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How well do you know the people who work for the Association?

In this new series we give you a chance to learn a little more about a member of BIGGA's Headquarters staff



John Pemberton

Position:
Deputy Executive Director
What does your role involve?
Responsible for BIGGA's finances together with administration at Headquarters

How long have you worked for the Association?
10 years

Where were you born and brought up?
York

Where did you work before you joined BIGGA?
Group Accountant for a Danish owned wholesale distributor involved in the building industry

What are your hobbies?
Golf, DIY, Antiques and Furniture Restoration

What is your favourite food?
A nicely cooked steak

What is your favourite film?
I don't have one

What was the last book you read?
Dick Francis

Who is your all time hero?
My wife - for putting up with me for 33 years!

What was the best event you've ever attended?
My own wedding

What is your claim to fame? (None not acceptable)
In the days of the Benson & Hedges Tournament at York one year I helped out driving courtesy cars for the players and officials. Passengers included a much younger Seve Ballesteros but the most courteous was Gary Player who insisted on sitting in the front seat. He was a good conversationalist and we ended up stopping at a small corner shop one evening so that he could buy some carrots. Imagine the reaction of the shopkeeper!

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Message of the Month Winner



Each month the person who has written the best message on the BIGGA Bulletin Board, which is found on the BIGGA website www.bigga.org.uk, receives one of these FM desktop scan radios.

Our congratulations go to May's winner, Kerry Jones from Garnant Park Golf Club who's message was posted on the 25th March under the 'Talking Shop' section.

MAY'S MEMBERSHIP DRAW WINNER

Just introduce one or more new greenkeeping members to BIGGA and your name will be placed into a draw to win a fantastic BIGGA Clock/calculator/calendar and alarm. Our congratulations go to May's winner, Andrew Flemmings, of Filey Golf Club.

Course Feature

Playing your Cards Right

When Robert Hogarth took over at a new development in Peebleshire he had a great deal to content with but with the right attitude he is reaping the rewards



When I arrived at MacDonald Cardrona Golf and Country Club the Course Manager was in the quaint railway station building, acting as the temporary clubhouse until the official opening of the new one, counting money.

This wasn't anything directly concerning his staff wages or the maintenance of the golf course but money which had been taken in for the buggy or cart hire and green fees and Robert Hogarth, calculator in hand, was splitting it into the relevant accounts.

That's the way life has been for Robert since he arrived at the superb resort, just south of Peebles, in October '99. He has turned his hand to just about everything in that time and when Prince Charles opens Cardrona officially next month there will be few people more proud of what has been achieved than him.

Among the tasks Robert has tackled are drawing up the fixture lists; determining the Standard Scratch; naming the holes; sourcing a second hand bridge over the River Tweed... oh and selling space in the pro shop to top clothing and equipment manufacturers. All in a day's work for Robert, who also manages to fit being Scottish Region Education Convenor and GTC Liaison Officer for Lothian and Borders.

On top of that, of course, he had the growing-in of the Dave Thomas designed course from the moment the constructors left the site in November '99.

"Construction had started in May '98, which coincided with an extremely wet time and work was held up dramatically. The first sowing was done in July '99 and I arrived in the October. But, with it too wet to work, the constructors left the site in the November but didn't return the following spring to finish the job. It was the last I saw of them," recalled Robert.

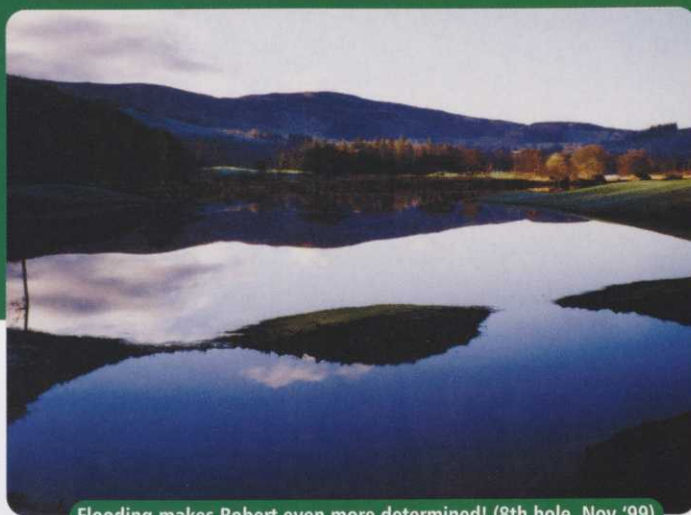
"At that stage it became apparent that I could take one of two attitudes. I could take the view that it wasn't my job, nor my responsibility, and just wait for something to happen. Alternatively I could say 'Right, this is what we've got to work with. It's not the greatest, but let's see what we can do'. Thankfully I chose the latter approach."

