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Words and pictures by
SCOTT MacCALLUM



Communal Massage seemed to be just the ticket for Ronan McKeown, Mark Ellis but particularly Neil Whitaker

BIGGA's Greenkeeping Support Team

saw more sand than Lawrence of Arabia at the 125th Open Championship at Royal Lytham and St Annes.

There are 185 bunkers on the magnificent Royal Lytham & St Annes course. That's an average of more than 10 a hole and by any stretch of the imagination an awful lot of sand.

BIGGA's Greenkeeping Support Team must have shifted every grain of that sand during the four days of The Open Championship because during that time between them the 52 greenkeepers raked an incredible 1618 bunkers – to put that in perspective at St Andrews last year the figure was a mere 701.

The work was appreciated by everyone from the Championship Committee Chairman, Peter Greenhough who made a visit to the BIGGA Marquee to find out the three day figure on the final morning, and BBC commentator Peter Oosterhuis, who also visited the marquee to collect results, to the caddies, whose job it is at regular Tour events to rake the bunkers. The general consensus being that slow play would have been a real problem had the caddies had to rake such a huge number of bunkers – the same player frequently visited more than one bunker on a hole. Indeed one player was in four bunkers on one hole.

For the second year

BIGGA IN THE LYTHAM RHYTHM

BIGGA ON THE INTERNET

BIGGA was launched onto the Internet during The Open and the new service will offer "surfers" a range of information on the Association's services.

The BIGGA Web site can be accessed on – <http://www.bigga.co.uk> – and will initially display five pages including information on Golden Key sponsors, BTME 97; Greenkeeper International.

"This is a new and exciting vehicle for BIGGA to utilise and we are sure that as the Internet grows the benefit from our involvement with it will increase immeasurably," said James McEvoy, Sales and Marketing Manager.

"This will enhance our reputation as a truly international Association and will enable us to offer our sponsors added benefits and spread the word about Association membership," said Executive Director Neil Thomas.



Iain MacLeod was called into action to rake the bunker Nick Faldo found on the very first morning



Above: We've done it! Another successful Open and time to party. BIGGA's Vickie Peckham certainly isn't short of dancing partners!

Left: The Augusta National division of the Greenkeeping Support Team – Brad Owen and Russell Myers



BIGGA ran the Great BIGGA Bunker Competition for the world's press and media for a daily prize of a bottle of whisky and an overall prize of a Hayter Harrier lawn mower worth over £600. This year the lawn mower was won by the end of the third day because the highest estimate by any of the press was lower than the three round figure of bunkers raked. That meant that Patricia Davies of *The Times* could relax on the Sunday safe in the knowledge that she and her husband Dai, golf correspondent of *The Guardian*, would take the prize.

As it was her estimate was 1113 more than 500 out but still better than everyone else, all but two of whom predicted under 1000.

If the top brains in the world of golf could be so far out how would the Support Team members fare in their own competition which was run in conjunction with the Media event. Well judge for yourself. The winner was Chris Sheehan of West Derby GC who as well as being an active member of the team on the golf course was also one of the designated mini bus drivers. Chris estimated 1620 – only two out!

The Support Team also had time to pick up snippets of news for circulation in the Press Centre, television and radio and to assist the scorers. Duncan Smith was actually called in by Championship officials to clarify one scoring situation.

Irishman Des Smyth had signed for a three on the final hole of the second round but the scorer had him down for a four. Duncan was called in and showed on his bunker form that Des had been in a bunker on the 18th. This evidence was accepted and Des, who would have missed the cut in any case, was disqualified.

For his efforts Duncan won the Editor's Prize for the Best Newshound of the week.



Steve Evans (top) led the way with the first match on the first day at 7am while Alex Robertson (below) brought home the winner on the Sunday when he won the draw for the Nick Faldo, Tom Lehman match

■ Dave Musgrove, who is caddying for Lee Janzen, was protecting his player's interests when he shouted "Quiet Please" at a man moaning on the left hand side of the 15th fairway. It was only later that it became apparent that the poor man had a broken arm – Information supplied by Howard McAddey of the BIGGA Greenkeeping Support Team.

