



Furthermore it is a fairly native species with it being discovered 100km from the site on Mr Chewing's farm, fescue works really well on the course, providing a natural look. However, in New Zealand the warmer temperatures are a major consideration. Extra caution has to be taken with machinery as it can bruise the fescue easily from the heat and it is then slow to recover. This is not often an aspect that British greenkeepers have to worry about.

There are two other courses in New Zealand also using fescue on their fairways and roughs, the newish Jack Nicklaus course, Kinloch, in Taupo, and the new course in Christchurch Pegasus, The Pegasus people were so impressed when they visited Jack's before the sow-out of their course that they actually used the same turf types as Jack's Point (that's got to be the highest form of praise)

Management mentioned that they have found that the fescue goes into dormancy before the bents but they recover far quicker coming out of winter, also they love

the idea of less irrigation requirements and lower fertility.

Real resourcefulness had to be demonstrated in continuing the rustic and natural characteristic. This was achieved by recycling driftwood from the bottom of the lake. Driftwood is used as a fence along the back drop of the classic par-3 7th hole, reminiscent of the drop hole 7th at Pebble Beach and around the course native wood is a visual feature and is used to make rakes, bins, fences, benches etc.

Their goal is to have everything on the golf course made from totally natural materials but as the Superintendent says that's pretty hard to do when your only choice is metal or plastic putting cups and nylon flags although he did mention he would love wooden flag poles if he could get them.

The irrigation on the course is sourced from the beautiful Lake Wakaputi and the water drawn is pumped into a man-made lake. This man-made lake feeds an irrigation pond which (unlike a huge tank) blends into the course unnoticed.



I really enjoyed working at Jack's Point under Superintendent, Simon Forshaw. They may be some of our distant cousins, but do have a laid back attitude

Every consideration has been made with the design even the Maintenance Depot building is hidden from site with high mounding all around it, you can't see it hardly from anywhere when playing the course (a very nice touch).

My favourite aspect of the course was the bunkers. Although they looked very rustic and natural a

ABOVE: Superintendent, Simon Forshaw (right) with 1963 Open Champion, New Zealander, Bob Charles (left)



lot of maintenance hours had to be spent on them. The greenside bunkers and the fronts of the fairway bunkers which lead into the bunkers from the tees were all kept looking good by cutting them the same height as the fairways and the rest of them done by using fly mows. However, the rest of the bunkers were left to grow as wild sweeping fescue. They looked amazing!

Like the rest of the world New Zealand is also experiencing economical strains, with budgets constantly being reviewed. Jack's Point has around 15 members of staff during the summer season and then they cut down to a skeleton staff during the winter months, numbering around seven members of staff, which sees them taking most of their annual holidays

as the course can be covered in snow or has perma frost.

The larger Courses in New Zealand and in the South Island because of the seasonal changes have a lot of opportunities for seasonal workers to make up their team size during the growing season when more man-hours are required and this gives a great chance to experience another way of seeing how golf courses are maintained to the highest level down under.

New Zealand has some different opportunities to get Qualified in Turf Management

We are lucky in the UK that there is considerable help to finance greenkeeper education.

In New Zealand there are some different ways that you can get qualified such as:

- You can do an Apprenticeship through the New Zealand Sports



THIS PAGE: Luxurious scenery of Jack's Point Golf Club

INSET BOTTOM LEFT: 17th fairway bunkers looking towards 18th green

INSET SECOND BOTTOM LEFT: 18th green under development



Turf Institute along with your golf club/sporting club (Three years)

- A course through the Otago Polytechnic (Two years)
- At Universities
- Online Through Universities in North America
- After the standard Level 4 Apprenticeship you can do Level 6 and 7 through University which is something like our Masters programme

Like all courses Jack's Point is improving all the time. Although to me it is an amazing course - improvements have already been outlined for the future. This will include more drainage in key areas, how best to protect fine fescue getting damaged by the use of golfers on golf carts, how to maintain your growing turf as long as possible, best way to treat high traffic areas.

There are also plans to extend some par-3 tees. It is a work in

progress which is developing for the better all the time as like with everything the golf course is a living breathing identity changing and evolving all the time.

Nothing is perfect in the beginning and it is good that problem areas are highlighted so that improvements can be made, but the best thing apart from the people at Jack's Point is the experience you get when you are there.