And he hasn't regretted the decision. It wasn't the easiest, as he had little or no equipment to work with at the start and no staff, but he set to work about finishing the job that had been started and moving the course forward.

"The whole episode taught me that you can achieve a lot more than you believe you can by having the right attitude and the necessary people skills. There were, and still are, a lot of contractors on the site, building houses and the hotel, using large machinery and by talking to them I was able to get favours done in exchange for games of golf when the course opened. It's what makes the world go round" he explained.

This pragmatic approach was also seen with the designing of the course as well.

"The course was designed and built for £1.5 million out of an overall project cost of £12 million and to meet budget Dave Thomas felt it best not to include every feature he intended for the course right at the beginning.



Flooding makes Robert even more determined! (8th hole, Nov '99)

"What we have achieved for £1.5 million is of a high standard, but what we have actually done is complete the foundations for a superb course with other elements to be added when the budget becomes available.

"For example there are still 40 bunkers to go in and in many cases we have the materials on site and seeded over them for the time being but they will be brought into play in the next couple of years."

The golf course has been designed to fit into the rolling hills and countryside of the local surroundings and uses its main feature, the River Tweed, to great effect.

The river, which is regarded as the best salmon fishing river in the country, also causes some major headaches and, as will be revealed later, to Robert, some leg aches.

"Because we have built a golf course on a flood plain it meant we had to raise all the greens and tees, which are built to USGA guidelines, and create a series of swails and ponds to move the flood water as quickly as possible.

"I was very sceptical at first that it would work but it is superb. There is no point attempting to stop the flooding so we put all the resources into trying to get rid of the water as quickly as possible."

And it needed to be as, three weeks after Robert started, they experienced what was a one in five year flood which drowned the still to be completed fairways under four feet of water.

"I wondered what I was getting myself into but the Tweed is a very fast flowing, clean river, not very silty and leaving very little debris, and we can get the course back into play very quickly. For example last November, the



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View of 16th hole

most common month for a flood, we had a bad one but had nine holes playable in 12 hours and the whole course in 24. Last year we were only closed for a total of 48 hours."

While the river is a superb feature of the area it does mean that the area is designated a SSSI from the river bank to the golf course and the Scottish Environmental Protection Agency (SEPA) and Scottish Natural Heritage are very protective of what goes on.

As with the other areas of his responsibility Robert built up relationships with the people involved, earned their trust, and moved things forward.

"They were under the misconception that we were big fungicide junkies and that we'd spill out thousands of tonnes of chemicals, so I arranged, through Jonathan Smith of the Scottish Golf Course Wildlife Group, to bring a group from Scottish Natural Heritage here to explain what goes on.

"The argument I put over was that if the area was still agricultural farm animals would go to the edge of the river and the banks would slide away. I told them that it was absolutely essential that I maintain the river banks because that is what protects me from the river. I'm going to look after that river bank like no-one has ever looked after it in the past," said Robert, who was also responsible for sourcing a second hand bridge over the Tweed capable of taking all their machinery and a strong gallery, if and when the course is chosen for a professional tournament.

"CEPA then allowed me to take water out through the bank into the river as long as it was monitored by them, the work carried out by a company recommended by CEPA and that the river bank be maintained to its original standard.

"I got a lovely letter back from them afterwards saying that I'd changed their opinions on how it would be," he said.

Cardrona is a unique project and with the 280 houses, built by five different builders to fit varying budgets up to £1 million - a King's ransom in this particular location - and is actually the first new village to be built in the Scottish Borders since the 1700s.

