS), based near Lincoln.

"All are inter-related and cannot be taken in isolation," he pointed out. "When we are asked to calibrate a spreader, that service is just one part of a package designed to ensure that all fertiliser is applied accurately during the year. The other points are equally important in achieving this goal."

Although working primarily in agriculture, SCS is looking to extend its operations into associated areas, knowing that turf professionals face similar problems to farmers and growers. "Most work with a variety of materials with differing spread characteristics," commented Mr Crooks. "These have a marked effect on the ability to spread accurately across a consistent bout width."

Prills, pellets, granules, crumbs, flakes and powders all have differing flow rates which need to be allowed for during the spreading operation. For example, a smooth, shiny prill will leave a spinning disc or oscillating spout at a higher speed and angle than a rougher, duller granule or a fine powder.

To ensure accurate and even application, the spreader needs to be set up and operated with these points taken into account, in line with the manufacturers' setting and operating recommendations.

Correct calibration of the machine is particularly important when handling fertilisers with large variations in size, shape and consistency. Ted Crooks pointed out that such variations are not found solely within different types of material. They are evident also in those of a similar specification coming from a range of suppliers, especially within imported materials.

For that reason, sound operator training is a fundamental element of precision fertiliser application. "If the operator can recognise the differences in materials and make adjustments accordingly, it will be a major step forward in improving the effectiveness of fertiliser applications," stressed Mr Crooks.

Training elements should include general machine care and use as well as the recognition of materials and their varying characteristics as they move from the hopper via the metering and spreading mechanisms onto the turf.

The first point that is checked by Ted Crooks when called out to test a spreader is the speed of the tractor's power take-off shaft. Using a hand-held meter, the speed of the PTO is compared with the tractor's tachometer to ensure that the spreader is being driven at the recommended input speed.

This test is also of help when the tachometer is broken or missing as it can be used to establish the required setting on the hand throttle to achieve the required PTO speed.

Incorrect drive speeds are one of the principal reasons for inaccurate spreading and Ted Crooks advises greenkeepers to have their tractors tested regularly. Many machinery dealers offer this service using optical or mechanical instruments.

At this stage, it is vital also to ensure that the tractor's linkage is in good order and can be adjusted to set up the spreader at the recommended working height and attitude at the rear of the tractor. The correct operating height will be specified in the machine's handbook.
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25 • and must be adhered to if optimum spreading width and accuracy are to be achieved. Always check operating height with the hopper half filled.

One point often overlooked is tyre pressures. These should be equal, otherwise the machine may sit at an angle resulting in uneven spreading.

Machine maintenance is a very important, but often neglected point. Worn or damaged outlets, vanes or spouts, a misaligned disc, and bent shafts, agitators or framework can all adversely affect the spreader’s performance.

“The state of some machines is quite alarming,” commented Mr Crooks. “One cannot bend or neglect a fertiliser spreader without affecting its operating characteristics. These will change in any case with the fertiliser being applied. Why add to the challenge with a faulty, worn or damaged machine?”

For optimum accuracy, the spreader should be tested with each of the materials to be applied during the year. In practice, this will usually be impractical due to constraints on time and labour. It will, however, be of immense help if at least the principal material used on the course is tested through the machine to ascertain the effective spread width and the distribution pattern.

There is a very good reason for this. Although a machine may have a claimed maximum spread width of, say, 12m (39ft), the effective spread width may drop by more than 50 per cent when applying lighter or less free-flowing materials. Unless compensation is made for this during application, large gaps will result in the spread pattern, causing uneven grass growth.

Similarly, the distance between the tractor’s passes needs to be increased when moving from a fine, light material to one which is spread wider due to its weight and greater speed through the hopper.
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DEVON AND CORNWALL
Westurf will be with us any day now and your support will be vital to its continued success. With Westurf’s success, the region will be able to keep its fees on educational events down to cost price. Westurf has helped the section purchase a secondhand photocopier which will allow yours truly to supply all your committee members with minutes of regional and national board meetings, so if you have any queries about recent events within your Association, your local committee member will hopefully now be able to update you with all the relevant details.

With the winter programme complete, I would like to thank all of you who attended meetings. The section is always looking at ways to generate an even higher membership participation at our meetings, so I would like to hear from anyone who has a good idea to increase numbers.

Our next meeting will be the new summer tournament for the Jacobsen Trophy, to be held at Yelverton GC on Wednesday June 22 and sponsored by Jacobsen & MST. With major educational prizes on offer for golfers and non-golfers, it’s one you cannot afford to miss. Details will be sent to you nearer the date.

RICHARD WHYMAN

EAST MIDLANDS
There’s not a lot to report on this month as I have just come back from a golfing holiday in the Algarve. Congratulations go to Chris Lewis this month on his appointment as deputy head greenkeeper at The Leicestershire Golf Club and to Kevin James of Rushcliffe GC on his promotion to head greenkeeper.

This month we welcome Paul Redding of Rugby GC and Warren Barker of Anstey GC to our section. We have certainly made a promising start this year with new members to our section – 22 in all. Let’s hope this increase continues. Any members who have not paid their subscriptions should do so straight away, or they will miss out on all the benefits.

With the golf season about to start, I would like to wish all greenkeepers a successful year, and hopefully a drier one than last year.

Our winter lecture produced a good turnout (32), but please try to send your forms back to me before the closing date in future. A thank you should go to our two speakers, Valerie Holt and Mark Hunt, for their excellent talks, and to Lingdale GC for their hospitality and marvelous buffet meal, which made this a great night.

ANTHONY BINDLEY

CLEVELAND
Clive Higenbotham from ICI Professional Products gave a talk/slides on the management of a golf course. His technical knowledge and enthusiasm was inspiring. He covered fertilisers, fungicides, selective weedkillers etc and ensured us that good turf management was the key factor in producing a healthy sward. The new fungicide Greenshield sounds interesting as it lasts 6-8 weeks and has worm repellent quality. For empty pesticide containers, which are called special waste, ICI will collect empty, clean ICI containers free of charge through their environmental disposal service.

Just ring 0345 125398. All head greenkeepers are personally responsible for safe disposal. We cannot bury or burn anymore and we need written proof of what we have done.

David Crocher has moved from Castle Eden GC to Bishop Auckland. At Castle Eden, Graham Border has been promoted from first assistant to head greenkeeper.

A new course is being built at Ingleby Barwick, near Thornaby.

New members are Anthony McGeough (Richmond), Craig Wayman (South Shields), Allan Piggins (Hunley Hall), and Paul Stephen son and Peter Allison of Beamish Park.

BRUCE BURNELL

NORTH EAST
At last the message is getting around about joining BIGGA. I’m happy to welcome the following new members to the section:

John Walton and Kevin Walkinshaw from Heworth GC; Ashley Marshall, Matfen Hall GC; Jason Campbell, Whitley Bay GC; David Coulson, Morpeth GC; Derek Cruddas, Garsfield GC; James Stoney, Alnwick GC; Steven Quince, Alnemouth GC; Shaun Collier, and Martin Donavand, students at Haughall College; and John Hogg, student at Elmwood College.

Providing all 1993 members pay their ‘94 subs, we shall be over the hundred mark, that’s up 500 percent since 1984.

On the move is Parklands’ Andrew Bowes who has gone to Matfen Hall GC as first assistant. Eddie Crozier, formerly head greenkeeper at Parklands, takes over at Burgber Farm.

Golf dates: April 14 – Spring Competition, South Moor GC; July 12 – Match v Secretaries, Seaham Harbour GC; October 6 – Match v East Lothian, Westerhope.

