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Keith McKee, of Scotts, gives some advice on the use of pesticides on golf courses.

# Spray Jaway



When thinking about using a pesticide the very first questions, as required under the COSH regulations and out of pure common sense, are "What is the problem?" and, "Do I need to use a pesticide to control it?" or, "Is there some other method?"

Identification of the pest or disease is crucial. Are you sure that you have made the correct identification?

One golf club was regularly treating to control Fusarium but achieving little or no control. Eventually the Head Greenkeeper asked a consultant for a second opinion.

A number of diseases can look very similar at certain stages of development but given the time of year and the weather conditions the Consultant thought it was not Fusarium and requested samples be sent to the laboratory for testing. At the laboratory Pythium was identified as being the problem. The cost of sending samples to the laboratory is very small indeed compared with, in this case, two years worth of the incorrect pesticide in an attempt to control the disease not to mention the waste of time and the frustration.

Just a few words in passing about Pythium which is a slowly increasing problem in the UK. Pythium foliar blight occurs mainly in hot humid weather conditions and can devastate large areas of bent grass within hours. It is also capable of infecting creeping bent grass under cool weather conditions. Pythium is a too large a subject to be covered in this article but a little news could be of help to those who suffer with the problem of Pythium on their courses. Until September 1998 there was no pesticide in the UK which had approval for use on turf. Thanks to the efforts of Mark Haver, Head Greenkeeper at Chelsfield Lakes Golf Club, who applied for and obtained OFF -LABEL Approval for the use of Aliette (80% Fosetyl Aluminium) MAFF No. 05648 there is now a control available to Greenkeepers in the UK. Details of time and amounts of application are stated on the approval and must be con-formed with. Product literature from the USA gives a warning about compatibility - it states that Aliette should not be mixed with any sticker, extender or wetting agent and makes special mention



# Spray



that Aliette is not physically compatible with Daconil when used as a tank mix.

Of course the other question to be asked after the problem has been identified and a decision made as to the best method of treatment is "why have I got the problem" and "what could I have done to prevent it other than applying a pesticide?"

So often the reason is down to the weather being too hot, too dry, too wet, too much fertiliser, too little fertiliser or even the incorrect fertiliser, but these problems are more easily corrected next time around.

With golf courses taking more and more play the quality of construction and maintenance becomes even more important.

At one golf course which is about six years old and built by the local farmer where the greens are constructed from local soil, which has a clay content of 37% (more than satisfactory for a county cricket square) and therefore become water logged very easily. The greens have a Poa Annua content of approximately 40% and have been scarified and aerated approximately three times in the past year! The local water is high in pH. Most will already have guessed which prob-

lem is starting to show - yes - Take All Patch. Soon the pesticides will come out to try to control the Take All Patch which should not be there in the first place

Pesticides are good and at times work under some very difficult conditions but they can not work miracles. So when the greens at this particular course are taken out of play because the disease problem has developed, do not blame the pesticide for not working as the problem could have been avoided. Two sayings come to mind:

a) "As you sow so shall you reap" in other words good construction and good maintenance will produce a good result and lessen the need for pesticides.

b) "Time spent in reconnaissance is rarely wasted." An old Army saying but very true of greenkeeping. Walk the course daily to see what is going on. Your eyes are in the soles of your feet not under the tyres of a powerful machine.

a powerful machine.
You will see the start of problems and be able to react quickly to the situation. It is amazing how many sprinkler heads are seen not working which have remained unnoticed by the greenkeeping staff.

Sprinkler heads not working in

hot weather puts the grass under great stress and therefore more vulnerable to attacks of disease.

Fortunately in recent years when it comes to actually applying a pesticide things have changed for the better. Things continue to change for not only are most greenkeepers fully qualified but application methods have also improved.