"The whole project was the brainchild of local farmer, Tom Renwick, who had the vision to see that agriculture was about to take a dip in the 80s, and had the idea to build a village together with the golf course. The idea took off when he contacted MacDonald Hotels in the 90s," explained Robert, who takes additional pride in the project as he was born in Peebles and has built a greenkeeping team of predominately local people.

Every visitor to the golf club will have valet parking, their own locker for the day, their clubs taken to the 1st tee and shoes cleaned for them by the butler.

"MacDonald's have 127 hotels but no five stars and although Cardrona will open with four they are going for five very quickly. Cardrona is going to be the flagship of the company."

"It will be an all year round resort with golf between March and October; salmon fishing October and November; December will be Christmas parties; January and February is the Conference season with March the start of golf and the wedding season. We have an events division so we can organise anything including falconry, archery, 4x4 quads biking, tank driving and ballooning," said Robert, who was Head Greenkeeper at Peebles at 19 and who arrived at Cardrona from Cathcart Castle.

"This has been the biggest development in Peebleshire in the last 200 years and so the local team, and it includes many of the others in the hotel as well, have a vested interest in making it a success."



The first sowing was done in July '99



Construction of USGA practice putting green (800m²)

Course Feature

And "making it a success" saw Robert turn himself into a super salesman and selling shop space to blue chip companies.

"Until recently MacDonald Hotels wasn't really a golf orientated company and as I had experience of working in the industry my General Manager asked me to find 17 nominated suppliers and sell shop space to them for a three year period to pay for the high class pro shop fitting we'd had done.

"When someone throws something like this at you you panic but that's what I did. I went through the golf magazines and got the names of companies, then a contact name and called them up. Some turned me down but by the end I'd persuaded companies like Ashworth, Greg Norman, Pringle Burbury Golf, Ping, Maxfli and Taylor Made to come on board and by the end I actually had a waiting list!"

When the club's new Director of Golf arrived from his previous job at Gleneagles he couldn't quite believe what had been done as selling shop space to companies is not even done at Gleneagles!

"It gave me a fantastic amount of satisfaction."

It was that same ability and golfing knowledge which led him to be the man who named the homes, organised the fixture lists and the temporary standard scratch for the course and he dismissed the tasks with the view that they needed to be done.

Robert's approach to maintenance is one of low feeding but he admits to being a realist and that his regime will be dictated by the levels of play.

"On the greens I put on very little feeding and a lot of top dressing and overseeding especially in the early stages which a lot of people might mind strange on USGA greens. I get away with it but I'm a new resort and the hotel hasn't opened yet - although the course has been open since August 2001 - and I haven't had the weight of play yet.