JIMMY RICHARDSON

BIGGA NATIONAL GOLF TOURNAMENT
Dartmouth Golf and Country Club 1–3 August 1994

ACCOMMODATION

Due to the popularity of the area, we may suggest that you contact BIGGA Headquarters as soon as possible if you are looking for accommodation during the National Golf Tournament. Accommodation to suit all pockets is available in the surrounding area of Dartmouth Golf and Country Club. A selection of local rates is available to competitors – call Samantha Flint at BIGGA Headquarters on 0347 836581.

The full golfing programme will appear in the May edition of Greenkeeper International.
AYRSHIRE
This season's outings have now been finalised with the spring meeting at Thornhill GC in Dumfriesshire on April 19 (also a Hayter Qualifier) and the autumn meeting at Glasgow Gailes on September 22.

As with BIGGA, our section membership is steadily growing but I am sure most of you know of someone who is not a member, so please let them know what is being missed.

Scottish Grass and Kubota have both issued invitations for our section to visit their showrooms and workshops. If anyone is interested, please inform Jim Paton, our secretary, to enable him to organise this.

On the move is David Whiffen, assistant at Dumfries and County GC who is going to Wittelbacher GC in Germany. We wish him the best of luck.

The first winners of our lottery this year are R Stewart and N Carruthers, who win £30 each, and G Haughie with £40. The big £100 winner is Jill Paton. Congratulations to them.

DUNCAN GRAY

NORTH WALES
Firstly, a reminder that all entry forms for the Hayter Challenge Spring Tournament should be completed and returned to Terry Adamson at his new address (27 Berwyn Ave, Penyffordd, nr Chester) by April 14. No entries will be accepted after this date. Any members who have not received an application form should contact me on 0836 785751.

Any members wishing to attend a first aid course at the Welsh College of Horticulture should also let me know so appropriate dates can be booked.

Finally, all nominations for the ICI Premier Greenkeeper of the Year award should be forwarded to me c/o The Estate Office, Carden Park, Chester CH3 9DQ by April 30.

ANDY CAMPBELL

LONDON
The second RPK supercart challenge was held in February at Bracknell indoor circuit – and it was an excellent evening. I would like to thank RPK Supplies and especially Jamie Bennett for organising the event. The overall winner was the undefeated Cameron McMillan.

I would also like to thank G Brown Implements for organising the day trip to the Massey Ferguson factory. Everyone that went along enjoyed the excellent hospitality and were all suitably impressed with the set-up.

Another date for your diary – June 28, the summer golf tournament at Old Ford Manor. Details will be sent out nearer the time.

TONY DUNSTAN

NORTHERN
Our Christmas Golf Competition was held at Shipley Golf Club, in December. There were 35 entrants on the day and I am pleased to say that all entrants did receive a prize, which they richly deserved. It rained heavily all day, in fact at night on Calender it actually announced that the largest recorded rainfall in the area was Bingley where 3 inches fell. Despite the weather MOST people enjoyed it.

Our AGM followed the Christmas golf and a brief resume of that meeting being that the following members were duly elected to office: President – Bill Mountain; Chairman – Phillip Taylor; Vice Chairman – Allan Gamble; Secretary/Treasurer – Pat Murphy; Committee – Dennis Cockburn, Ian Thompson, Colin Garnett, Michael Hannan, Telford Jarvis, Robert Gee, Robin Smith, and David Thackray.

I thank those members who attended and voiced their opinion on various matters relevant to our section. President Bill Mountain informed the meeting that this would be his 34th year in office, all I can say is keep up the good work.

May I welcome the two new committee men who have joined us this year. I am sure you will enjoy your term in office.

On behalf of the Northern Section I'd like to thank Andrew Smith for the time and effort that he put into the Northern Section during his time in office.

The visit to Gem Fertilizers was a huge success. I thought it was marvellous how everything was put together on such a huge scale. If you get the chance to visit it, I recommend you go. My thanks on behalf of the Northern Section to John Harris, Andy Hardy, Duncan Metcalfe, and Alan Dyson for making us so welcome. The visit to Martin Brothers was also

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Around the Green

Coldra Woods course.

The development has been hampered somewhat by the appalling weather of '93 and won't now be ready until the summer, when a trip to the club will be organised. Then you will be able to see for yourself the delights of one of the largest, most secure, ultra-modern sheds, workshop, maintenance buildings in the country.

Some facts about the course to whet your appetite: it's a par 70, 7010-yard long championship course, designed by Robert Trent Jones; it boasts a 10-million gallon reservoir, various streams and a lake; and Ian Woosnam is to be the touring pro.

April is set to be a busy month, so don't forget these dates: April 17 - South Wales semi-final at Pencoed College; April 20 - Spring tournament and Hayter Challenge Qualifier, Newport GC, 1pm prompt; April 27 - Westfult, Long Ashton, Bristol.

PETER LACEY

NORTH SCOTLAND

The planning of the one day conference in December 1 is progressing well. The venture is being co-sponsored by Greens of Scotland, Morayshire Tractors, Stewarts and Waterman. The brochure is currently being printed and below is a brief description of the speakers and their subjects.

The conference will be opened by Eric Thain, a director of Greens of Scotland. First speaker is David Roy, head greenkeeper of Linlithgow Golf Club speaking about "Wildlife and Conservation on the Golf Course". He will be followed by Steve Cademelli, past president of the GCSAA and course superintendent at Medeconak National Golf Club, Jackson, New Jersey, who will give us the benefit of his knowledge from across the Atlantic. The third speaker is Greens of Scotland's Raymond Morrison talking on "Drainage and Construction". After a coffee break we have J D Patterson from the Northern Ireland Horticultural and Plant Breeding Station in Armagh giving us a lecture on "Breeding Turf Grass Varieties". Our final morning speaker will be John Hacker of Professional Sportsturf Design talking on "Golf Course Presentation".

After lunch we start with a lighthearted look at the "Rules of Golf" presented by David Rickman, assistant rules secretary at the R & A. Our penultimate speaker is Tom Mackenzie, a native of Dornoch who is part of the Donald Steel Design Team. His subject being "Golf Course Design in the Highlands". People planning to enter the Scottish Greenkeepers Competition next year will find this talk very interesting as there will be a lot of slides of the Carnegie Golf Course at Skibo on view, the venue for the outing. Last but certainly not least is Mr Robert Laycock of Karsten Golf Science with a talk on "Turf Pests and Diseases".

There will be a question and answer session in the morning and the afternoon and Master Greenkeeper Certificate credits can be obtained for attendance. All in all a great day in prospect, so be sure and return entry forms quickly to ensure attendance.

The Spring Outing is at Forres next month on Thursday the 12th. Entry forms will be out this week and a large entry is anticipated for a day out to this lovely course set amongst the trees above Forres.

A glut of new members to welcome this month. Head greenkeeper John Mowat, Reay Hotel Golf and Country Club. Asst greenkeeper Stuart McGregor, Panmore Golf Club; Gordon Fraser, Tain Golf Course and apprentice greenkeepers Mark Ross, Elgin Golf Club; Bryan Crocker Jr, Alyth Golf Club and finally Paul Fiske, Moray Golf Club. Gordon Fraser is the last of my staff to join! How many other head greenkeepers can claim total staff membership to BIGGA? Brian Crocker Jr is following in his father's footsteps into the business. Bryan Snr is head man at Alyth.

IAIN MacLEOD

EAST SCOTLAND

Eleven section members attended the enjoyable and enlightening trip to Hardi Sprayers, Leicester. Chris Hale, Mike Williamson and Andy Birrell from Sherriffs would like to thank everyone for their hard work in making the event run smoothly.

Thanks must also go to Bill Oliver, Colin Gregory and their team at Hardis for their hospitality and presenting a series of informative talks clearing up the often misunderstood aspects of spraying technology.