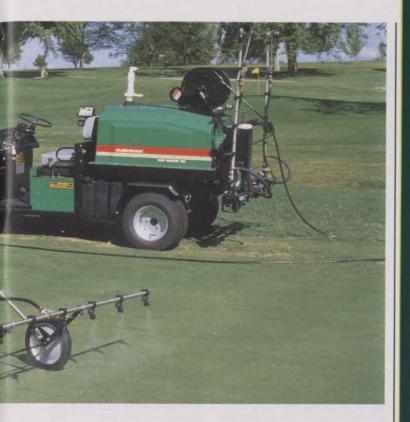
Pesticides and herbicides have developed and are designed to work at specific application rates and under particular conditions. No longer is it acceptable to apply pesticides by a "seat of the pants" type operation as in the past when the operator mixed a small amount of chemical into a large amount of water and tried to apply it uniformly to the turf. It was skill and experience of the who could position the boo

who could position the boo correct height, maintain the correct pressure and flow through the nozzles. At the same time keeping tractor speed constant when going up or down hill

The entire operation was on the shoulders of one man - the operator. If he had a bad day with the brain not working well then a disaster was never far away. Pictures A+B show the result of using an







old sprayer without an agitator where the mixture had been allowed to stand over a lunch period. The pesticide had settled to the bottom of the tank so that when the sprayer was turned on neat pesticide was delivered on to the turf.

Picture A is at the start of spraying and picture B is taken from the other end of the field as the water is starting to work its way through.

Today things are a little different, for with the use of computers the gauges have been turned into electronic sprayer control systems. In these situations a microprocessor rather than an operator opens and closes valves to control the single of mixed chemical in to changes in ground to changes in ground will advance a lot further yet. Root zone injection is already available for the application of pesticides to control some pests and diseases.

On show at SALTEX this year was

On show at SALTEX this year was a spray machine which, admittedly, is currently for use on pavements and total weedkill areas, this employs optic sensors to spot treat weed growth by using computerised technology. How long before a similar system is available for use on turf? May be there already is such a system and possibly you already know about it.

arready know about it.

The aim must be to reduce the amount of pesticide used as much as possible but make what Pesticide is used perform as efficiently as

possible.

We can not reasonably expect pesticides to work well for us if we are not using the correct pesticide to control a specific target nor if they are being applied incorrectly.

Question. Do we need pesticides? Answer. Yes most definitely for they are a major part of the greenkeepers armoury but this could well change when biological and other control methods are developed further.

Question. How can we minimise the use of pesticides?

Answer. 1. Daily inspection of the turf so that disease can be treated early and not allowed to develop.

2. Keep the turf healthy and

strong.

3. Regular aeration to assist surface drainage and develop stronger root systems.

4. Regular scarification/verti cutting to remove the dead and unwanted grasses and allow the movement of air through the grass plants

5. Do not maintain low mowing heights for prolonged periods - it puts grass plant under great stress.

6. Try to avoid heavy traffic on the greens and have as large a green as possible (only possible at time of construction or reconstruction)

7. Avoid compacted soil, so often caused by over play in wet conditions.

8. Avoid over irrigation, which could cause saturated greens.

 Improve poor surface and sub surface drainage often caused by poor construction or lack of aeration.

Question. How can we get the best out of our pesticides?

**Answer**. 1. By accurate identification of the problem.

By use of the correct pesticide.
 By using the correct application rate.

The powers that be throughout Europe are looking very closely at the use of Pesticides. We must use pesticides safely and wisely or their use could well be banned.





#### Golden Key Mini Profile

# **Rigby Taylor**



Rigby Tayloe House, Garside Street, Bolton, Lancs BL1 4AE

Tel: 01204 394888 Fax: 01204 398379

\* What is the nature of your business? Established in 1919 (80th anniversary in 1999) Rigby Taylor has since the 1930's been a producer and supplier of turf management products to the sports and amenity sectors. We are a direct sell organisation operating throughout the UK and parts of Europe. Initially specialising in fertilizers our Mascot range now covers all the major turf requirements including chemicals for weed and disease control and specialties like wet-ting agents, iron tonics and microbial stimulants. We supply grass seeds and growing medium/top dressing and we also supply line-marking materials and sporting equipment for golf courses and sports fields ge erally. We also specialise in weed control for hard surfaces and amenity areas to councils

#### \* What major changes have you seen in your sector of the industry over the last 10 years?

In our view the key change in our sector has been the growth of technically advanced products reflecting greater research into soil and turf science. This has been largely driven by the commercial opportunities offered by the growth sports generally. Secondly would be the increased regulatory requirements.