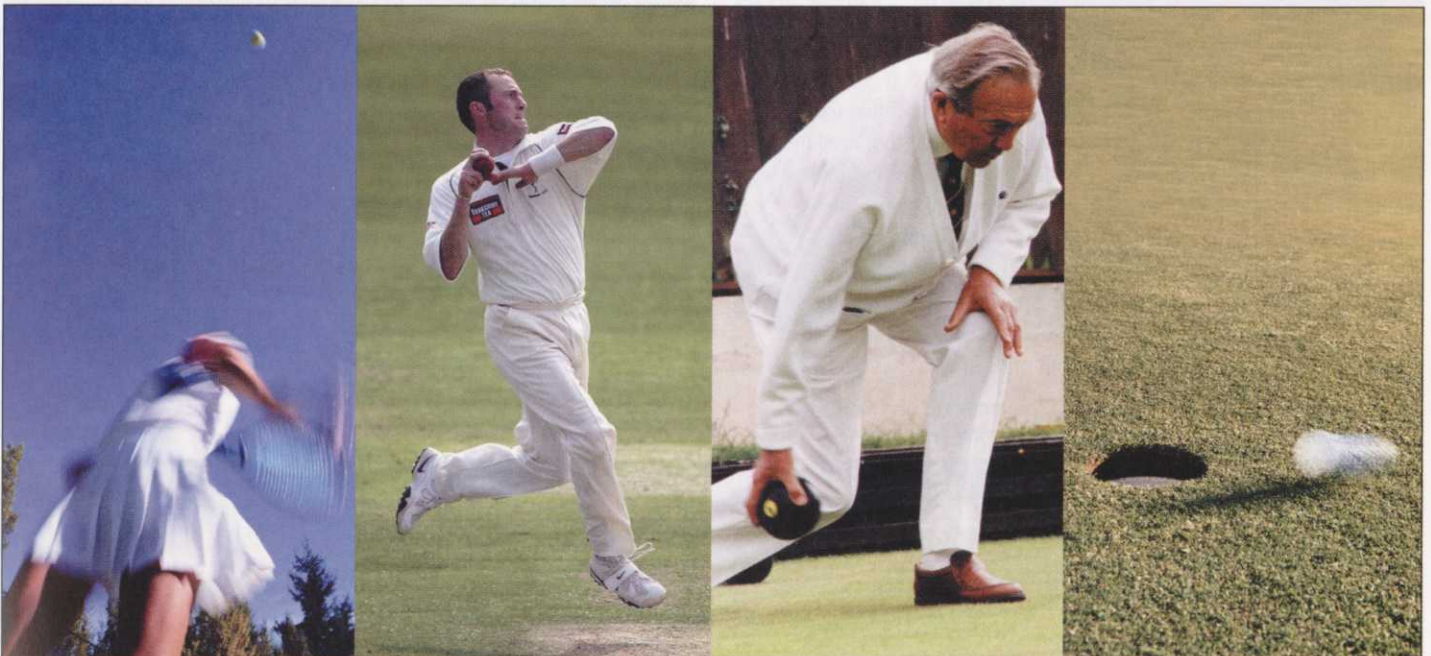
"I have good tight bent fescue swards and I'll do everything in my power to keep them that way but if I have to change the programme to suit customer needs so be it.

"The bottom line is that I'm a realist and I know that if I've got 100 golfers out on a soaking wet course in November my bents and fescues probably won't survive and I'll have to build a programme to suit that need. But that's modern golf. You must meet the requirements of the customer," he said.

"I'm very conscious of the company's role more than my own and it would take a stronger person than me to tell a Chief Executive that we can't take £50,000 worth of business at a weekend because it was going to damage the course.

"I used to see the golf course as my own but since coming here I've found that there are other ways, and there are better ways. I'm not saying that everything I did in the past was wrong, but you can always open up your eyes to something better.

Robert is delighted with the attitude and commitment of his seven man team which he will grow by one more in the summer.



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Bringing quality to play



View of 11th hole from the back of the green

"I've put together a really strong and willing team although there have been casualties along the way, people who have come in and worked very hard but been unable to maintain it. I'm very proud of the guys I have," he said, while revealing that at the beginning of March the team, along with the fire brigade had been out fighting a fire which accounted for 150 tubed trees.

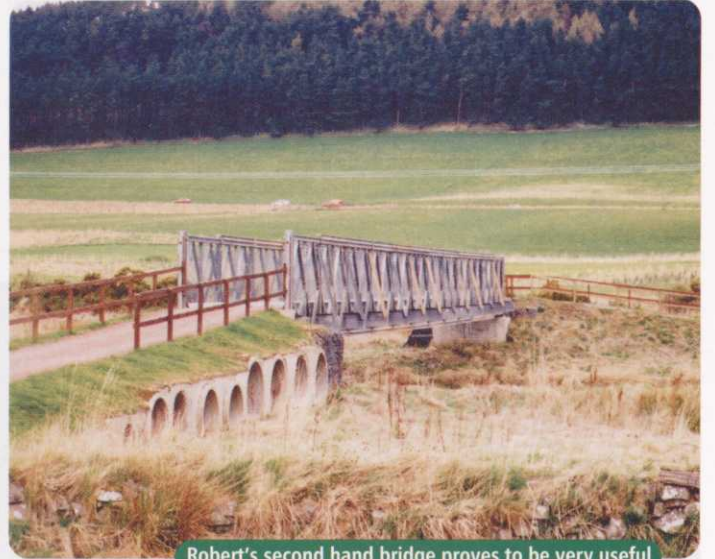
"A grow-in is hard graft and on this site we've got stones eight inches below the surface and when you dig stones they never seem to go away,' while in addition they had carried out an extensive wood clearance programme.