If any section member has any suggestions for places to visit or people they would like to hear speak, then please pass them on to me or to a member of the section committee.

Finally, some dates for your diary: May 11 - PGA Trophy, Burghley Park GC, Stamford; May 26 - Purdeys Trophy, Stoke Rochford GC (Hayter Qualifier).

If any section member does not receive any postal information on these tournaments, then please call me on 0832 274499.

MIKE FINNEY

EAST ENGALND

I am proud to welcome the following new members: Christopher Murray, Stuart Townsend, David Miller, Mark Pagan, James Manuel, Allan Shaw, Brian Strachan, John Reid, Ian Cunningham, Paul Miller, George Asher, Andy Birrell, Grahame Ferguson, Gary Tusler, David Bridges and James Little.

We hope to see you all at season events, where a big welcome awaits you. So far that is 16 new members, but I am sure there are many more to come. So, as I said in my last report, let's all make a big effort this year to make everyone a member of the Association.

I know it's not the done thing to blow your own trumpet, but I am very proud to have been nominated by our new Scottish Region chairman, Gordon Moir, as his vice chairman. This is not just an honour for myself, but also the section as I am the first East section candidate since BIGGA was set up; and you can bet...
I will give my usual 100% to our cause. I have just returned from a two-day secretaries meeting at Aldwark Manor and again this proved to be a very enlightening affair. These meetings give the secretaries the opportunity to put their sections views across; and I for one was delighted with the response.

Next on our busy calendar is the Spring outing on April 12 over Gallane No.2. By now you should all have your entry forms; providing your subscriptions are up to date. This is also the qualifying for the Hayter Challenge and a big entry is anticipated. The regional finals this year will be held at Duddington Golf Club on May 24.

A full calendar of all section events will soon be in all members' hands very shortly. It is hoped that this year everyone will make a special effort to attend as we are at present working very hard on your behalf, but there is nothing worse than organising these events and only a handful turn up. We as a committee have always said 'tell us what you want and we will do it (within reason)'.

In conclusion, may I wish everyone another successful greenkeeping season; hopefully, the weather and golf club committees will be kind to us all again this year. I would also be grateful for news of any kind; this is your magazine and Association, so let us use it. Also remember to get these non-members to join our ever-growing BIGGA. WILLIE BLAIR

SOUTH COAST

Our winter programme of lectures concluded last month with a talk by David Whitaker from the Wisley Golf Club. His subject was course maintenance.

The February lecture was delivered by Paul Hobden as Ken Barber was unable to attend. Paul is the assistant course superintendent, but in the true style of the theatre, 'it was alright on the night'.

April is a busy month for the section with the spring tournament at the Test Valley Golf Club on the 21st and the Hayter Challenge and all enquiries should be directed to our tournament organiser Bob Cully on 0489 782976. We will be looking to promote monthly, one day/afternoon/morning seminars or "teach-ins". Perhaps there are some topics you feel should be covered. Should we, for instance, be running more first aid courses, health & safety courses, would this be of benefit to you, your staff and your club? Never forget that this is YOUR Association and your input is most welcome. Like most things you must put something in if you are to get the best out of it. With this in mind, we will all be required to comment on the national BIGGA five-year plan. You may have read about this in Neil Thomas' article in the February magazine. There are some very tough decisions to be made and you will be given the chance to make them. More details at a later date.

PAUL COPSEY

SOUTH WEST

Ever played 18 holes, come off the 18th and it's felt like 36? That's what my legs were telling me and I should think many others felt the same way after playing in the recent winter competition at Castle Combe Golf and Country Club. One or two contemplated using one of the fleet of available buggies but such were the frowns of disapproval from the majority, that not wanting to seem the odd ones out any thoughts of an easy round were soon forgotten. Anyway, whoever heard of a greenkeeper using a buggy?

Joking apart, in an idyllic setting, with brilliant sunshine, the course was in excellent condition and a credit to course manager Guy Woods and his staff. Thanks are also extended to general manager Paul Ware and Castle Combe for their hospitality, to Lloyds of Letchworth for their afternoon lecture and last but by no means least to the caterer for some excellent home-made steak and kidney pies!

The event results are as follows: 1, Paul Godwin, Tracey Park; 2, Ian Hazel, Clevedon; 3, Marc Haring, Cumberwell Park, 4, Andrew Johnson, Saltford.

If you are keen, be seen at Westurf this year. April 27, Long Ashton Golf Club, 10am-5pm to be precise. Your presence is invaluable and there are even opportunities for a stint on park car gate duty! Interested? Give me a ring to secure an hour session.

As reported in the February edition of Greenkeeper International, a five-year plan to review and improve the Association's continued growth is to be formulated this year. The opportunity for any section member is there to voice his/her opinions and submit ideas. If you feel you have something to raise, either put it on paper and send it to me or give me a ring on 0272 793127.

Congratulations to Martin Townsend of Aycop Amenity Products and his wife Lesley on the recent birth of their son Roger Martin.

Finally, Chippenham Golf Club is the venue for the Hayter Challenge Regional Qualifier on April 21 - book early and I'll see you there.

KEVIN GREEN

BERKS, BUCKS & OXON

Only a few reminders to report this month. The Spring tournament and Hayter Qualifier is at Mill Ride GC on June 1. You should have received your fixture cards for 1994 by now, if not let me know.

If anyone has any ideas for this year's win...
lecture programme, could they let Mark Chesman know on 0734 440225 and if you have any news for this column please call me on 0628 829208.

RAY CLARK

SURREY
It was nice to see the winter lecture so well attended. The lecture, on Surrey heathland, was presented by Dr McGibbon and Ian McMillan – thanks to both of them for a most interesting and beneficial lecture.

Thanks also to Clive Osgood and Steve Shaw, head of greenkeeping at NESCOT, for organising the event.

The South East Region's Annual Gentlemen's Dinner at Walton Heath was also well attended. Thanks to Doug Smith and David Wood for all their hard work. Thanks also to all members of the trade for their involvement in the day's proceedings and to Clive Osgood and everyone at Walton Heath GC.

The winners were: Gross – J Jackson, 39pts; Handicap 0-8 – 1, S Haynes, 38; 2, J Tixeira, 37; 3, L Bingham, 36; Handicap 9-16 – 1, D Wilson, 41; 2, S Antolk, 40; 3, B Walsh, 40; Handicap 17-24 – 1, J Millen, 33; 2, M Mewett, 27; 3, D Coomer, 27; Guests – 1, D Taylor, 41; 2, C Town, 41; 3, R Elderfield, 39; Longest drive 13th – G Barr, R Pride, T Dunstan; Nearest pins – S Haynes, R Glazier, R Watts; Putting – J Jackson, 32 putts.

Is anyone interested in a dinner-dance in the near future? If you are, please contact any of the committee members listed on the front of your fixture lists. An amended telephone number on this list – David Gibbs – 0737 832015.

A belated thank you to Ian Kerry for supplying our section with a coach to the BTME.

Any member with any news, please contact Roger Glazier (081 394 1493) or me.

Two forthcoming events: June 1 – the Cresta Cup, Laleham GC; June 29 – South Turf, Motspur Park.

DAVID GIBBS

HAYTER QUALIFIER
The Scottish Region North Section held their Hayter Qualifier during the Autumn Outing at Kirriemuir last September. The reason for this is that the North members felt that qualifying at the Spring Outing in May is only a couple of weeks prior to the Scottish Final and some could not get the time off. The following members qualified:

Class 1 (Scr-9) – 1, George Paterson, Fortrose; 2, Alisdair McLaren, Abernethy; 3, Gary Tough, Montrose (BIH); 4, Eoin Riddell, Royal Dornoch (BIH).

