Most men find themselves dwarfed by Tracy Ruane. Yet that's an exceptionally tall person - tall for a woman. But then, for a woman she has an exceptionally unusual job: At 29, she's head greenkeeper at Oulton Park Golf Club in Leeds - one of only two women head greenkeepers in the country. She is overflowing with enthusiasm for her work in and this she encapsulates the pride and optimism of the small body of women greenkeepers working in this country.

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

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

Tracy Ruane's moment of truth came during a spell of greenkeeping during the second year of her four-year Leeds City Council horticultural apprenticeship, when she was posted to Gotts Park golf course in Armley, West Leeds. 'Before I went there I'd always thought I'd be a gardener, but after I'd been at Gotts a while, I thought, no, this bears gardening hands down.' She asked to be allowed to stay on in greenkeeping for her third year. The apprenticeship involved rotating from year to year between gardening in parks, greenkeeping, arboriculture and work on the tree gangs with, finally, a year in nursery work, but instead of going on into the third stage she was sent to Temple Newsham golf course for a few weeks to see how she got on with it. She ended up staying 18 months. 'Luckily for me there weren't many people that wanted to do golf. The lads wanted to work with chainsaws and wear the ear muffs and ballistic trousers and the other girls either went into the parks or nurseries. For me it was golf'.

Jane Ryan was a farmer's daughter before meeting and marrying a greenkeeper and in so doing, being forever converted to the religion that, for many, is golf. According to legend, she badgered the committee where her husband was employed as head greenkeeper until they took her on temporarily for 25p an hour. She too was allowed to stay on - that was more than 15 years ago. She and Paul, her head greenkeeper husband, work successfully together at Abbeydale with their small team of men where they have been for nine years.

've got the job with the Leeds City Council on leaving school at 16. It was her 'first and last' interview. Since discovering her vocation, she has worked for 12 years on the city's fine municipal golf courses and, now, as contractors for the City Council, she and her lads are in close touch with their contract managers, able to phone through whenever they need to pass on information or gain consent for work to be done. The managers come out regularly and discuss work in progress with all the greenkeepers working at Oulton and Tracy is justly proud of their small team of greenkeeping staff with the best sanitary and other facilities it can afford is one which is interested in the morale and well being of its men. If it values the work they do, the comfort of its women will be taken account of in the same way, and at Oulton, Tracy Ruane con-
designed by Dave Thomas and has only been open for two years. Tracy thinks it opened far too early, before it had adequate chance to establish and, with an average of 70,000 rounds per year, the problems in maintaining playing conditions have been enormous and have seen off several predecessors. They are also working on bringing a short nine-hole course into play at the same time, and on the day I visited building work was in full swing on the conversion of an old hall and other buildings to a multi-star hotel and leisure complex.

Jane Ryan: badgered the committee until they took her on

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

Tracy explained to me how much she admired the way her old boss, Eric Garlick, headed his team at Gotts Park, "He led it through enthusiastically, and sometimes, according to Gerry, downright bad temperedly. As she puts it: 'Being a greenkeeper doesn't make you a better golfer, and being a good golfer doesn't make a better greenkeeper. I'm sure that there are excellent golfers that are greenkeepers but I think that too much playing the game takes away something of the art of the greenkeeper.'

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

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

Problems of a different kind beset them at Costessey, which is a private club owned and run by the developer, but the younger men being aged from 18 to 27. A river runs through the site and as the water table is high, they suffer very much from flooding during extended periods of rainfall, although they usually manage to avoid closing the whole course.