"This is my first grow-in and I swore 18 months in that I'd never do another one but as time goes on the pain dulls and I think I would do it again," said Robert, who is indebted to the support he's received from local dealer, George Henderson, and, in particular, Graham Miller and William Smith.

One pain that has taken some time to dull is the one from his right leg after he broke his ankle falling into the river last year.

"I hopped over the dyke to check the outlet of the no-return valve but got my legs tangled up in the long grass and took a four foot drop into the river onto my right leg shattering my ankle in three places. I've had a metal pin inserted in it and I'm afraid my five-a-side days are over. I was indebted during this time to all my staff for a fantastic job, especially Deputy Course Manager, Colin Noble and First Assistant Donald Campbell."

However when Prince Charles arrives to open MacDonalD Cardrona Golf and Country Club officially next month Robert will hopefully be able to forget even that pain and feel nothing but pride in what has been achieved.



Robert's second hand bridge proves to be very useful



Par 3: 13th hole

Course Feature



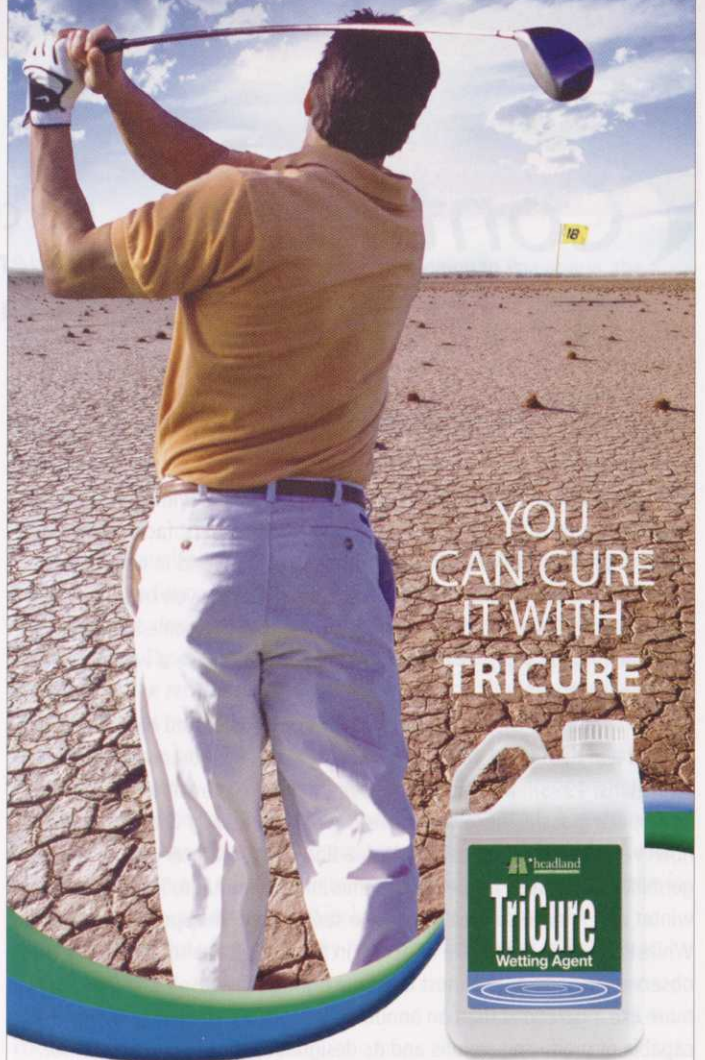
Par 4: 2nd hole with Hosburgh Castle in the background