■ Amateur Champion Warren Bladon had a magnificent first day but must have rued the three putts he took from two and a half feet at the 16th – Information supplied by Anthony James of the BIGGA Greenkeeping Support Team.

■ Michael Jonzon had an eventful time on the 13th. His tee shot landed in bounds but was inadvertently kicked out of bounds by a spectator. He was given a free drop and was able to continue – Information supplied by Richard Heaslip of the BIGGA Greenkeeping Support Team.

■ Tiger Woods used the hard running 7th fairway to launch a drive, his caddie measured at 390 yards leaving himself just 160 yards to the green – Information supplied by David Weedon of the BIGGA Greenkeeping Support Team.

■ Paul Azinger's fit of pique (he broke his putter over his knee) on the 9th and their implications didn't necessarily affect his performance on the greens. On the 10th hole, using his sand wedge he holed a nice 10 footer – Information supplied by John Wells of the BIGGA Greenkeeping Support Team.

■ The BIGGA Greenkeeping Support Team, which has been raking bunkers and divoting fairways, had another use in game 50 when Duncan Smith, the Support Team member designated to the game, was called in to clarify a scoring problem which resulted in the ultimate disqualification of Des Smyth. Des had marked his score at the 18th as a 3 but his scorer had him down for a 4. To clear up the situation Duncan was asked to bring in the form upon which he was marking the number of bunkers he'd raked and it showed that the Irishman had been in a bunker on the 18th and that he couldn't have made a 3. "I was asked to recollect every shot on that hole," said Duncan.

■ The girlfriend of Tony Johnstone's caddie had an unusual way of marking the fact that "her man" was going to have the weekend off. Halfway down the 18th fairway and to the cry of "Well, I said I would if he missed the cut" she turned and "mooned" to the stands. As it was towards the end of the day the display did not have the size of audience it might have done – Information supplied by Alec Davies of the BIGGA Greenkeeper Support Team (who had an excellent view).



MAN OF THE



Head Greenkeeper Jimmy MacDonald and his team won praise from all corners for the condition of the golf course which was a model of how a links course should be.

It brought out the best in the world's best golfers and despite perfect golfing conditions

ensured that the leaderboard by the end was a roll call of some of the world's finest golfers.

Jimmy is pictured visiting his friends in the BIGGA Marquee on the final day

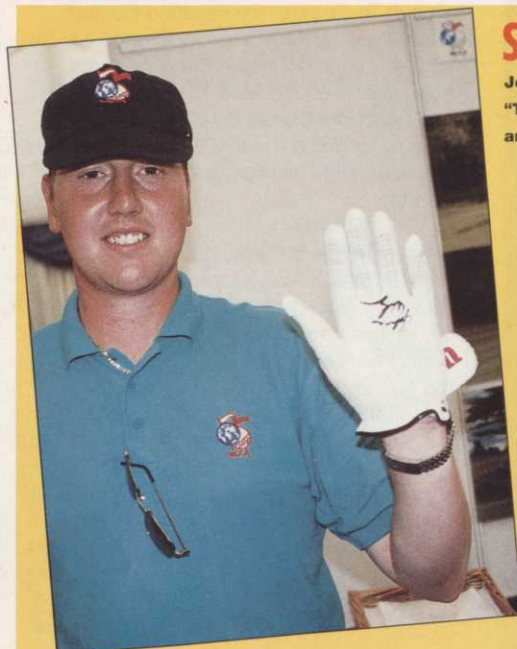
However, one woman spectator was not too

enamoured by a typical links golf course being overheard saying, "I've just returned from Spain where the fairways were wonderfully lush. I think it's a disgrace the way they've been allowed to die here."

What can you say?

SOUVENIR TIME!

John Daly's glove being modelled by its new owner Robert Hogarth, Mark O'Meara's hat bearing the words "To Peter, Thanks for all your help. Your friend Mark O'Meara" now owned by Mark's friend Peter Biscoe and Fanny Sunneson's towel now in the safe hands of Jimmy Neilson.