#### \* How do you believe the industry as a whole has changed over the same

period?
The turf management industry is now seen as more of a cohesive trade rather than a collection of separate niches. It has become much more high profile with the general public driven largely in our view by the impact of television which has increasingly promoted sports such as golf and football. This has created major commercial impetus into bringing a far more scientific base to soil and turf management.

#### \* Looking into your crystal ball what major developments do you envisage during the next 10 years in your sector?

We envisage increasing research into products, particularly chemicals. For instance turf is no longer regarded as a "Cinderella" industry by the major chemical companies who would previously have considered pos-sible applications for existing agricultural products on turf. Nowadays they are building turf into initial screening activities dur-ing the development phase. We certainly envisage an increasing amount of regulation and probably fewer companies supplying because of the difficulty of complying with an increasing regulatory load.
We also envisage that the relationship

between distributors and their customers will become more and more advisory based. We intend as a Company to remain at the forefront of developments in our sector. Over the last eighty years we have seen many changes and this year (1999) sees us adopt a new logo designed to portray our view of ourselves as forward thinking and modern but with a strong tradition.

\* And in the industry as a whole? We imagine that TV will continue to exert a major influence on the development of sport as entertainment, leading to an increased commercialisation of the sporting industry. Not having a crystal ball it is difficult to know the answer but an interesting ques-tion would be "will the balance between private and commercial golf clubs change in the UK in the future?" Will members clubs increasingly find themselves selling out to commercial operations? We imagine that customers will become fewer but larger and the profit motive will become an increasingly important factor in their management.

#### \* What contribution do you believe BIGGA has made to the industry since the Association was formed?

BIGGA has played a major part in raising the profile of the turf industry as a whole by successfully focusing attention on the vital

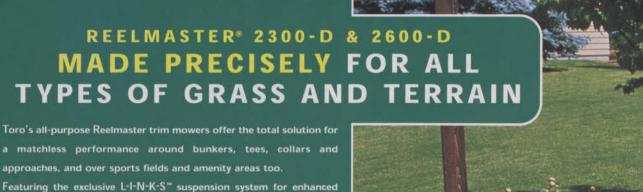
input of greenkeepers to the quality of the game of golf. In terms of greenkeepers specifically, BIGGA has largely been responsible for building a career structure with professional status.

#### \* Why are you pleased to be associated with BIGGA?

Because our association with BIGGA allows us to support our customers in a visible and effective way. By contributing to the Education Fund through the Golden Key we are able to contribute to development of greenkeeping standards and ultimately to support golf clubs as a result.

#### \* What do you believe to have been your company's greatest contribution to the fine turf industry?

Undoubtedly we have broadened customer choice. In our view, we have successfully introduced innovative products to the market place by our policy of direct sell. We work extremely closely with our customers and are therefore well placed to understand the products they need. We also have strong relationship with innovative research companies and are able to assist them in developing their products specifically for this market place. A good example is our partnership with Dow AgroSciences in introducing Rimidin Fungicide.



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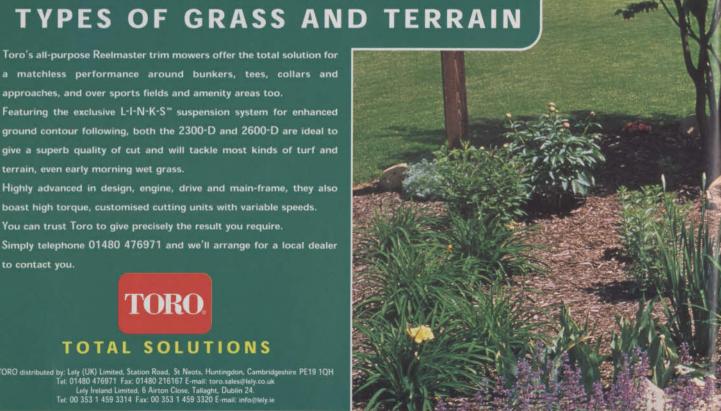
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### This month, Geoff Steel gives advice on mortgages and how to choose the best lender for you...