MACHINERY INVENTORY

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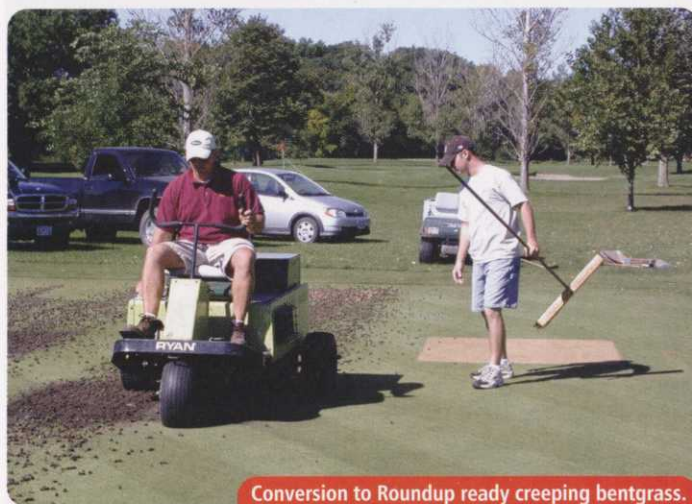
Annual bluegrass (*Poa annua* L.) is one of the most widely distributed weed problems that Course Mangers' and greenkeepers' face. It can be found in greens, tees and fairways throughout the world in both cool-season and warm-season regions. This species has proven over the years to be one of the most difficult weeds to control. While some headway can be made in reducing it, *Poa annua* always seems to have a way of winning the ultimate battle.

Poa annua is a cool-season grass that can be identified by its boat-shaped leaf tip, folded vernation, and prominent membranous ligule (Christians, 1998). Botanic texts generally class it as a winter annual and as a bunch grass. Those who have worked extensively with this species, however, know that this can be misleading. A true winter annual should germinate from seed in the late summer to early autumn, live through the winter as a mature species, produce a seed crop in the spring and then die. While *Poa annua* is capable of acting in this way, it is also commonly observed to germinate almost any time during the season and may act more like a perennial than an annual. There are also many types that are capable of producing stolons and its designation as a bunch type is not always accurate.

There are a number of factors that make this such a difficult species to control selectively in golf-course turf. It is a highly productive seed producer. This gives it huge competitive advantage over grasses like *Agrostis stolonifera*. The seed can live for years in the soil and will germinate when it is exposed by a ball mark or divot. While *Poa annua* is not very competitive with other grass species at higher mowing heights, it is highly competitive at low mowing heights and can even be observed to produce seed at mowing heights as low as 0.254cm (0.1in). This gives it a big advantage over *Poa pratensis* which is poorly adapted to mowing heights below 4cm.

Its greatest competitive advantage, however, comes from its genetic diversity. While this grass is identified as a single species, it is really a compilation of hundreds, if not thousands, of biotypes, each with their own distinct characteristics. There are annual bluegrasses termed *Poa annua* var. *annua* L. Timm.(Beard, 1978) that are bunch grasses that act as true winter annuals. There are also types known as *Poa annua* var. *reptans* (Hauskn) Timm. (Timm, 1965) that act as weak perennials and may have stolons. Between these two extremes are the other biotypes, some closer to the *annua* types and some closer to the *reptans*.

Nick Christians, University Professor, Iowa State University, gives an update on where we are in the battle to rid our courses of the old enemy.



Conversion to Roundup ready creeping bentgrass. The process began with core aerification

On older courses, it is not unusual to find distinct biotypes that are common to fairways, others that are common to greens, and yet others to tees (Lush 1989). It is common to also observe variable biotypes under each of these management regimes (Cline, 2001; Wu, 1991). Variations in colour, texture and time of seedhead production are often observed on the same green. This diversity of biotypes helps explain the variations in response to herbicide treatment that are often reported.

In 1996, I spent several weeks looking back at over 85 years of research on attempts to control annual bluegrass in golf course turf. My findings were later published in a Golf Course Management article titled 'A historical perspective of annual bluegrass control' (Christians, 1996). The history of attempts to control this troublesome grass has been one of temporary excitement about new herbicides or plant growth regulators in early testing stages, followed by disappointment once the material hit the market.

That doesn't mean that all attempts at control have met with failure. Some have provided limited, usually regional, success in selective control. Ethofumesate (Prograss), for instance, has proven to be quite effective at removing *Poa annua* from perennial ryegrass fairways and tees in the Midwestern United States. When used in other species and other locations, however, its use has been less successful.