MOMENT



Mark Broughton, of Morecambe GC, was presented with his Master Greenkeeper Blazer by National Chairman Dean Cleaver during the Championship.

Mark, who spent some time at Royal

Lytham working under Jimmy MacDon-ald, and was part of Jimmy's own green-keeping team during the week, had family and friends on hand for the pre-sentation.



THE WAY WE WERE

The Greenkeeping Support Team from the last time The Open was held at Lytham – eight years ago

■ David Frost had a bad start to his second round. Standing on the 1st tee his brand new pair of golf shoes split and he had to send someone back to the tented village for a pair of size nine and a halfs. A marshal was presented with a pair of slightly damaged shoes on the 2nd tee – Information supplied by Gavin Kyle of the BIGGA Greenkeeping Support Team.

■ The hard running ground presented Hidemichi Tanaka with an interesting rules problem on the 12th. He was preparing to make a chip shot when his ball ran into a bunker. He was allowed to play it without penalty – Information supplied by Billy Merritt of the BIGGA Greenkeeping Support Team.

■ The work of the BIGGA Greenkeeping Support Team has been well appreciated by the caddies, whose job it is to rake the bunkers at regular Tour events. With so many bunkers raked over the first two days slow play would have been a bigger problem that it actually was if every caddie had to rake his own player's foot prints.

■ British Rail has its critics but Anthony Davies of the BIGGA Greenkeeping Support Team had reason to sing its praises. The head of his rake fell off and it was British Rail maintenance who came to his aid – Information supplied by Anthony Davies of the BIGGA Greenkeeping Support Team.

■ Vijay Singh played the entire second round with a cracked driver – Information supplied by Alec Davies of the BIGGA Greenkeeping Support Team.

■ The Duke of York took an interest in the work of the Support Team during his visit. He talked with Stuart Bridge of the Team on the 1st tee before the Ben Crenshaw and Tiger Woods match went out and then chatted with another member of the team, Neil Woolfrey, on the 8th tee during the Mark James and David Gilford match.

■ Stephen Curtis of the BIGGA Greenkeeping Support Team got more than he bargained for when he sat waiting for his match to hole out on the 13th. He was hit square in the back by Klas Eriksson's tee shot which was hit long and right.

■ Mark Calcavecchia showed rare baseball talent on the 9th tee. He bounced his ball off the tee marker and hit it with his putter. It bounced off the road, hit a house and bounced back on to the course – Information supplied by Alec Davies of the BIGGA Greenkeeping Support Team.

■ D.A Weibring took time to smell the roses during his final round. The American, who recently won on the US Tour having recovered from serious illness, stopped every couple of holes to have marshals take photographs of himself with his son and by the end the match had lost around half an hour on the game in front – Information supplied by Chris Sheehan.

TURF TISSUE

How turf tissue analysis is used to grow healthy golf greens. Robert Laycock reports.

Turf grasses take up nutrients from the soil and their tissue can be analysed to determine its content of nutrient elements. Used in conjunction with soil analysis, the nutrient content of grass clippings (collected from the grass box of the mower) gives a more complete picture of nutrient usage than the conventional simple soil analyses usually used for this purpose.

Who uses it? Tissue analysis has been part of decision making in agriculture and horticulture for many years and now is becoming more commonly used on golf courses around the world. My own clients include golf courses which are old and new - 9 hole courses as well as championship courses - who use tissue analysis

on a regular basis.

Why use it? The thinking turf manager, interested in an integrated approach to managing his greens learns that by reducing turf fertiliser applications or applying nutrients in the appropriate proportions it is possible to avoid lush production of turf at the wrong times thereby cutting fertiliser costs and improving the health of the grass.