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

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

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

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

And when it is realised how
Tests themselves go for analysis

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

It is not that they are more she than their male col- league. None is immodest enough to claim such a thing. It is, as Tracy explained, that although at times they may have had to work 100% to be 100% good, whereas a lad could work 90% to be seen to be just as good, they know they are as good, and they have proved it. When Tracy went to the BTME in January, everybody shook her hand, went to the BTME in January everybody shook her hand, people she’d never met, and everybody referred to the quality of the grass that has been laid down by the USGA. The testing for hydraulic proper-
ties of the rootzone, which has been completed, is a turf scientist currently working at the American example by testing methods and experts who can make a mess of defining and measuring. However, the whole issue is being made more difficult because these com-
mentators are confusing the pur-pose of testing with the methods and interpretation of analyses.

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

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

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

An analysis does not make judgement about how good or bad the condition of the rootzone is; this only happens when you compare the analysis with the quality of the turf. Testing is valid even when it shows that the rootzone does not meet the ideal textbook description. This is quite common and it demonstrates that a combination of rootzone material and climate and turf species can adapt well despite con-trary opinion. However, one com-
ponent of the rootzone undergoes change – as will invariably happen despite maintaining a constant management programme from year to year – then the change can be so significant as to throw the other fac-tors out of balance and a problem in the turf arises.

To illustrate this consider the fol-
I I lowing two examples applied to many courses during the recent prolonged spell of rain. These saturated, cool conditions lead to a substantial loss of nitrogen as volatile ammonia, and the subse-
quent imbalance of carbon to nitro-
gen reduces the manufacture of organic acids in the soil solution.

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

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

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

The enthusiasm for testing, how-
ever, is often not matched by the expertise of many labs conducting such work and this is where the whole issue comes crashing down. If our industry insists to follow the American example by testing and recommending suitable root-
zone material, then we should be aware of some of the problems that can arise from test procedures as laid down by the USGA.

The methods for determining it is a turf scientist currently working at the American example by testing and recommending suitable root-
zone material, then we should be aware of some of the problems that can arise from test procedures as laid down by the USGA.

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

The testing for hydraulic proper-
ties of the rootzone, which has been the cause of the apparent unreliabil-
ity of physical analyses to date, can be easily resolved by substitution for a range of simpler and more accurate procedures.

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

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

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

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

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

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

In summary therefore, any green-
keeper who has lost confidence in the capacity of physical or chemical analyses should be consoled by the fact that there are both test proce-
dures and experts who can make testing a cost effective and mean-
ingful exercise.

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

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KENT

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

Although informal, we propose to meet in the Hole & Groom public house between 12.00 noon and 1.00 pm. The pub is sited on the left side of the A20, about 3-4 miles beyond Brands Hatch Circuit, heading south towards Maidstone. Not only will this give us a chance to meet, but those who wish may buy a pub lunch or sandwich. For those who choose to go straight to the course, may I suggest you arrive a maintenance shed complex no later than 1.30 pm. London Golf Club is located just off the A20 just to the north of the town. The pub suggests ‘Stansted’ on the same side of the road as the pub and about 2-3 miles past the Brands Hatch Circuit. For further information call me on 01622 414970.

Those of us who make it through to the regional final of our new Hayter Challenge Tournament will find it strange that BIGGA regional administrator, Norman Exley, will no longer be in attendance. For many years Norman suffered from a heart complaint, so perhaps a follow-up planned for next year.

NORTH WEST

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

An interesting piece of news has just come to me: NW section life member, Harry Walsh, and his wife Martha celebrated their 60th wedding anniversary last Christmas Eve. They received a telegram from the Queen and another from the House of Commons, following the news that Harry was national chairman of BIGGA in 1972, the Diamond Jubilee of the Association. Harry is 83 years young and still very active, playing golf to a handicap of 11. We wish Harry and Martha many more happy years to come.