Fenarimol, marketed as the fungicide Rubigan in the US, has been a very successful postemergence control of the annual types of *Poa annua* along the Gulf Coast in the Southern US, but has been shown to be much less effective on perennial types in the rest of the country. Plant growth regulators such as flurprimidol (Cutless) and paclobutrazol (TGR and Trimmit) have also shown positive results in some situations and some environments and have been less effective in others.

The problem, again, can generally be related to the genetic diversity of the target species. I have conducted research on experimental herbicides that effectively killed *Poa annua* in both *Agrostis stolonifera* and *Poa pratensis* fairways. When the same material was applied to other biotypes, however, 12 times the rate of the herbicide would not even discolour the treated *Poa annua*.

Little has changed in the seven years since the Golf Course Management article. There are new materials such as rimsulfuron (TranXit GTA), that is showing some promise as a control of *Poa annua* in *Cynodon* spp turf in the Southern US (Walker et al. 2003).

Another experimental herbicide, bispyribac-sodium (Velocity), has also met with some success as a selective control in *Agrostis stolonifera* fairways. If these materials follow the history of earlier herbicides, however, they will likely be effective in limited situations and only certain biotypes of *Poa annua*.

I ended the 1996 article with the statement that I did not believe that a single 'magic bullet' herbicide would ever be developed that would be the final answer to the *Poa annua* problem. Nothing in the past seven years has changed my mind. However, there is some new technology on the horizon that may greatly impact the science of weed control. That is the developing science of biotechnology and genetic transformation. The most promising example of this new technology in the turf industry, is the recent development of Roundup ready creeping bentgrasses (*Agrostis stolonifera*).

Roundup (glyphosate) is a nonselective, systemic herbicide that has been used since the late 1970's to control a variety of grasses and broadleaves. It is very effective on all of the major cool-season and warm-season turfgrasses and is often used in the renovation process where all existing vegetation is to be killed before reestablishment.

Scientists have discovered that a gene exists that allows some plants to tolerate the effects of this herbicide. Recent advancements have made it possible for scientists to isolate this gene from an agrobacterium and place it in plants that normally would be susceptible to Roundup. This has been a very successful technology in crops like soybeans and has revolutionised weed control in many agricultural areas in the US.

Scientists at the O.M. Scotts Co. of Marysville, Ohio, in conjunction with scientists from the Monsanto Co. of St. Louis, Missouri have successfully inserted this gene into creeping bentgrass. This Roundup ready bentgrass is still experimental and has not been approved for sale as of spring 2003. When this technology does reach the market, it will provide one of the first truly effective means of removing *Poa annua*, which is susceptible to



Preparation of the area to be converted to Roundup ready creeping bentgrass



Perennial ryegrass fairways area being seeded with Roundup ready bentgrasses

Roundup, from creeping bentgrass turf. In addition to *Poa annua*, the Roundup should also control most other weeds that compete with bentgrass on the golf course.

The technology is not fool proof. It is possible that resistance may develop in weeds over a period of time as Roundup is applied and Roundup ready *Poa annua* could be eventually develop. However, this would take time and if Roundup ready bentgrasses are released for sale, they provide the promise of many years of *Poa annua*-free greens, tees and fairways.

At Iowa State University, work is presently underway to determine the best procedure for converting existing turf to Roundup ready bentgrasses. The research is designed to study the effects of Roundup timing before and after seeding. The objective is to convert to Roundup ready bentgrasses while taking the renovated area out of play for the shortest possible time. The work began in the autumn of 2002 and involves the conversion of existing creeping bentgrass greens and fairways, as well as the conversion of fairways presently consisting of *Poa pratensis* and *Lolium perenne*.

Initial results indicate that conversion to Roundup ready bentgrass can be easily performed by seeding directly into existing turf, combined with Roundup applications to kill the existing turf. This project will continue for at least one more season and will include further work on the management of the areas once they have been converted to Roundup ready bentgrasses.