It's like playing golf with all the views you get watching a Lord of the Rings movie. The only difference is that from time to time you might catch the view of deer running across the fairways as you are working.

Jack's Point is still very up and coming, already rated number one golf course in the South Island and ranked number five overall. I'm sure we will see great things from it in the future!

Jack's Point is still very up and coming, already rated number one golf course in the South Island and ranked number five overall. I'm sure we will see great things from it in the future



RIGHT: Abi Crosswood

Back in time to this month in... 1989

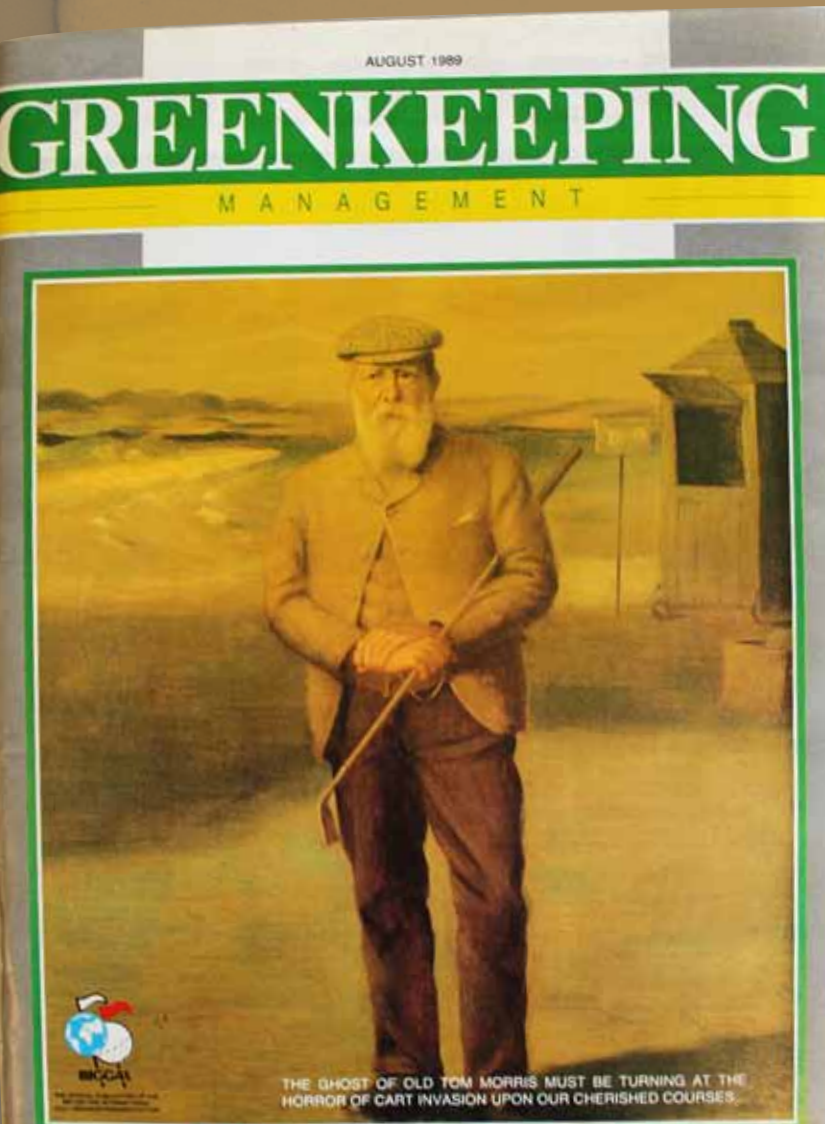
Do you have any old artifacts from days gone-by?

Perhaps your grandad was a greenkeeper and has something stored away in the loft? Maybe an Association tie, or a journal? If so we would love to hear from you. We are particularly interested in the early part of the last century but anything you have would be worth considering for future editions of this article.

Please contact us on 01347 833800 or email Elliott Small, BIGGA Past Chairman,

elliott.edna@hotmail.co.uk

Back in time is a new feature looking back at cuttings of greenkeeping news from days gone-by. 2012 will be a landmark year, as it will be the centenary of Greenkeeping Associations, as well as 25 years since BIGGA was formed. Each month we will look back at the current month, but in a different year, from over the last hundred. This month we travel back to August 1989 when ironically the magazine was looking back itself with the grandfather of all greenkeepers Old Tom Morris on the cover...