What does it add to what we already know from soil analysis? It is well known that the nutrients which can be extracted from the soil by turf grasses interact both in the soil and within the plant. This affects their availability for biochemical processes in the plant, and turf grasses often take up more of some nutrients than they actually need for growth. This may not be a problem unless the high level of that element affects the content of others. One of the best known examples of

this, well-known to grassland farmers, is that adding high levels of potassium fertiliser to grass depresses its magnesium content. Using tissue analysis this can be seen happening in turf. Other less well known interactions also occur, and it becomes clear that maintaining the nutrients in balance is essential to the good health of turf.

Criticisms of tissue analysis

Common misconceptions exist about the usefulness of tissue analysis and its use has been criticised for several reasons. Some of these criticisms are valid, but experienced users are aware of them and take them into account in their interpretations. It helps to have a good grasp of plant biochemistry and physiology and for this reason interpretation of the results by an experienced and qualified agronomist is essential.

Firstly, tissue must be clean. No

analysis procedure can distinguish top dressing particles, insects, or bud scales from trees from grass clippings and these must be removed before analysis. This is a very obvious factor, but one remarked on by a number of researchers in this field.

Tissue must be reasonably fresh. In practice, unless the golf course is within easy reach of the analyser, first class post can be used to ensure a fresh sample is analysed. The effects of decomposing plant tissue on analysis results are well known and documented (surprisingly enough) and again, experienced interpretation of the results will tell whether the sample is too old for analysis to give sensible results.

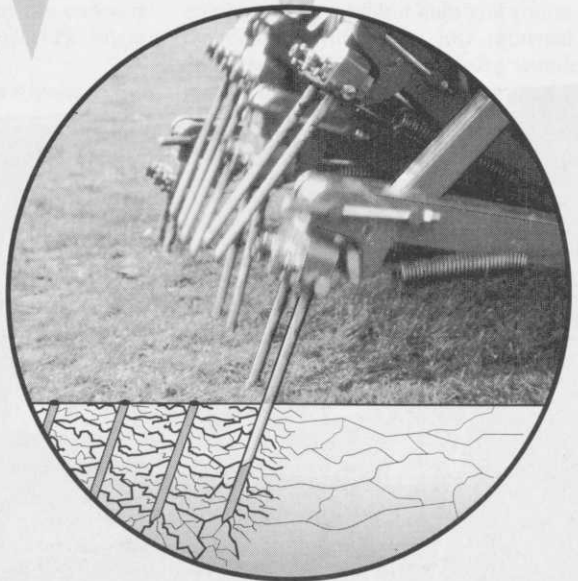
Results of tissue analysis must be interpreted in the context of soil analysis from the turf area. This means that a more detailed soil analysis is required than that often used by agronomists. How-