Class 2 (10-18) – 1, Steve Simpson, Fraserburgh; 2, Sam Morrison, Royal Aberdeen; 3, Kevin Fowler, Fortrose; 4, Stuart Robertson, North Insh, Perth.

Class 3 (19-28) – 1, Robert Allan, Hazelhead; 2, Stuart Hogg, Fortrose; 3, Tom Simpson, Murrayshall; 4, Colin Burgess, Forbes.

These 12 will represent the North Section in the Scottish Finals in May at Duddingston Golf Club.
Risk assessment: how to get started

Jon Allbutt kicks off a new series of health and safety tips

To have an up-to-date statement of safety policy that gives details of the general arrangements for health and safety at work is not enough to fully comply with modern health and safety legislation. It should be the beginning of a process to produce what will become a safety manual which contains all the work necessary to comply with the regulations introduced under the 1974 Act and also the new EU/HSE Regulations which came into force on January 1, 1993.

In effect, the safety manual is a clear account of what should be happening in the workplace, setting the safety standards for each area of the work. To be fully effective the manual must reflect the actual working practices and is therefore a working document and not an academic dissertation on each subject! In fact, inspectors will compare what is stated in the manual with their observations of what is happening on the ground. The safety manual is an essential reference for the employer, manager and employee and must be available for all to use where necessary.

It will not be possible to complete the work in one exercise. The safety manual may in fact never be completed as it will be altered, revised and will include new material as work practices change.

The term Risk Assessment is the new buzz phrase which conjures up a picture of difficult technical operations requiring special skills. Whilst this may be true for some of the tasks, eg noise assessments, the majority of the work requires only a good knowledge of the work, the relevant guidance, a fund of common sense and a heightened sense of safety awareness! The manager who has a detailed knowledge of the work and experience in carrying it out is the best person to carry out the risk assessment process. He does however need some training or guidance so that he develops 'health and safety eyes', that is the ability to see the workplace in terms of its hazards. The blindness of familiarity is a major obstacle and some help is necessary to help the assessor to 'see' where the hazards are. A fellow manager from a neighbouring course will be able to help, or the club could call in independent expertise to get the process started. If the club decides to use a consultant, remember to follow the guidance in the HSE leaflet 'Selecting a Health and Safety Consultancy'.

Before commencing the risk assessments, plan how the job will be done, allocate time each week and sort out how the information will be recorded and stored. The use of computer software will provide greater flexibility and allow for alterations with the minimum waste of time. Organising a directory (Health and Safety) which is divided into sub-directories to take account of each area of work (Manual Handling, Noise, The Golf Course, Machinery) and then individual files for each assessment is the best system. There is no special software available for this, the use of a good quality word processing software will be sufficient for most needs.

Manual systems can be used and many of the documents give suggested formats for conducting assessments. There will be a lot of paperwork, so plan carefully and create files to separate the information and avoid a confused pile of paper!

When deciding on where to start, suggest that the Management Regulations are used to check out existing arrangements and also to identify hazards that are not already covered by specific regulations, eg there are no 'Risk of Being Hit by Golf Balls Regulations'! To have a set of the Regulations is very important. New Health & Safety guidance leaflets will be available from the GTC mid-May, but there will be a charge for these. tel: 0347 838640. Some free leaflets are available from the Health and Safety Executive Information Centre, Broad Lane, Sheffield S3 7HQ. Tel: 0742 892345. Fax: 0742 892333.

With the US Masters nearly upon us, Alan Mitchell, South Coast Section secretary, has this timely warning:

The Greenkeeper's Lament

The story true is often told, Of Percy once a greensman bold, As a bloke was not contentious, But at his job most conscientious.

Twenty summers came and went, While Percy often did lament, How can I make my greens sensational, Just like those at Augusta National?

For you must dear reader pity, Perce who had a greens committee, Who yearly saw the National greens, All lighted up on telly screens.

Looking at this turf like lightning, Really could be rather frightening, For Perce knew after the Master's fleet. The committee quickly would call a meeting.

"Percy!" they'd cry all tongues a-lashing, "From the members we get a-bashing, They want us for it is fashionable, To get our greens like Augusta National!"

So they went and gave to Perce, And now you'll see things getting worse, I think the man's first name was Peter, Who gave to Perce the dreaded Stimmeter.

With this tool they would stand tall, And have greens to beat them all, Slick and green with curly bends, On which they could impress their friends.

Well Perce tried hard to tell the facts, But it availed not, they wanted acts, "Give us greens like we desire, Or Percy you'll surely fire!"

Then Perce left the meeting site, Though he had put up quite a fight, They didn't want to know the reason, Augusta looked so good each season.

So here stood Perce quite all alone, To the vagaries of English climate prone, Take-all patch and dollar spot, Fusarium wilt, he'd got the lot.

No USGA spec greens for him, What could he do just for this whim? He reduced the height to speed the ball, And in three months had lost them all.

With greens all sad and looking sick, The committee the fault with Percy did pick, And so they sent him soundly packing, For they thought that he was lacking.

And now Perce doesn't tend his course, He rather goes with cart and horse, And feeling like the committee to throttle, At each front door leaves a fresh milk bottle.
An even spread

27 - the air. Lack of compensation will create over-application and wastage.

Because all fertilisers display differing spread characteristics in different machines, the only sensible way to determine the accuracy and consistency of spread is by a tray test. SCS carries out tray tests nationwide on all types of spreaders, including spinning disc machines and Vicon oscillating spout units. A national test service is offered also by Amazone, but only for its own spreaders.

To tray test a spreader, it must first be set up and calibrated for the required application rate, according to the manufacturer’s recommendations in the operator’s manual. The machine is then driven at working speed over a row of collection trays placed on level turf and spanning two complete bout widths.

The fertiliser collected in each tray is emptied into a row of test tubes corresponding to each tray to show the amount in each. The measure of uniformity of the pattern across this width is known as the coefficient of variation (CV).

Under ideal test conditions and with the spreader set up accurately to suit the material, a CV of less than 10% should be the aim. In practice, this can rise to 15% depending on turf conditions and wind speed. A CV of more than 15% is not acceptable, says Mr Crooks.

“Striping due to under or over application does not normally become visible until the CV exceeds 20%. So a CV in excess of 15% will produce significant wastage and variable grass growth without any visible warning signs,” he explained. “Even if striping highlights a problem, it is often too late to take corrective action. It is better to tray test and calibrate a machine to achieve the lowest possible CV in the first place.”

One drawback with the CV method of uniformity measurement is that it irons out single narrow variations within the overall bout width to produce an average figure which can appear quite acceptable. It is important, therefore, to examine the material placed in each test tube after a tray test for any major peaks or troughs across the spreading width. Individual variations of 20% from the average can indicate a mechanical problem with the spreader or in its specific setting for the material being applied.

Because of the difficulty in maintaining a consistent width of spread on golf courses due to undulating and sloping fairways, trees, bunkers and other obstructions, the ideal spread pattern is a gradually tapering pyramid from the centreline of the tractor, points out Mr Crooks. Providing the operator achieves an overlap on each pass, this pattern will permit quite large variations in driving width without seriously affecting the overall rate or evenness of spread.

An undesirable pattern is of a rectangular shape with a marked cut-off, leaving little margin for any deviation from one fixed driving width.

Data on wind speed is another factor which is often overlooked. As a rule of thumb, if it is considered too windy to spray, then it is too windy to spread fertiliser. Humid conditions can also affect spreading, as damper materials have reduced flow rates.