Europe's most widely circulated Greenkeeping magazine

Viscount Whitelaw, BIGGA's first President is pictured (right) and the "Flannel Panel" lists who were involved in BIGGA at that particular time

"ANOTHER DEAD MOLE" The story was about an albino mole which was one of four trapped by the Fraserburgh Head Greenkeeper, one Gordon Moir, now Director of Greenkeeping at St Andrews.

The Poseur's Pose! Piece is actually a preview for BIGGA's National Championship, which was due to be played at Lyme Regis GC over three days in August. Coincidentally, Greenkeeper International is previewing this year's National Championship, sponsored by Charterhouse and Kubota, at West Lanes GC.

GREENKEEPING

The Official Publication of The British and International Golf Clubs



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Tel: 091 496 0003 Fax: 091 496 0004
Typesetting: Metrosat, Newcastle.
Printing: CWS Ltd, Gateshead.

Greenkeeping Management is published monthly by the British & International Golf Clubs Association, at Spicers House, Market Lane, Newcastle, Tyne & Wear NE1 3JG. Tel: 091 496 0003. Editorial enquiries should be sent to the Editor at the above address. Advertising enquiries should be sent to the Advertising Manager at the above address. Manuscripts, photographs and advertising should be sent to the Editor at the above address. Manuscripts, photographs and advertising should be sent to the Editor at the above address. Manuscripts, photographs and advertising should be sent to the Editor at the above address.

GREENKEEPING

The National Association of Public Golf Courses threatened

The National Association of Public Golf Courses, for six by one years the accepted and recognised administration body for the public course club golfer, are indignant at the recent news - out of the blue - that the E.G.U. are to discuss a privately published paper. The English Golf Union and the Non-Status Golfer without consultation with NAPGC, even though their Association represents over 100 of the present public course clubs and over 80,000 public course players' insulted and ignorant as they are over the seeming insensitivity of the E.G.U. on such an important issue, they made the point to Greenkeeping Management that to make attempts to support and recognise the non-status golfer without involving the ONLY organisation with real experience in this moment to their being discussed. Some of the questions posed in the paper, with NAPGC comments, are given here:

1. The Non-status golfer (NSG) wants some official recognition of his golfing ability. **Answer** - Let him join the club at the public course he plays upon.
2. The NSG wants to become a better player and enter the 'real' world of golf by competitive and social play. **Answer** - By joining a public course club he gets his 'passport' through a handicap certificate.
3. The NSG wants ultimately to join a club of society. **Answer** - Public course clubs would welcome him into their ranks.
4. The NSG wants to improve his knowledge of rules and etiquette. **Answer** - The first priority of NAPGC is to teach new players the rules and etiquette of golf with committee members of the Association always on hand to guide and counsel.
5. The NSG wants an opportunity to play in an organised competitive arena. **Answer** - NAPGC organises numerous competitive events at both local and national level.
6. The NSG wants a passport to extend his play beyond the municipal course.

Poseur's Pose!

Flying Divots



ANOTHER DEAD MOLE

A RARE ALBINO MOLE TRAPPED BY G. MOIR.
Greenkeeping enemy number one, the mole, is seen here in a different guise. One of four of the same little varmints trapped by Fraserburgh Golf Club head greenkeeper, Gordon Moir, all within a matter of weeks. All pure white when trapped, Gordon makes the point that this specimen had turned a little yellow by the time he had photographed it, being well dead and, surely, having been in the trap for a few days. Gordon says of this rarity, 'I am sure many greenkeepers have never seen a white mole before'. Our feelings are that these obnoxious creatures, albino or regular, male or female, big or small, whatever their lineage, are better dead than alive.

Rosemount record shattered



LEFT: Another coincidence! August '89 previews the very first Toro Student of the Year competition, which was to be won by Mark Proctor. This month Greenkeeper International contains the preview for the 2011 competition.

RIGHT: Range of adverts which appeared in the issue



BELOW: A snapshot of an article written by one of greenkeeping's greatest supporters, architect, Fred Hawtree. Again this piece was looking back into golfing history.

Greenkeepers Association

"They donned the felt Homburg hat of commerce"

They too put up a team of five, captained by Harry Colt, R & A. Rules Committee, Cambridge Captain, Lawyer, Sunningdale Secretary, and finally No. 1 course architect of the amateurs. He scored 20 layouts in his first eight years, finally leaving Sunningdale in 1913 to go solo. His associates Dr. Alister MacKenzie, the Leeds medical practitioner, and Hugh Alison, Secretary of Stoke Poges followed his lead.