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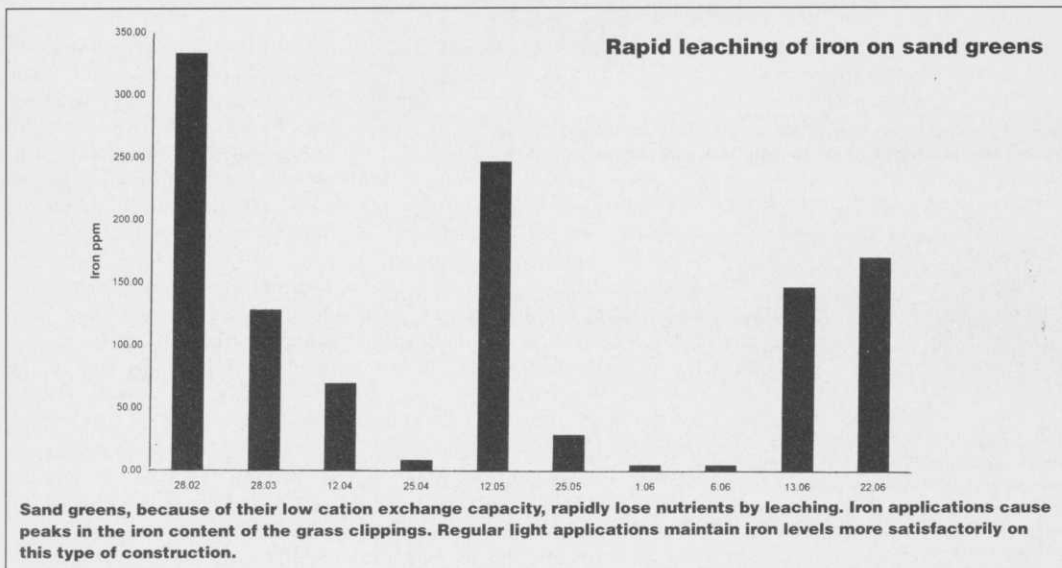
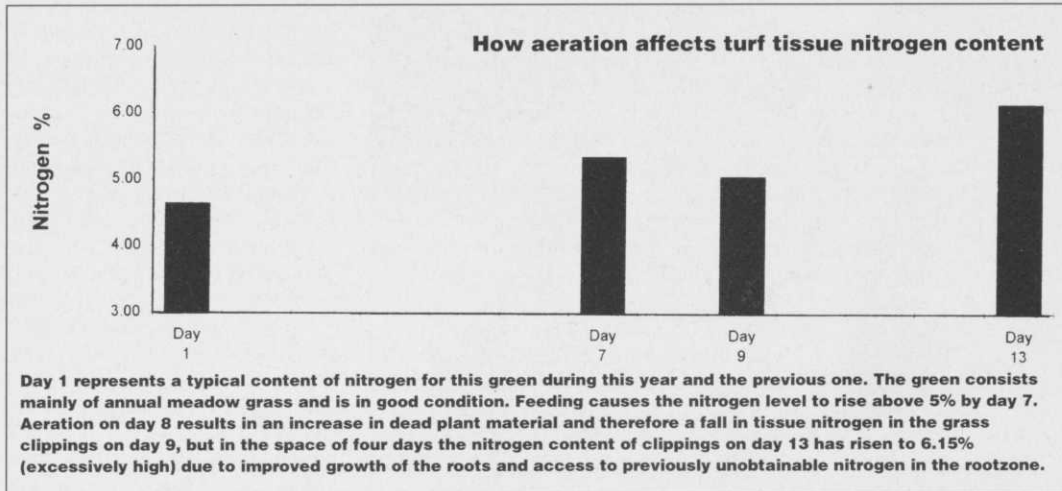
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ANALYSIS



ever this is not a bad thing and in itself adds to the background information made available to the greenkeeper through his agronomist.

Tissue nutrient levels vary throughout the year. This is not necessarily a disadvantage, and provided frequent testing is carried out can be used to advantage by the turf manager. It is often overlooked that availability of nutrients in the soil varies with the season, particularly on modern constructions, so variation in the tissue is to be expected.

Other factors also affect the results, notably the age of the tissue and the species of grass being analysed.

Some of these supposed disadvantages are in fact helpful. For example, knowing that the levels of the various nutrients change

through the year gives a better understanding of the way the turf plants in the greens work. Fertiliser composition can then be selected to suit, reducing waste and cost.

There are many complications in interpreting analysis results and laboratories with little experience of turf tissue analysis should be avoided.

Effects of turf management on tissue nutrient content

Tissue nutrient content is affected by a number of factors. Fertiliser application is the most obvious. However, other management practices also affect the results of the analyses. For example, vertical mowing introduces older tissue into the sample, causing an increase in those elements associated with older tissue, such as cal-

cium, and a decrease in nitrogen.

Aeration increases oxygen supply to the roots and thus enhances growth of roots into parts of the soil previously untapped. The result of this is the same as giving a dose of fertiliser. This is why on old greens aeration can encourage fusarium patch disease around the tine holes, a phenomenon often seen on golf courses. By integrating aeration practices and fertiliser use through the season, it is possible to cut down on fertiliser inputs and make a more healthy, less disease-prone turf. This effect is illustrated below with results taken from an actual green. Because of this it is advisable to perform tissue analysis regularly, so that changes in nutrient content can be followed throughout the year and variations due to fac-

tors like these can be identified.