Accessories and special attachments are available for most spreaders to prevent fertiliser being thrown into ditches, ponds and hedges. They limit the spread to one side of the machine and help prevent wastage and pollution. Similarly, there are special agitators for powders or damp materials to maintain an even flow from the hopper.

One of the most important points is the cleaning of the machine. This must be carried out at the end of the season using a good flow of water. After drying, all exposed metal parts should be lubricated and the spreader examined for wear, damage or faults before being stored carefully ready for the next time it is needed.

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- Lingfield Park
- Malone Golf Club
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- Middletown Golf Club (Dublin)
- Mold Golf Club
- Muirfield (Dowline) Golf Club
- Newbury & Crookham Golf Club
- Northwood Golf Club
- Omsode Feeds Golf Club
- Potters Golf Club
- Pykehill Golf Club
- Ponteland Golf Club
- Royal Ashdown Forest Golf Club
- Royal Birkdale Golf Club
- Royal Liverpool Golf Club
- Rye Golf Club
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GREENKEEPER’S CROSSWORD

Compiled by Mark G Smith, assistant at Frilford Heath GC

WIN A BIGGA BLAZER OR £50 IN CASH!

CLUES ACROSS
1 Ideal tee shot (8,5)
8 Frank …… Zoeller Jr or “Fuzzy”, the 1979 US Masters Champion is also in town! (5)
9 The old name for a 2 wood (7)
10 Rule 25 states that snow and …… be treated optionally as casual water or loose impediments (3)
11 Raise a flag (5)
12 Wood treatment product (trade name) (7)
14 Surname of the 1981 Open Champion (6)
16 Boring tools in the workshop (6)
20 Compacted layer of soil beneath the surface (4-3)
23 Golf headwear used as sun protection (5)
24 Hole number at Royal Troon named “Black Rock” (3)
25 Golf complex near Murcia in southern Spain, for many years the European Tour School’s final qualifying venue (2,5)
26 Ease the pressure on an opponent (3,2)
27 Relative position of player A (68,69,70) to player B (69,72,72) after 54 holes (3,5,5)

CLUES DOWN
1 Venue of the 1994 USPGA Championship …….. CC, Tulsa, Oklahoma (8,5)
2 Synonym for “Marcelling” where grass tufts are left above the height of cut (7)
3 The role of the spark plug (7)
4 …….. Green, US Open Champion in 1977 (6)
5 Of what are Moat, French and Mole examples (5)
6 Dispense parts from stock (5)
7 How properly mown greens should appear (6,7)
13 Mountainside courses in Europe and the US sometimes double as these resorts in winter (3)
15 Name of the 10th hole on the Old Course, St Andrews, the last on the front nine (3)
17 Johnny …….. USPGA Champion in 1935 (7)
18 Fail to find one’s peg after driving (4,3)
19 Complete, like the perfect hole plug (6)
21 The Dock Genus of weeds, eg. (L. Obtusifolius) (5)
22 Golf shot played low and with force (5)

Solve the crossword puzzle and you could win either a BIGGA blazer (worth £87.95) or £50 in cash! Send completed entries to: Crossword Competition, Greenkeeper International, Aldwark Manor, Aldwark, Alne, York Y06 2NF.

Closing date April 25, 1994. 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.

This is the solution to last month’s crossword. Because of tight deadlines, the winner will be announced next month, together with the winner of the March competition.

Are these crosswords too hard, too easy or just right? We need to know – please drop us a line.

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If I’m the winner, please send me ☐ £50 cash or ☐ BIGGA blazer, size ___________________________

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Address: ___________________________

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Desert island risks

When your golf course is bounded by water on all sides, bringing in even the most fundamental supplies can be a logistical nightmare...

The problem for Walter McDonald is not what he puts on his course or how he spreads it, but how he gets it there.

The King James VI Golf Club is on an island in the middle of the River Tay.

When Walter first came to the course on Moncreiffe Island, Perth, Scotland, a small boat was used to ferry things across from the mainland. "But that was bloody dangerous," says 56-year-old Walter, who came to the course 15 years ago.

The head greenkeeper at the time loved his boat and used it to transport fertiliser, top dressing and beer (the essentials) to the course.

One day the boat's small outboard engine packed in - and there were no oars in the boat, so the head greenkeeper had to use his hands to paddle the craft and supplies ashore. "I thought, that's not for me," said Walter. And when he became head greenkeeper he got rid of the boat.

Walter uses the small footbridge that runs alongside the railway bridge. His three-man team carry the essentials up the steps and load them onto a four-wheel buggy which was specially made to fit on the footbridge. Once across the river they can throw the goods down to the waiting tractor/trailer (or carry them down, depending on how fit they feel).

"There's less chance of hurting yourself carrying the barrels up the steps than lifting them in and out of a rocking boat," adds Walter who remembers stripping down a Sisis Hydromain 14 13 years ago and carrying it over bit by bit - wheels, chassis, engine...

In the summer they can drive a small tractor/trailer (under 10-ton) across the river at low tide. There are concrete blocks set in the riverbed at the narrowest

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point from the north of the island to a car park on the east bank of the river. But it means careful planning of deliveries.

"It's all about arranging with the contractor and getting them to deliver at a certain time before the tide comes in or just after the tide's gone out. If you have to wait an hour you could be in big trouble, especially if you've got 30-ton of sand in the car park on the other side. You've really got to get rid of it out of that car park pretty sharp, although the town understands our predicament," says Walter.

The path can be exposed for six to eight hours but if high tide is mid-day it means they can't do anything from 10am-2pm. The path can be seen six months of the year and sometimes in the winter when heavy frost halts the water higher up in the mountains. Just after the path had been put in, and before it had time to settle, King James VI club lost a tractor off it - the engine was still running when the path disappeared into a hole. Even Walter couldn't get it going - and he was a mechanic in his pre-greenkeeping days.

He worked for a construction company, "But I got sick of being away from home and I'd not long been married."

His uncle was a greenkeeper at Alyth and had offered Walter a job before he became a mechanic. It got him thinking about the profession when he was looking for something else to do. Walter's first greenkeeping post was as the first full-time greenkeeper at nine-hole Dunkeld. While there he started going to college and collecting his City and Guilds and Scouvee qualifications.

He came to the 700-member King James VI club as first assistant, and after about a year got the head greenkeeper's job. He is in charge of another qualified greenkeeper (his first assistant), a tractor man and an apprentice. "Being a trained mechanic comes in handy, very handy at times," says Walter.

Getting things to the course will become easier next year when another, wider footbridge is erected (to take walkers to a new picnic area on the island). Walter believes he (and the allotment gardeners with whom he shares the island) will be able to drive a compact tractor and trailer across it.

This will make life much easier for him when he receives his deliveries of half a ton of fertiliser in spring (1 1/2 a year), 80-100 ton of top dressing, and bunker sand. They are turfing the bunker faces at the moment and replacing the quarry sand with yellow sand (it's what the club members wanted). They have done about 14 of the course's 30 greenside bunkers at the moment, so more sand will have to be brought in.

How to get these things to the 97-year-old, Tom Morris-designed course is not the only problem. The course has been flooded twice in the last four years. But it's an ill wind... last year's flood washed away the greenkeepers' small wooden shed - and now they have a new one, built on higher ground. But they had to bring all the upfill and concrete over by hand. "We were days on end bringing that stuff over," remembers Walter.

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Ford New Holland 2120
When the time comes to replace or buy a new tractor, price is not the only consideration. Many courses buy their greenkeeping plant on a lease purchase deal, a sort of hire purchase and the real price is what it costs over a four year period.

The money side is of course important but suitability, size, weight and whether it will fit in with existing equipment are all part of the equation. Also, the dealer network is an important consideration: it's not much good having the finest tractor modern industry can offer, if it can't be mended and spares are a week away.