J.F. Abercromby was not a profile designer, but was highly respected. His new course at Addington was a gem, stolen now by housing needs, though the Old Course is fortunately still there. He checked out the opposition by working with Park earlier at Coombe Hill.

Herbert Fowler, who had designed Walton Heath, co-operated with Abercromby at Cowdray Park and West Kent (now moved to Downe). All three were involved in the early days of Worpleton. Fowler started playing golf at the late age of 35 and planned Walton Heath because of a family connection. He then completed five British courses and one in Los Angeles before the 1914 war.

On quantity, The Caps halved one game and won the rest, even giving a stroke a hole. But if we assess quality in the results, I should say it was honourably halved.

The flood of new courses did not

Caps well to the fore at Sundridge Park, circa 1913



Aspects of Design

stop completely between 1914 and 1918; it slowed to a trickle. Only MacKenzie and Alison were young enough to join the Army. But in 1920, both sides returned to the offensive. The amateurs struck first. Colt & Alison produced one book, 'Some Essays on Golf Course Architecture', and Alister MacKenzie produced another. He included in his book a list of the 13 features essential in an ideal golf course, this catching the readers' imagination, as simple summings-up often do, despite what they leave out. Historians have mistakenly quoted from this book ever since, but I can now reveal for the first time that MacKenzie first outlined his

13 points not in book form, but when lecturing to the Northern Section of the Golf Greenkeepers Association, **Greenkeepers First - The World Second!** He obviously got his priorities right.

In case you have forgotten what he said up there, we shall start in the next issue where we leave off - with those 13 points, and a few extra for good measure. Incidentally, his book, 'Golf Architecture', costs about £350 now, so you might as well wait and get his points for nothing.

FRED HAWTREE.

A Homburg behatted forebear of The Author.



In search of the perfect bunker sand

George Shiels offers some valuable advice on how to ensure you have the best sand for your bunkers

Bunkers and bunker sands have, yet again, been a topic of much conversation. Golfers seek the perfect bunker, one that is consistent, regardless of the weather. Where sand depth never varies and the ball never disappears from view, and every bunker on the course has to be identical in every respect. Whatever happened to a sand bunker being a hazard?

What is it that makes a bunker acceptable or unacceptable? Opinions seem to differ just as much as golfers' handicaps but, surely, bunkers must have some features in common that makes them more or less acceptable to the average golfer.

Bunker designs vary according to the whims or desires of the architect or designer and, of course, they vary along with the character of the golf course. But, surely, the sand is more or less the same in them all,

so what is the problem with making bunkers work everywhere?

Well, sand may well be sand, but opinions vary about what does or does not constitute a good sand once it is placed in a bunker and, even when tests suggest it should be good, the golfer may not like it, perhaps because the way it plays or, maybe, simply because the appearance isn't quite right.

There are some factors that we can't do anything about. One such factor is the handicap of the individual golfer and how he or she likes the sand to play. We often find that low handicap golfers prefer firm sand which is quite shallow, while a higher handicap golfer may well prefer softer and deeper sand.

Unfortunately, they play the same course, end up in the same bunker, and come out with a totally different assessment of the bunker's quality. Selecting bunker sand that will please every golfer and greenkeeper is, perhaps, as





It is the role of the specialist testing laboratory to look at the various characteristics of the sands being considered, and then to identify those that might be suitable, and which, if any, might be preferred

close to impossible as we are ever likely to get. But, in the testing laboratory, we can, at least, go part of way to selecting sands that might be acceptable to golfers.

Putting a technical spin on sand selection is only the start. Having found sands that technically appear suitable, we must then subject them to field testing, on the golf course, to establish whether they are, indeed, suitable for use, bearing in mind the design and location of the bunkers and the expectations or preferences of the golfers themselves. We have to start somewhere, and subjecting sands to technical assessment will, at least, shorten the list by rejecting some that will never be suitable. Historically, some golf clubs have always purchased local sand, because it was cheaper than others from further away. It might or might not be good for the purpose but, in these days of budget constraints, it might be used out of necessity. A few tests can help the selection process for sands, and may help to avoid buying in problems in the form of sand that will never be suitable.