Modern technology means that results can be supplied very quickly. In my own case, I results of analyses are faxed back on the day I receive the sample, which means that the tissue results can be used to decide immediate fertiliser needs, for example.

Advantages

There are two ways for a golf club to use tissue analysis. A single analysis, made in conjunction with soil analysis, can detect an imbalance in nutrient uptake by the turf which can be corrected. This approach can be used to help determine why, for example, two greens on a course are behaving differently. However, I have found by far the most popular way of using the technique in practice is as a management tool in long term nutrient tracking to monitor changes in nutrient content of the turf. This enables fertiliser applications to be planned and the response of the turf to be followed during the course of the year. In doing this, the turf manager learns the optimum amounts of particular nutrients to apply without putting on too much at a time and to regulate applications to avoid under or oversupply of fertilisers.

Some nutrients are more dynamic throughout the year. Iron (see graph) and nitrogen are examples of these, in healthy turf responding positively to applications of fertiliser which contain them. With experience, the turf manager can use tissue analysis to avoid alternating peaks and troughs of nutrient content, at the same time producing a more healthy turf, less prone to damage from disease or environmental stress.

The final question is: "Is turf tissue analysis essential to good golf course management?" The answer of course is "No, it is not essential" - but it is a major help in decision making. Once Course Managers have used tissue analysis they tend to continue to do so, finding it improves their understanding of the way the grass on their greens interacts with fertiliser applications and other management practices, and thereby improving the standard of their greenkeeping.

Continuing education: essential for us all

A number of Head Greenkeepers and Course Managers could be doing far more to help in the training and development of their staff, believes Nick Bisset, head of horticulture at Askham Bryan College, York.

As a first step along this path, Nick is looking for a major improvement in communications and a greater willingness by experienced turf professionals to share their knowledge, helping close the gap which he feels has developed between many managers and their staff.

Nick Bisset's observations stem from 20 years' experience with students attending block and day release greenkeeping and sports turf courses at the college, which is a BIGGA-recognised regional centre for greenkeeper training.

"Many of the trainees we see each year display a serious lack of knowledge in the most basic areas," he explained. "They come to us supposedly with some greenkeeping experience but it is obvious from their comments that important information and advice is simply not filtering down from the top."

But it is not just in the areas of turf grass management and course maintenance where Nick Bisset wants better communications.

"It is alarming just how little is known by some students about the club where they are employed," he pointed out. "Facts such as the number of members and rounds of golf played each year, the timing of important competitions and the age and design of the course is key information for any aspiring greenkeeper, influencing a whole range of jobs such as fertilising, spraying, aeration, hollow coring and top dressing. Better understanding can only stimulate greater interest in the work, leading to improved performance and results."

Nick stressed that head greenkeepers and course managers should make a point of talking frequently and openly with their staff. "It is vital that anyone allocated a specific course maintenance task is shown how to do it properly. Yet it is equally important that the person understands why it is necessary, why he or she



Sharing of knowledge will help make staff feel more involved, leading to a happier workplace and a better maintained golf course



Never assume that staff know why a specific turf maintenance task is necessary and how it should be carried out. Better education will produce better results

has been asked to do it a particular way and what benefits are expected."

By sharing their knowledge, experienced greenkeepers, managers and turf professionals will, he says, help make their staff feel more involved. This, in turn, will stimulate positive feedback, comments and suggestions, leading to a happier workplace and a better maintained golf course.

"All we can do at colleges such as Askham Bryan is provide students with the facts," pointed out Nick. "Armed with these, they can start making decisions and forming their own opinions. However, they cannot be expected to do it alone. They need continuing encouragement and education at the workplace."

Classroom discussions have revealed that the majority of managers take for granted the

fact that their staff know why they are doing a particular job. "This is a dangerous assumption," commented Nick. "Fear of being laughed at can make even the most able trainee clam up and not ask for help or advice."

"I believe the best approach is for the head greenkeeper to talk regularly to everyone about the specific management and maintenance actions being planned and carried out on the course. This can be done through a general briefing or individually for those who prefer a one to one approach."