## CHOOSING A MORTGAGE LENDER

Most people when looking to purchase a house are guided by the estate agent to a suitable mortgage lender. Many agents, however, are tied or belong to a building society or bank. For example, I have recently seen lenders offering fixed rates for up to 10 years, when there is every likelihood that interest rates may be reduced over the next few years.

Everyone should shop around to find out what else is available. For example, the building societies which have converted to banks, in the main are now charging 8.2% as a standard range, whereas traditional building societies and some of the new direct telephone banks, are charging as low as 7.7%.

On a £50,000 mortgage, the dif-

On a £50,000 mortgage, the difference in repayments can be up to £21 per month.

There are also many attractive incentives available, including reduced interest rates for the first few years, fixed rates and capped rates. While one of the offers will be suitable to you, ensure that you check the conditions first. A good initial offer for two or three years is not in anyone's interests if the borrower has to pay additional amounts for the remaining term of the mort-

gage.
The usual conditions that can apply are:-

 Large penalties if the loan is repaid in the first few years.
 Buildings, contents and other insurance must be taken with the lender. The cost can be up to dou-

ble that available from a more competitive source.

3. High initial fee required by the lender. This may be obscured by

the fact that it is added to the

loan

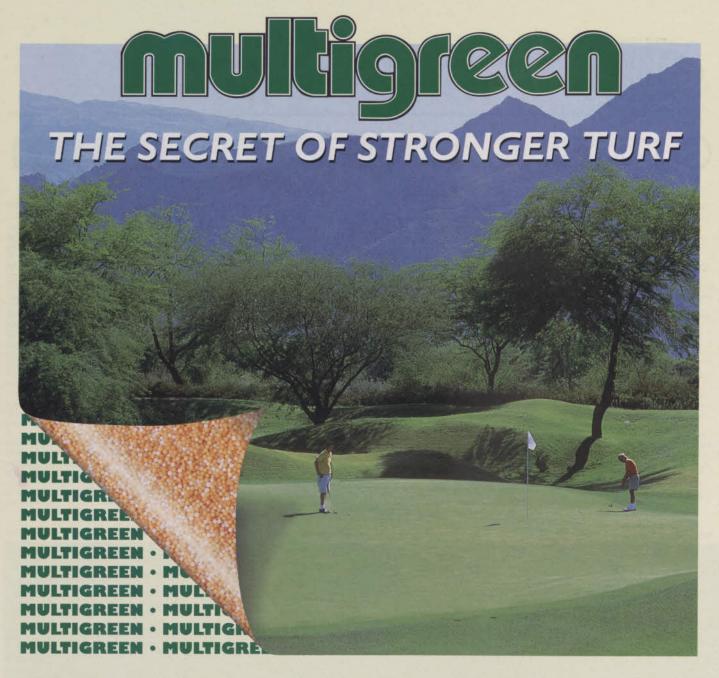
There are mortgages available which provide a reduced initial cost and do not have any of the above restrictions. Shop around until you find the right one, or ask an

Independent Financial Advisor for the best mortgage for you.

Traditionally, interest on mortgages is charged at the year end, which means that any additional payments made by the borrower do not have any effect until the next date of interest calculation. Some lenders have now introduced mortgages where interest is charged on the balance of the loan each day. Additional payments to this kind of mortgage can significantly reduce the total amount of interest paid over the term of the mortgage. The direct telephone banks usually offer mortgages charged on a daily balance and can have lower interest rates than High Street banks.

Geoff Steel is an Independent Financial Advisor with Walsh Lucas and Co. and he welcomes comments from readers. His freephone telephone number is 0800 7835132.





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## Winner takes all?