Unfortunately, sands are not all the same, they vary in several ways - in composition, size, shape and colour. And, because they vary in these ways, we also find that they vary in drainage rate as well as how they pack down, and, in particular, how they play and adhere to the

bunker faces, remembering that some faces are 30cm high and others are close to 3m high.

It is the role of the specialist testing laboratory to look at the various characteristics of the sands being considered, and then to identify those that might be suitable, and which, if any, might be preferred.

Step One

The first step after identifying sand suppliers is to get samples to the testing laboratory. Send about 5kg, and ask them to run the samples through a series of tests for potential bunker sands.

A - Colour

An obvious and easy test to undertake is by matching the sands with colour charts. Some clubs prefer white sand, because they value the contrast of white and green.

It may well look very attractive at the outset, but it can soon become dirty and require replacing so often that it becomes a budgetary nightmare.

Some players love the appearance; others hate the glare that white sand creates on a sunny day, even though sunny days happen only rarely.

Occasionally, an owner or a committee ask for a sand that fits the local geology and soil, they want one that blends in and plays well. How enlightened they are.

B - Particle Size

Having received the samples, the first test is to determine the grading or makeup of the sand, by running the samples through a nest of sieves. The procedure for this test will give very accurate results, but it doesn't test the entire supply, and sand grading might change slightly with time. If you can, get hold of some older test results and check for any obvious changes.

We look for sands where 95% of the particles lie between 0.15 and 1.0mm diameter, but also where the bulk of the particles lie between, say, 0.25mm and 0.50mm to ensure that the sand splash from greenside bunkers don't cause deterioration of the putting surface.

Coarser sands may result in surface abrasion, whilst finer sands may well cause perching or increased surface wetness on greens built with a USGA rootzone. Even though this sand grading is the one we'd all opt for, it is no guarantee of consistent playing characteristics. However, sands of this grade are more likely to be good bunker sands than others which lie outside the range. How the sand plays will still depend on maintenance and, of course, moisture content. The sand that drains well and plays well throughout the winter may be deemed too soft and unacceptable in a dry summer.

Ideally, a minimum of 75% of the sand should lie within the 0.25 to 0.5mm range but, where the spread of particles is too narrow, you may find the sand is too soft. A percentage of larger particles, and some finer particles, can improve stability of the sand and reduce the risk of balls burying too deeply; but too much and you may find the sand being lost to the first stiff breeze.

The laboratory will include a measure of uniformity for the sand (CU) and this will give a good indication of the spread of different particle sizes.

C - Purity

A good bunker sand is clean. If it contains silt or clay, it will tend to crust and will be at risk of draining slowly. The test for particle size will include silt and clay levels as a norm.

D - Shape

When we select materials for drainage, a round particle is often preferred, because the material flows more easily into the trench. In a bunker, a round sand particle will do much the same - it will move easily and, so, each time it rains,

the sand will wash away from steep slopes. Angular sand is, therefore preferred. You will also find that an angular material will pack down more firmly and will resist balls burying into it. There are degrees of packing down of course, so be careful. Going for something which is too angular may leave you with a bunker that bears more resemblance to the M4 than a sand trap.

E - Composition

Most sands contain quartz or silica. A hard, quartz sand is preferred in bunkers because it retains its shape and resists weathering. Sands that weather, or break down too easily, may well become compact and seal, requiring more attention from the maintenance team. Some sands come with a large amount of limestone attached to the sand grains, and the laboratory will pick this up when they test the pH.

If the pH appears high, the laboratory will usually undertake a simple "fizz test" to determine how much limestone is present. If there is too much, the sand grains will weather and become smaller in time, so the drainage rate and playing characteristics will also change.

If you use a high pH sand, bear in mind that splashing this onto your greens may well affect soil pH and perhaps increase disease incidence.

F - Angle of Repose

I love this test, because it involves mathematics, and it informs us about the maximum angle of bunker face that we can construct and still keep the sand in place. Generally, we'd look for sand with an angle of repose of say 35 degrees or more.

Some designers build near vertical faces in their bunkers and, when we are faced with using sand that can stay in place on a face no steeper than 40-45 degrees, it's no wonder that bunkers become sources of discontent within the golf club.