To assess the current crop of 30-40hp compact tractors we invited a few down to The Weald of Kent Golf Club at Headcorn near Maidstone. The six that took up the challenge were put through their paces by John Millen, Weald's course manager, (not an unknown character in greenkeeping circles) who headed the judging team. Others on the team were Peter Gee, course manager of the Ridge Golf Club at East Sutton, Weald's first assistant Martin Mewett and also from Weald, craftsman greenkeeper Colin Judge.

John concentrated on looking into each tractor's daily servicing characteristics. Whether the dip stick was easy to reach or a fight to remove or replace, if you were able to remove and replace the bodywork around the engine without removing any skin. Also position of the battery and if you slipped a disc or received a hernia taking it out for maintenance. All these things can make or break the tractor and the staff who have to operate it. The team did find that the more 'compact' a tractor is the more difficult it is to service and operate.

The rest of the team were out driving the machines and seeing how they coped with the equipment and the tasks set for them.

John and his team found the engineering standards of all the tractors present at the Weald were very high that day. If we were to award marks to the tractors then all six would be between 8 and 9 out of ten. The good was excellent and the bad was still very good.

The general consensus was that in the golf greenkeeping world the compact tractor has a big part to play in the everyday upkeep of a golf course. It does not have to be a very compact tractor though, the two smaller tractors would be very welcome on a fruit farm or a vineyard. On a golf course however, lack of space is not a problem, there is very little need to buy a tractor where the operator is going to be uncomfortable.

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Gl. 4.94
COMPACT TRACTORS

Testers give their verdicts

MASSEY FERGUSON 1260
£14,250
John Millen liked the layout of the Massey Ferguson engine for daily servicing, dip stick, battery and oil filler were all in sensible places and cause no-one any difficulty.

The drivers found the tractor very easy to operate even though it was the first time any of them had driven it. All the controls were in the right place and were easy to find. They were very impressed with the PTO start up, it took up the strain of whatever it was driving in three stages, there was no snatching and no appreciable loss of engine revs. The company call this a high inertia input.

When using the three point linkage the operators found it smooth and positive and gave them a lot of confidence in the system. The team felt well in control using a Dabro top dresser, the PTO transmitted plenty of power and the fitting, gear changing, steering and smoothness of operation gave them no complaints at all. This was also the case with the articulated and the two tonne trailer.

When driving along a bank the Massey is fitted with very useful handles on the rear mudguard giving the driver the comfort of being able to hold on to something solid to keep him upright. A couple of niggles were that there was no handbrake warning light. There was limited space for the driver’s feet making him keep them in the same place for a long time. The operators found that they could knock the shuttle gear lever out with their knee because it was too near the steering column.

Massey Ferguson specifications and performance
ENGINE HORSEPOWER: 35 Din hp
MAX TORQUE: 111Nm @ 1600 rpm
PTO HORSEPOWER: 31hp @ 2500 rpm
ENGINE TYPE: Turbo Diesel, ind injection

NUMBER OF CYLINDERS: 3
BORE/STROKE/CAPACITY: 86/86mm/1498cc
TRANSMISSION: 16F/16R synchro, mech shuttle Speeds (forward) 0.8-16.2 mph Speeds (reverse) 0.46-15.3 mph
CLUTCH TYPE: Split torque
POWER TAKE OFF: Rear Independent 540-1000 rpm 6 spline
WEIGHTS AND DIMENSIONS
Weight 281 lbs 1275kgs Overall length 121" 3075mm Minimum width turf model 57.6" 1463mm Height, over ROPS turf model 83.8" 2130mm Turning radius less brakes 110.2" 2800mm Ground clearance 12.8" 325mm Wheelbase 66.9" 1700mm CAPACITIES: Fuel tank 6.6 gallons 30 litres
OPTIONAL EXTRAS: Front weights, safety cab, additional spool valves.

KUBOTA B2150HST
£13,475
John felt the positioning of the main serving items could be a bit better, access to the dip stick, oil filler and the battery was awkward.

The drivers found the clutch a little fierce and it was impossible to pull away smoothly, could be an adjustment problem.

The PTO, came out of drive more than once and the engine had to be turned off to put it back in, again adjustment would probably put this right.

Very little marking was caused by the Kubota with the steering being easy to use. The gears did not have a good range and there was no creep gear. A problem also, the three point linkage arms would not go low enough.

Pulling and stopping the trailer was no problem to the B2150st, the operators felt most confident driving along the banks with the mower and the top dresser also gave them no problems.

All in all the team of judges felt that the Kubota B2150hst was a little dated in design and the example they had to test was a little out of adjustment. But it is a good and reliable tractor and did all that was asked of it.

Kubota B2150HST specifications and performance
ENGINE HORSEPOWER: 24HP @ 2600rpm
MAX TORQUE: 60Nm @ 1700rpm
PTO HORSEPOWER: 18hp @ 2600rpm
ENGINE TYPE: Diesel 4 cycle water cooled

NUMBER OF CYLINDERS: 4
CAPACITY: 1237cc
TRANSMISSION: Hydrostatic Speeds (forward) Low, 4.95 Med, 10.2 High, 19.6k Speeds (reverse) Low, 4.05 Med, 8.39 High, 16.2k
POWER TAKE OFF: Rear @ engine speed 2408rpm 1st 540rpm, 2nd 748rpm Mid @ engine speed 2408rpm 1st 1701rpm, 2nd 2355rpm
WEIGHTS AND DIMENSIONS
Weight 835Kgs Overall length 2780mm Minimum width turf model 1365mm Height, over ROPS turf model 229mm Turning radius less brakes 2300mm Ground clearance 235mm Wheelbase 1600mm CAPACITIES: Fuel tank 28ltrs
COMPACT TRACTORS

**JOHN DEERE 1070**

£12,919

Most of our panel felt that the John Deere 1070 was just, and only just, pipped at the post by the Massey Ferguson as their favourite tractor in the test. John found the daily servicing layout was very good with the side panels easy to remove and replace.

Local firm, Drake and Fletcher, supplied the 1070 in a very high order and our judges found the machine just as polished in its performance as was its paintwork.

The driver/testers found a good range of gears in the 1070, 18 forward and 6 reverse including creep. The working platform is uncluttered with all the controls colour coded making for very smooth operation. Like on other machines, the handles on top of the rear mudguards give the driver something to hold onto when operating on banks.

The brakes were found to be good as were the 1070's abilities in mowing, towing the trailer and carting about the top dresser. The operator found that the 1070 was very kind to the grass's surface and was able to drive across the greens with complete confidence.

It was a very comfortable and easy to drive machine and it should not be forgotten that it cost £1200 or so less than the Massey.

**John Deere 1070 specifications and performance**

- **ENGINE HORSEPOWER:** 38.5hp @ 2600rpm
- **MAX TORQUE:** 105Nm PTO HORSEPOWER: 35hp
- **ENGINE TYPE:** Diesel
- **NUMBER OF CYLINDERS:** 3
- **BORE/STROKE/CAPACITY:** 84mm/86mm 1906cc
- **TRANSMISSION:** Speeds (forward) 18; Speeds (reverse) 6
- **CLUTCH TYPE:** Dual Stage Dry

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**LAMBORGHINI RUNNER 350**

£11,200

Out of the six tractors in the test, the 350 was the second smallest. Bearing a name that conjures up thoughts of a vastly different vehicle, the reality is a rather attractive looking machine.

John found the dip stick awkward to extract and replace and the batteries are a problem to fill, remove and reconnect. To fill with oil requires a funnel, a small

---

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COMPACT TRACTORS

COMPARSED

item until you can't find the funnel. The body work also came in for criticism, John thought the bonnet lid was too lightweight, also the side panels were troublesome to replace.