Following an article in the November issue of Greenkeeper International, I would like to offer the following letter for publication. Although brief I feel that it highlights a point which has no doubt caused interest among many in the turfgrass industry. If there are any problems with the draft please give me a call.

Having read with great interest the story of Ramside Golf Club

in the November edition of Greenkeeper International, I'm sure that I will not be alone in my surprise at one point raised in the article. It mentions, towards the end of the article, that after developing such a severe outbreak of take-all patch disease, Roger was apparently told that there was a chemical control option available

I would be extremely interested to

know which product was recommended for use against take-all patch since, as far as I am aware, there are no chemicals which are legally approved for use against this turf disease in the UK.

Catherine Entwistle (nee York) Pathologist, STRI

#### Irying to worm out an answer

Thank you for your article on Fingle Glen in September's magazine but I would like to point out two things in relation to it.

Firstly, I would like to say publicly that I was aided in the construction of Fingle Glen by my son, Bill, and my friend, Brian Ridgeway, who both had considerable input.

Secondly it is Dartmoor, not Dartmouth, that can be seen from the course. Indeed if you could see Dartmouth from Fingle Glen you would need a light on your head for low flying aircraft!

The main reason I have written is that I wrote a letter earlier in the year concerning chlordane and worm control to which there were two replies through the magazine. I would like to say to those people who write letters in reply to be more specific. You would not expect a doctor writing in reply to a letter in the Lancet to say "put a couple of leeches on - we were doing this years ago"!

To return to the original question about worms. If sulphur is the answer - How much? Which type? When? etc etc. What pH is optimum to stop casting worms? My course has fairways of 5 to 5.5 pH. How much lower should I go? My last course had a Ph of 4.4 to 4.8 on the greens and we still had some worm casts. Also acidity of the soil reduced bacterial activitiy with the result that thatch forms. What is the dividing line between beneficial and detrimental acidity? What about links courses? I have seen some lovely fine grass fairways and greens plastered in worm casts.

Would they consider acidity as an answer? I think not.

Perhaps Mr Arthur would be kind enough to give us some case histories of the transformations he has seen and the names of the clubs so we can seek out the greenkeepers and ask advice.

Mr Fletcher gave the answer to worm control in the PS to his letter in October's magazine. The R&A and the STRI are, I understand, spending vast sums of money on research for a suitable solution. Would Mr Fletcher like to expand on his letter by giving us facts, figures, methods etc so that we may all learn from him.

Bill Pile, Fingle Glen GC Devon

#### Recommended salary scale debate

There must be a tremendous number of disgruntled 21 year olds and other greenkeepers disappointed that their salary falls short of the BIGGA's minimum recommended wage scale.

The Surrey Section is probably the best area for greenkeepers salaries. However having made enquiries myself with other courses I have found the BIGGA figures slightly inflated. Although I acknowledge that some courses are paying these salaries they have only recently adjusted to the BIGGA recommendations.

The Association has obviously arrived at these figures in a constructive manner.

However I feel the Regions should have an input and that Course Managers and secretaries should be advised much earlier in the season as to the proposed recommended increases to allow them to adjust their budgets.

Brian Turner, Course Manager, Sunningdale GC

Note: They are not BIGGA's recommended pay scales but those of the Standing Committee on Pay and Conditions which comprises representatives of the Golf Club Secretaries and the Golf Club Owners as well as those from BIGGA's Board of Management. Also see the Education column on page 21

#### Dealing out a rewarding relationship

I write in response to Kim Blake's letter concerning relationships in your December issue.

Relationships matter in all walks of life and Kim Blake's letter makes very refreshing reading. We too, believe in the benefits of those direct relationships between customer and manufacturer, as it is from these contacts that most of our product and service development ideas come. SISIS Direct was formed to further deepen the already established customer/company relationships that our 12 direct salesmen have developed, but we are always looking for ideas and ways to further

lan D Camp, General Sales Manager, Sisis Equipment Ltd

#### **Dubious** dictionary definitions?

My reaction on reading the article (Dec 98) on the Application of Science was one of incredulity in view of the drive towards more understandable teaching approved colleges in greenkeeping education.