This test isn't done on all sands and some laboratories don't offer it, but ETL finds that the angles vary with particle shape and distribution, and it is a piece of the jigsaw that that may help predict sand behaviour on flashed bunker faces, the probability of fried egg lies.

G - Drainage Rate

Not everyone asks for this test because, once they have seen the particle make up of the sand, they can often tell whether or not the sand will drain well. It is a piece of



If you leave old sand in place, and cover it with a new material, the old sand will eventually come through, unless you ban golfers from using rakes

the jigsaw, and adds information about how the sand will perform initially, though, of course, with time and contamination, drainage rate will decline.

Having a sand that drains freely often has to be balanced against the sand being too soft in dry weather and, although the laboratory can put numbers on the performance of the sand, the final decision rests with the club to decide whether or not the balance between drainage rate and firmness of the sand is the right one.

H - Penetrometer Reading

A simple penetrometer test is the best measure of sand firmness that we have at the moment; it's not perfect but, added to the other information, it helps to predict performance.

Step Two

Having tested the sands and found some that might be suitable, test them insitu and let the golfers report back on how well or badly they play. Before you put the new sand into a bunker, make sure the old sand has been removed, otherwise you don't get the playing characteristics of either sand, just

an unpredictable mish-mash of what might be two very different materials.

If you leave old sand in place, and cover it with a new material, the old sand will eventually come through, unless you ban golfers from using rakes.

Given a bit of help from nature and the powers that be, you may get good feedback from the golfers and can then proceed with a sand replacement programme.

Hopefully, the new sand fits the bill, until it becomes contaminated or the sand supply runs out, and then you may have to start again.

Using a laboratory can take away some of the guesswork from sand selection, but always bear in mind that bunker design, climate and golfers vary enormously. You may never reach the Holy Grail of golf, i.e. the perfect bunker sand for all seasons and all courses but, if you do find this, you're well on your way to making your fortune.

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Scott MacCallum discovers what is behind the recent success of BIGGA Gold Key Supporter, Syngenta.

Syngenta may be a young company – having been formed in 2000 and not breaking into the UK golf market until 2005 – but in those six years many Course Managers have come to rely heavily on the products that it has developed and services that it provides.

With Primo Maxx, Rescue, Banner Maxx., Instrata and Medalion TL among the big hitters in its portfolio along with the industry standard Heritage Maxx, and back up services like the GreenCast website, innovative nozzle application technology and environmental initiatives, the days before their existence already seem like a distant memory to many grateful turf professionals.

But behind the company is a long history and pedigree with its roots in ICI, Zeneca and Novartis.

“We have always seen ourselves as solution providers, rather than just selling a product. We work hard to produce good products, provide the after sales care and build relationships with our customers,” explained Syngenta’s Rod Burke, as we talked at Marriott Hanbury Manor Hotel and Country Club, along with one of those customers, Course Manager, Andrew Howarth.

“That’s the Syngenta way, and how the company operates in all of its markets. We are never in a situation where we just put a product out and walk away. It doesn’t work like that, and it also helps us because we get feedback from the customer about where we need to go and the new products we need to research,” explained Rod.

Much of that turf research work is carried out at Stein, in Switzerland, a vast complex containing laboratories, greenhouses and climate chambers. It even has breeding stations for pests and diseases, to replicate golf course problems



“We have always seen ourselves as solution providers, rather than just selling a product. We work hard to produce good products, provide the after sales care and build relationships with our customers”

Rod Burke, Syngenta

in test conditions. No stone is left unturned in the unwavering ambition to produce new products.

In the UK, the company also has a base at Jealott’s Hill, near Reading, where testing of new active ingredients is carried out in mind boggling numbers, aimed at uncovering those which should be put forward for further development work as potential new products.

It all goes to explain the huge investment required to create a new product— estimates place it at anything up to £200 million to develop a new active ingredient and bring it to the market.. “That includes meeting all the various and demanding regulatory requirements which are set by individual countries or

regions. Product development can take a decade or more from the first discovery through to market. Once the development work has been completed it still takes around two years to go through the regulation process in the UK and in other countries like Spain, up to a further five years. It is a huge amount of work,” explained Rod.

But that effort is appreciated by people like Andrew, at Hanbury Manor, who has used Syngenta products almost as long as they have been available in the UK, and who provided one of the trial sites for the recently-launched Medalion TL, a contact+ fungicide, which offers protection from fusarium.

Such was his confidence in the