While applauding the many clubs which encourage formal education for trainee greenkeepers, Nick stressed that there is an accompanying need for continuing training for more experienced people.

"New ideas and techniques appear with ever-increasing frequency and keeping up to date with the latest developments can be a problem, even for college lecturers," he observed. "Supplier open days, manufacturer demonstrations, trade journals, STRI bulletins and BIGGA conferences and courses are able to provide a wealth of information which no golf greenkeeper should ignore. Any club wishing to advance its standards of course management and maintenance ought to pro-

vide their staff with the means and the time to take advantage of the opportunities available."

In addition to its published programme, many colleges are happy also to lay on specialist courses if there is sufficient demand. Askham Bryan was asked recently if it did anything on golf course design and was promised six students if a specialist course was provided.

Having found a qualified lecturer, the college will be presenting its very first two day session on the subject next winter with places available for a further six students on the course. "First come, first served," notes Nick Bisset.

To support and advance the current level of education available to experienced and trainee greenkeepers, Nick says he would like to see a regular series of regional technical meetings, targeted at everyone within a golf club having responsibility for the management and upkeep of the course.

"Continuing education should not stop simply at those who maintain the course or service machines," he commented. "Club secretaries and chairmen of greens also need to understand why certain operations have to be carried out at specific times of the year, why they are necessary and what equipment is required."

"The majority of clubs want to see their course being well used by members and visitors throughout the year. At the same time, they want it presented in perfect condition, yet the two situations do not always sit comfortably together. Bringing everyone together within an educational or training forum should produce a better understanding throughout the club leading to greater harmony and improved playing conditions."

"BIGGA has made a great start with its chairmen of greens and secretaries course at the BTME event in Harrogate. I would like to see such sessions extended nationwide throughout the year."

■ Nick Bisset can be contacted at Askham Bryan College, York. Tel: 01904 702121. Many thanks to Coventry Golf Club for assistance with the photographs used to illustrate this article.

Have you ever had it Blue?

Ocmis Irrigation Tel. 01460 241939



Ocmis has been quick to make an impact on the golf course irrigation market and now, as Golden Key sponsor, greenkeepers will be seeing even more of the Somerset based company which has an additional three offices providing service to the whole of England and Scotland.

When it comes to timing its introduction into golf course irrigation, Ocmis couldn't have done it any better if a crystal ball had come as part of the office equipment. The Somerset based company began installing golf course systems in the late 1980s and has strengthened its position to the extent, that as the need for improved water usage and conservation has become increasingly apparent few companies are better placed to take advantage of

Preparing for an 'unrainy' day!

the increasing demand for irrigation systems. "For a long period the attitude towards irrigation in the UK was that it was used to top up natural rainfall," said Ocmis Managing Director, Chris Aplin. "However, grass is now much more technical than that nowadays, both in growing it and keeping it growing well."

But the change in the weather, although the experts say they need many more hot dry summers before it can be described as a significant trend, has marked water down as a precious commodity to be used wisely.

"The apparent change in the weather over the last few years in bound to have an affect on our

business. We've seen golf courses where the fairways have been so dry that golf balls have been disappearing down cracks and have seen a significant interest from clubs who are looking into full fairway irrigation."

Chris says it is difficult to make members comprehend that they need a system when it is perhaps only a month in middle of summer when it doesn't rain at all. "However, the damage which can be caused to the course in that time can be astronomical. It's the unfortunate greenkeeper who has to find five or six bodies to water by hand day and night to keep the course from burning up."

"The labour saving benefits of

having a fully efficient automated system are very high compared with manual watering but in many instances the members and the committee never see the work which is going on in the background by greenkeepers to keep the course up to their required standard."

Chris has also noticed a change in the way golf courses have marketed in recent years. "So many of the courses built in the late 80s and early 90s were in remote locations. Since then other courses have been built nearer population centres so the remote ones are finding it more difficult to survive. The only way they can is to make their playing condi-