I put myself in the position of an experienced Head Greenkeeper when reading the piece. First I checked on good dictionaries, then on scientific glossaries. Virtually nothing emerged. Then I consulted my American text-books and found some with difficulty (because of mis-spellings) but their definitions left me little wiser.

The first decision any writer must make is to identify his potential readers. Certainly in this case the article cannot have been intended for greenkeepers, agronomists, committees or trainers. Perhaps it was aimed at a few fellow lecturers?

All that this article does is to pose endless questions put provides few answers, and most of those are arguable.

We are treated to statements that seeds need water to germinate. I bet that was based on several years of underpinning research! Then followed a dissertation on how seeds imbibe water which is irrelevant and inadequate and of no interest to anyone save a plant pathologist.

The aim of all education must

surely be beyond argument: to first teach the basic principles and only when students have a firm grounding in these should they go on to discuss the finer points of opposing philosophies and they should never be confused by techno-babble.

I am more than willing to enter into good natured debate either through these pages or personally with anyone from student to lecturer who wish to argue their views and I am the first to admit that after well over 50 years in education I am still learning and willing to do so.

Jim Arthur, Budleigh Salterton, East Devon



#### Kenneth Arnold has had more demands on him than most yet still found time to devote to the game of golf...



There is a man in the Sheffield Section whose knowledge of the industry is second to none. His opinions are sought by greenkeepers young and old, far and wide and he has been a regular attender at Section lectures for over 30 years. Last year in fact he was presented with a plaque from BIGGA Past Chairman and fellow Sheffield Section member, Barry Heaney.

Yet he has never worked on a golf

Kenneth Arnold is 85, a retired solicitor, a former Chairman of Green and President of Abbeydale Golf Club and has been President of the Sheffield Section since 1965. He is also a former Lord Mayor of Sheffield yet he would appear to have shared quite a bit of the time he might otherwise have spent in County Hall with greenkeepers and discussing greenkeep-

"When I was told that I was to be Chairman of Green at Abbeydale by the previous holder of the position I was a keen gardener but didn't know anything about greenkeeping," confessed Kenneth. He recalled those days back in

the 60s as being completely different for golf clubs and everyone associated with them.

In those days you might get two or three cars in the car park on weekdays," he recalled.

He is quick to appreciate how beneficial such low demand was on the greenkeepers.
"Staff could come in at 8am and

start cutting greens. If someone was playing a hole they just stood aside. If they did that nowadays they would never finish!'

Kenneth is a man of strong opinions. His first point of view delivered not long after the conversation had started was that the Americans were ruining the game.

"They are making greens faster and faster. I don't know why they don't just dig up the greens and put down linoleum.

Another view emerged when talking about the role he first undertook in the golf club - Chairman of

'Chairmen of Green should be done away with. They are not required. The Head Greenkeeper should report to the Board, or the committee, on what is happening on the course and what he intends to do. It should be just like a managerial role in industry."
He is a man full of anecdotes.

'When I was Mayor I used to travel to Sheffield Wednesday matches with the team and I once asked the manager how he coped with so many people calling for his blood. He said that he had 30,000 critics each of whom knew all the answers.

But none of them knew the problems. Golf clubs are just the same.

When thrust into the Chairman of Green role that he now considers to be anachronistic he threw himself into the role attending Sheffield Section lectures on a regular basis.

It is a policy which has been continued for Abbeydale's subsequent Chairmen of Green including the current incumbent, Jack Copeland, who brought newly crowned Toro Excellence in Greenkeeping Award winner, John Coleman, to the club.

"We had some superb speakers, like old man Hawtree, the architect, and I would learn a lot from him," he said.

The opportunities are there for greenkeepers to increase their knowledge and many more are doing so nowadays that when I started attending the lectures.

It is a positive, forward thinking attitude which would shame many people half his age as does his lasting ability on the golf course itself.

He still plays two or three times a week, always carries his bag and is one of those rare people who can beat his age.