The first golf fixture this year is the NW versus N WAles annual tournament, for which a team of six players will compete. The match will be played on Monday 26 April at Llanymynech GC, sponsored by GEM Professional. Tee off is 1.30pm, so if you are available, please contact me. The Spring Tournament will be played at Birchwood GC on Monday 10 May, and as this is a qualifier for the Hayter Challenge Tournament regional final (and numbers are restricted), no guests will be allowed—this in order to allow as many members as possible to qualify. A deposit of £10 must accompany your entry form, which must be returned by 3 May at the latest. Tee off will be from 1.30pm and the results will be allocated on the day. Smart dress is essential—thank you! Applications for the Spring Tournament to: Paul Pearse, 1 Swan Close, Poynton, STOCKFORD, SK11 1HX. If you have any queries — or indeed any news, please contact me on 0161 724 5412.

BUCKS, BERKS & OXON

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

Anyone out there who would like to represent BRBO in golf matches against the Surrey section, the Mid Anglia section or the section secretaries could be your chance to get your own back! Please contact our match captain, David Goodchild on 0296 415337. These matches will be held over the summer, starting on 1 June at Stoke Peggles GC. There is no handicap limit, so all are welcome.

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

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

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

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

CLEVELAND

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

Now is the time to take a stock check, get quotations and place orders for delivery in advance of events. Devoting fourways in April is vital: five men, five days (except par three’s). Greens compaction around flagpoles is serious: with 500 players out between Friday and Monday (average weight 10 stone = 31 tonnes), rollers on greens are not necessary. Hole cutting must only be done on a regular basis, together with weekly rota planning in summer and weekly tiling in winter— or Verdraining once or twice a year. Drainage is absolutely vital.

The outing to GEM Professional Products in Lancashire was a success and we were very well received by senior GEM staff, witnessing fertiliser production at first hand. For a family firm they are to be complimented on being so up-to-date and we offer them our congratulations on obtaining BS5750.

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

NORTH SCOTLAND

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

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

The section library is up and running with ➔ 46
the following books available: • Turf Management for Golf Courses, James Beard. • Turf Management Handbook, Freeborn. • Golf Course Presentation, John Hacker and George Shiel. • All Year Round Golf, Jim Arthur. • Greenkeepers Training Committee, 6th Edition. The OSGHI Passport to Turfgrass. These are available by phoning Gordon Moir on 0334 74021, or me (Iain MacLeod) on 0862 894402. We hope to add more books during the year, so if any member knows of a good related book, let us know and maybe we will add it to our lists. Also, anyone wishing to donate a book or books to the section please get in touch.

Nairn Dunbar course is currently undergoing some changes. The ‘Hill’ holes over the road are being scrapped to make way for housing and three new holes have been constructed and will come into play this summer. Time is not on our side so please phone me on 0862 350000 to book your tee time. This will give the course a traditional links design signiﬁcance of nine holes out and nine back. Some of the design features incorporate the style of James Bracken. The greens are 60% red granite from a local quarry and the fairways are seeded to the dry stane dyking method. The new holes come from 6431 yards to 6713 yards and par from 71 to 72. Grass Technology International are the designers and Southern Trophies are the main contractors. One of the most striking features of the extension is a bridge built at the 11th tee by a local man, using the red granite from a local quarry and employing the dry stane dyking method. The new holes come into play this summer, so please book as soon as possible.

Golf Course alterations: • Golf Course 2: changing the 578 yard par five, a 400 yard par four and a 131 yard par three, increasing the overall length of the course from 6431 yards to 6713 yards and par from 71 to 72. Grass Technology International are the designers and Southern Trophies are the main contractors. The greens, tees, aprons and bunkers surrounding were turfed, with fairways being seeded to the dry stane dyking method. Derek Roy and his staff all the best in this year of change, having to maintain the existing course while settling in the extension, but still have to see them at section outings if time permits. The section officials are working hard to make this event a success.

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

This article concentrates on results obtained from studies involving the possible correlation between automatic irrigation systems and the location of areas affected by dry patch on specific greens and the progress made to date in elucidating the identity of the water-repellent materials which are known to be present in soils affected by dry patch. Also included for interest is the information relating to the discovery that certain fungi are capable of producing water-repellency in soil, which, prior to their colonisation, prior to their colonisation, was impossible.