The test drivers found the Lamborghini had plenty of power but the steering was heavy and it marked the surface a little when turning, the marking was not too severe but it was noticeable. Gears were a good point with a good range and they were easy to shift. The two speed PTO had a good selection and was simple to engage. Our judges were not too impressed with the working platform, it was a little tight and as with all 'compact' compacts it was hard to get on and off.

Driving on the banks didn't instil much confidence, it was too light for the two tonne trailer and the brakes were poor under strain. The team found the top dresser difficult to fit, the three point linkage was too close to the tractor and they thought that some implements would lack clearance.

The problem with these very compact tractors is that to get them so small the designer has no choice but to compromise on certain aspects on the design and things.

Lamborghini Runner 350 specifications and performance

ENGINE HORSEPOWER: 33hp Din @ 3000rpm
MAX TORQUE: 84.5Nm
PTO HORSEPOWER: 31hp Din
ENGINE TYPE: Diesel
NUMBER OF CYLINDERS: 4
BORE/STROKE/CAPACITY: 78mm/78mm 1490cc
TRANSMISSION: Speeds (forward) Min 0.42 - 14.93 mph
Speeds (reverse) Min 0.42 - 14.93 mph
CLUTCH TYPE: Organic
POWER TAKE OFF: Rear 2 speed 540/1000 Mid Optional 1000rpm

Front Optional
1000rpm WEIGHTS AND DIMENSIONS Weight 1030Kg
Overall length 2860mm
Minimum width turf model 1275mm Height, over ROPS turf model Turning radius less brakes 2800mm Ground Clearance 305mm Wheelbase 1630mm
CAPACITIES: Fuel tank 29 litres

ANTONIO CARRARO 3800 £12,500
As with all small compacts John found the Carraro difficult to get to the dip stick, battery and oil filler, there is a trade off for being small and this is a fact of life.

The Antonio Carraro is unique in this line up being the only one with a cab and the only one capable of having the driving seat reversed. Cabs were found to be a double edged sword, on the one hand you are protected from the elements but you knock your elbows getting in and out. A cab on a larger tractor would proba-

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GREENKEEPER INTERNATIONAL April 1994
The Carraro's engine power was good, if a little noisy but the PTO couldn't cope with the long grass. It wasn't big enough to tow the two tonne trailer but made good work towing the course's large roller, even on wet grass the four wheel drive had excellent grip. The Carraro's unique ability to pivot around its centre allows the wheels to exert an even traction on uneven ground.

Marking was a bit of a problem but with larger turf tyres this would be minimised. The driver found he lacked confidence on the banks, this was probably due to the tractor's small size and narrowness and the driver being used to larger machines.

The team found using the top dresser awkward with the three point linkage having a poorly designed top link, they had to use the one that belonged to the Kubota. Our judges found that even with a cab the visibility was good, getting on and off poor and the platform cramped with comfort an issue buying top quality products.

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Antonia Carraro 3800 specifications and performance
ENGINE HORSEPOWER: 36hp
MAX TORQUE: 99Nm @ 2100rpm
PTO HORSEPOWER: 22.5hp
ENGINE TYPE: Diesel
NUMBER OF CYLINDERS: 3
CAPACITY: 1551cc
TRANSMISSION: Speeds (forward) Speeds (reverse)
CLUTCH TYPE: Single Dry Plate
POWER TAKE OFF: Two speed
WEIGHTS AND DIMENSIONS
Weight 1260Kg Overall length 2955mm Minimum width turf model 1380mm Height, over ROPS turf model 1990mm
Turning radius less brakes Ground clearance 180mm Wheelbase 1250mm
CAPACITIES: Fuel tank 30 Litres
FORD NEW HOLLAND 2120
£14,686
Like the Massey and John Deere, this was also a much liked tractor, probably because it was a tractor-shaped tractor and the team certainly admired its good looks. John found that the daily servicing was not so convenient as the Massey and the John Deere but still could be described as good and you didn’t require a funnel to pour oil in from a jug.

The drivers found the gears crunched a bit and thought it may need adjustment. To operate the PTO you had to use the clutch and it was ‘clonky’ and rough to use. They liked the working platform.

Marking was well within limits but more than the Massey Ferguson. Turning and steering was light and positive. The drivers felt that the 2120 was a little unstable on the banks but thought this was because they were not used to this model. Stopping the trailer was well within the powers of the Ford’s brakes. There was plenty of power in all departments and the mower was taken well in the tractor’s stride. Connecting up the equipment was easier than the Massey or the John Deere.

Getting on and off the 2120 was easy and without the driver banging his head or knocking his elbows. All in all the Ford was found to be a good all round performer with excellent visibility and comfortable in use.

Ford New Holland 2120 specifications and performance
ENGINE HORSEPOWER: 41.3hp
MAX TORQUE: (Nm/rpm) 136.2 @ 1800
PTO HORSEPOWER: 38.5hp
ENGINE TYPE: Diesel
NUMBER OF CYLINDERS: 4

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John Deere Ltd – Harby Road, Langar, Nottingham NG13 9HT tel: 0949 60491
New Holland Ford Ltd – Cranes Farm Road, Basildon, Essex SS14 3AD tel: 0268 533000
Kubota (UK) Ltd – Dormer Road, Thame, Oxon OX9 3UN tel: 0844 214500
Massey Ferguson (UK) Ltd – Stanton, near Kenilworth, Warwickshire CV8 2LJ tel: 0203 531000.

BORE/STROKE/CAPACITY: 85mm, 100mm. 2269cc
TRANSMISSION: Speeds (forward) 24 Speeds (reverse) 8
CLUTCH TYPE: Dual. Live PTO
POWER TAKE OFF: Rear 2 Speed 540/750rpm
WEIGHTS AND DIMENSIONS
Weight 1750 without cab
Overall length 3485mm Minimum width turf model 2.3Mtrs
Height, over ROPS turf model Turning radius less brakes
3220mm Ground clearance 355mm Wheelbase 1900mm
CAPACITIES: Fuel tank 42Ltrs.

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It may come as no surprise to learn that the golfing fraternity has always had its benighted element and greenkeeper's hackles?

Although any reference to the condition of golf courses by golfers has to be taken with some caution, the descriptions from Darwin do give some indication of how golf course maintenance and presentation has improved over the years. During the 1890s Darwin received a letter from his father who had been visiting some links, other than his home course, where "the lies are so good that I think a professional could take his irons of this article may do nothing to lighten the load when the annual tirade is upon you, it may at least prove of some comfort that your forebears suffered just as much.

The history of golf is littered with little gems of banality, focused not just on course condition and the supposed incompetence of the greenkeeper but on every aspect of the game. The written word is a major source of such platitudes with no better source than the renowned golf journalist, Bernard Darwin, a good golfer in his day too.

Although any reference to the condition of golf courses by golfers has to be taken with some caution, the descriptions from Darwin do give some indication of how golf course maintenance and presentation has improved over the years. During the 1890s Darwin received a letter from his father who had been visiting some links, other than his home course, where "the lies are so good that I think a professional could take his driver anywhere." The insistence on the quality of lies was considered a mute point by Darwin who was writing in the 1930s when a good lie was regarded as a right. In an article on St Andrews, written in 1934, he remembers a time long past when one remarked "I've got a good lie", whereas by that era of high-tech maintenance equipment one only commented on a bad lie! Times have obviously changed little since the 1930s in this respect, though with much busier courses complaints of a poor lie may be more frequently heard, particularly where, as seems increasingly the case, poor golfing etiquette is commonplace.