Footnote:

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ROOTING FOR SUCCESS

TESTING TIMES



Above: A scene witnessed regularly on golf courses everywhere.

Below: Testing begins with a 100mm core from three greens.



36 Greenkeeper International April 2002

We can then use this to identify a top-dressing range that either matches the rootzone or improves it.

The 70:30 myth
People who just mix a sand/soil mix in the



Above: Peter Jefford, a well-known face in the industry.

Below: Particle size is of key importance.



34 Greenkeeper International April 2002

In the first of a two-part article, Peter Jefford and Mick Higgins of Rufford, talk about the benefits of top dressings and the importance of testing in order to establish compatibility with the existing rootzone

TESTING TIMES

A frustratingly unpredictable climate, economic pressures and increasing numbers of players all demanding perfect playing conditions seven days a week, 52 weeks of the year. It's all a far cry from the challenges faced by greenkeepers 30 years ago and leaves today's successors nursing some major headaches. Establishing consistency and quality in such a fast changing industry is the key to creating successful greens - and that is all about testing.

Definition

Before we go any further, let's stop and consider exactly what we mean by the term 'topdressings' and why they play an essential role for greenkeepers today.

A farmer would interpret topdressing to mean the surface application of fertiliser (usually nitrogen) to a grow-

ing crop. However in the turfgrass industry the term topdressing is used almost exclusively to describe the surface application of sand, soil, organic material or any combination of these.

So why are topdressings necessary? We all know that long-term maintenance of high quality fine turf on golf courses is extremely difficult, especially given the factors mentioned in the opening paragraph. Greens only account for a very small percentage of the total surface area of a golf course - but every single player ultimately ends up there, resulting in a frightening rate of concentrated foot traffic.

However, frequent application of an appropriate topdressing will assist a greenkeeper greatly by providing the following benefits:

1. It helps maintain a smooth, true running surface which in turn improves mowing efficiency.
2. In conjunction with scarification, it will avoid thatch build-up.
3. Enables you to control organic matter content, water infiltration and aeration.
4. It's essential in maintaining or increasing rootzone depth.
5. Improves germination on overseeded areas.
6. Improves or sustains appropriate soil texture.

But you must remember that topdressings add to and become part of the rootzone. Over a period of years topdressings will either alter or sustain the physical (and to some extent biological) properties of rootzones. That's why it's essential to test and establish a green's existing profile before you can select and apply an appropriate topdressing.

Compatibility

You can't take a 'one-size-fits-all' approach when it comes to applying topdressings. Because they eventually become part of the rootzone they

logically need to have similar composition and properties. For the majority of golf greens this means a particle size composition dominant in medium sand. But this is only a general guide - it's still essential to use a topdressing that's compatible with your existing rootzone. If you don't then you could be in trouble.

There's no way that a topdressing supplier can claim that they have a good product for you without first of all testing your greens. That's because there's no such thing as a universally 'good' topdressing - what might be right for one course could be completely wrong for another because applying a mismatched topdressing can cause major layering problems to the rootzone profile. A major risk is the creation of layers of different pore size systems within shallow depths of the rootzone. If this happens then water retention and air/water balance will be affected and also rooting depth. The frightening fact is that this problem won't become apparent for several years, by which time it may be impossible to rectify through cultivation techniques.

Guesswork

It's so frustrating when people cut corners through either cost constraints or lack of awareness, because they end up undoing the years of work that have gone before them to create a great green. It doesn't have to be guesswork when it comes to determining the compatibility of a topdressing and a rootzone - it's not a blind date! The only answer is to test. And that's what we've built the Rufford business on.

To illustrate this in practical terms we'll take a specific example of one of our customers. By testing we were able to establish that their greens contained a lot of fine material with around 40% or more in particles smaller than 250 µm.

Part one: Featured in the April 2002 issue of Greenkeeper International

The importance of a rootzone is a subject often overlooked and frequently misunderstood. We're not sure whether this is because it is out of sight or whether its importance has not historically been communicated properly. Whatever the reason, it's a fact that the rootzone is really the starting point in the long-term success of any green. Get it wrong and you'll have an uphill struggle on your hands from the beginning. So let's start with a brief refresher.