Dry patch distribution and automatic irrigation systems

It is generally recognised that to provide sufficient water to an entire golf green, irrigation, whether by overhead or under irrigating any area, is almost impossible. High spots and slopes will affect the final distribution of irrigation water on the surface and the underlying soil profile, as will factors such as prevailing wind speed and direction. However, automatic irrigation systems can be set up to give as near as possible an even water coverage under ‘normal’ wind conditions and applying water at optimal times during the day, when required, reduces to a minimum the problems which can occur with under or over watering.

With this in mind, an investigation into the possible correlation between areas of a golf green affected by dry patch, relative heights across the green and the volume of water deposited by the installed irrigation system was completed for one representative green on each of three courses. The three greens selected for this study varied in their expression of the symptoms of dry patch. The first green was affected by dry patch, relative heights across the green and the volume of water deposited by the installed irrigation system, was completed for one representative green on each of three courses. The three greens selected for this study varied in their expression of the symptoms of dry patch. The first green was affected by dry patch, relative heights across the green and the volume of water deposited by the installed irrigation system, was completed for one representative green on each of three courses.

Can water-repellent soils be caused by fungi?

Much speculation has existed over the past years regarding the possibility that fungi are capable of directly causing the build up of water-repellent materials in the soil and hence the expression of symptoms associated with dry patch. This study is believed to be the first to show conclusively that water-repellence can be conferred by the movement of certain fungi through the soil profile. Thatch fungi or superficial fairy rings, which are generally caused by members of the basidiomycete group of fungi, have often been thought of as having some role to play in dry patch development. Their usual ‘ribbon-like’ appearance on affected areas of turf is seen as mimicking the symptoms of dry patch. However, because of the numbers of fungi naturally present in any soil or areas of decaying organic matter (such as the thatch of turf), isolation of the specific causal organism has often proved unsuccessful. Other fungi belonging to the basidiomycete family are, however, more readily identifiable although the first to show conclusively that water-repellence caused by Marasmius oreades

Marasmius oreades is a known fungal soil organic matter content, presence of active fungal mycelium and the presence/severity of water-repellence expressed in each of the three zones.

As with the study on irrigation and green features discussed earlier, this work produced a large amount of information which can readily be summarised for the context of this article. In essence what was discovered was that in the dead zone, i.e. the zone which contains the highest concentration of active fungal mycelium, levels of water-repellency were found to be severe. This was not unexpected because (true) mycelium, particularly in such high concentrations, is known to repel water from its origin. For the first few years the symptoms of this fungus are indistinguishable on the turf surface, but as the ring matures the amount of mycelium present within the soil increases and eventually symptoms such as those seen in Figure 2 are expressed. As the mycelium passes through the soil it breaks down organic matter, releasing available nutrients to the grass and hence stimulating grass growth. With time the older mycelium dies and breaks down, thereby releasing further available nutrients to the grass. This process ultimately shows itself in the typical symptoms of Type 1 fairy rings which are shown diagrammatically below.

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

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

Two approaches have been taken to provide an answer to this question, these being the extraction of the water-repellent material(s) from the affected soil using specific organic solvents, and a more direct approach to remove the water-repellent material from the surface of affected sand particles, by heating them with a laser beam to a temperature whereby they are made volatile and can be subsequently identified using specific analytical techniques.

This research has been completed in the last few weeks and at present the information obtained from these experiments has yet to be fully analysed. We know that the materials responsible for this water-repellency are present in soils which may show no symptoms, but with time build up to levels which result in the expression of symptoms specific to dry patch. Certain chemicals have been initially identified in soils expressing dry patch, these compounds being 'waxy' materials, which may be responsible for the water-repellency. Although at this time it is not possible to identify conclusively the materials present in soils affected by dry patch, it is believed that completion of analysis still in progress will clearly show the nature of the compounds which build up in affected soils. Ultimately this will lead to the solution of this important maintenance problem.

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

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