From the same era it is reported that a distinguished professional, whilst playing in a tournament on a well known links, remarked that he could not see which was fairway and which was putting green. The comment was intended as criticism that the green was not distinct from its surrounds but Darwin praised the fine texture and naturalness of the links turf that caused the fairway to melt into the green. The attitude of the professional would, I am sure, be mirrored by the majority of today's golfers, whatever their standard of play if everything isn't in a contrasting stripe and clearly defined from rough, through semi, fairway, surround and fringe before one sees the green then there is something seriously amiss with the man looking after the course. If only we could follow Darwin's example, especially on links and heathland courses where nature has carved out the golfing territory, then the golf course would be a much more environmentally friendly character, and far easier to maintain.

Support for this view comes from a rather unexpected source, the top American professional Bobby Jones who in 1926 compared the heavily watered American greens and artificial American courses to the naturalness of the British links with greens "watered only from the skies". Jones stressed the variable conditions of the links which "afford ample opportunity for the display of any strategic talent we may possess, and preserve in the most human of games that fascinating personal element which is its chief attraction."

Golfers of the present day would do well to heed these words before they throw the next tirade at the greenkeeper. There does seem to be far more emphasis these days on producing golf courses that favour the less-skilled golfer, holding greens and no impediment to a good lie and stance even into the semi rough, than encouraging the player to improve his game so that he can adapt to prevailing conditions. Yet, it has been known for professionals to make adverse comment on the condition of a true links that is in, by most accounts, good order. Darwin noted a distinguished professional of the era urging his poor performance in the Open Championship with the quip "I can't play on these beastly seaside courses." One might dismiss the quote as misguided rancour Continued on Page 62
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Judges’ decision is final. Not open to BIGGA staff.

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The Secretary, Sandy Lodge Golf Club Ltd, Sandy Lodge Lane, Northwood, Middlesex HA6 2JD

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required for new 9 hole public golf course.

Experience and qualifications necessary. Experience in new golf course construction would be helpful.

Salary to be negotiated. No accommodation.

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Further details and an application form are available by telephoning Sharon Povey on 0734 399091. Alternatively write to Reading Borough Council, Contract Services, 6 Darwin Close, off Commercial Road, Reading RG2 0SG. Please do not send CV’s, only Reading Borough Council application forms will be accepted.

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Apply in writing with full CV to:
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Closing date: 18 April 1994

Thornton Golf Club

require a

HEAD GREENKEEPER

for this pleasant parkland course.

Applicants should be fully qualified and conversant with modern techniques and machinery maintenance.

Accommodation is not available.

Apply in first instance with full particulars to:
The Secretary, Thornton Golf Club, Station Road, Thornton, Fife KY1 4DW. Tel: 0592 771111.

Ingol Golf Club

(Preston)

Require a

HEAD GREENKEEPER

Applicants must be experienced in all aspects of greenkeeping with appropriate qualifications and have a practical knowledge of modern machinery and irrigation systems with good organisational and management skills.

A member of BIGGA would be an advantage.

Accommodation is not available. Salary negotiable according to experience.

Please apply in writing with a full CV to:
Mr J Russell, Lingfield Park 1991 Ltd, Lingfield, Surrey RH7 6PQ

Ealing Golf Club

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Accommodation may be available.

Please reply with CV to the Secretary/General Manager, Ealing Golf Club, Perivale Lane, Greenford, Middlesex UB6 8SS

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GREENKEEPER INTERNATIONAL April 1994 61
sferred to hide embarrassment and frustration if it were not a sentiment that has been echoed time and again right up to the present day. If those having some mastery of the game express such opinion what chance the Rabbit accepting a need to change his game to suit conditions favouring pitch and run rather than the American influenced target golf?

Darwin comments that the greens in the 1880s "were nothing like so smooth and trim" as they had become by 1940s. However, the turf was a cause for concern, true fine seaside turf, sometimes bare and sandy, wiped off the face of the links by feeding and treatment. Sound familiar? Up until the 1920s nutritive of sports turf was largely based on agricultural practices, using generous amounts of organic manures, mixed fertilizers and lime, although there was some awareness of the difference between agricultural and golfing needs.

Hall (1912) suggested that the use of potash manures be avoided on golf links and that lime or fertilizers containing lime, such as basic slag, be used with discretion. He then went on to recommend basic slag at 753 kg/ha with guano and superphosphate! The Rhode Island Experiment Station after 20 years research work that began in 1906 concluded for turf of bents and fescue:

- Nitrogen is the most important nutrient and should be applied as an acid-reacting fertilizer such as ammonium sulphate;
- Acid conditions so produced are harmful to weed species but tolerated by fescues and bents;
- As a consequence of this "acid theory", the use of lime should be avoided;
- Where there is sufficient potassium and phosphorus none should be applied, except in composts.

There have been notable cycles of greenkeeping since then when these basic principles have been followed or ignored, in the latter case universally to the detriment of turf quality.

Let us return to the writings of Darwin and his much belated report (by some 80 years) on a match at St Andrews in 1849 when Allan Robertson and Tom Morris met the two Dunns. Darwin, whom the high scores from what were great players of their day. Darwin highlights changes in the development of the course with the furore of 1849 facing infinitely narrower fairways with more curves, all manner of indifferent lies and greens which were known for their different poor qualities; "one for its roughness, the next for its sandiness, the one often for its heather roots all over it."

The holes, unless freshly cut that day, were probably enlarged through the influence of foot traffic with uneven edges as there were no supporting cups in those days. It would be very interesting to have Darwin's comments on the quality of finish to greens, never mind the rest of the golf course, today in comparison to that of the 1930s. When one reads what golfers of the late 19th and early 20th centuries had to contend with then today's player must be considered a most cossedatated animal.

The principles of good design have changed little with time though around the turn of the 19th century there were still many sites onto which the architect could create a course without major upheaval. Whilst staying with his cousin in North Devon, General Moncrieffe from St Andrews was taken for a stroll on Northam Burrows, where he remarked "Providence evidently designed this for a golf links." The site moulded the shape of the golf course and a year later the Westward Hoe! links existed. This event took place in 1863 yet how often do we hear a similar tale being told by the golf course architects of today when they pronounce the opening of their latest masterpiece, many of whom have moved vast amounts of earth to produce their providential links?

Increasing popularity for golf necessitated a move inland, away from its true links origin to capitalise on the suburban masses. The vast majority of inland courses in the late 1850s were made on clay, "hard as a rock in summer and unusually squelchy in winter", according to Darwin. I am sure this rings a bell with course managers and golfers alike, even on some courses built within the last 20 years. Sad to say, the quality of construction, in some instances, hasn't significantly improved.

How often do we hear of ludicrous sums of money being talked when discussing the cost of building and maintaining the modern golf course? Compare these multi-million budgets from the archives of golf. However, though early as 1931, Darwin was lamenting that golf in the early 1930s was a much "cosier" game. With far fewer players, the game was a farmland and brought into inland courses. The vast majority of inland courses could not be developed from farmland and brought into play under an expenditure of £250! For a club with a multi-million budgets appreciating the benefits of natural drainage and infertility in sustaining quality turf and cutting costs. Unfortunately, Radford saw this in a different light and suggested that the custodian of the seaside course required little skill but that on the heavier inland course the art of greenkeeping came to the fore. Managing any golf course requires skill if good playing conditions are to be presented, the necessary skills between the two sites may well differ, on the "storms paradise" the greatest artistry may be that shown with a sprayer or a course closed sign!

Club golf has become extremely, some may say excessively, competitive with many clubhouses losing atmosphere and clubs the camaraderie that used to bring people into the game. This is nothing new. As early as 1931, Darwin was lambasting the clubs of the early 1880s was a much "cosier" game.
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