

A better way to **SPRAY**

With concerns running high in respect of the long term impact of pesticides on the environment, public discomfort regarding chemical pollution of waterways, and increased legislation restricting the transportation, use and storage of hazardous substances, there has never been a better time for greenkeepers to take stock of their spraying practices.

Surveys by university researchers have shown that on average, spray operators overlap their chemical applications by 25% to 30% more than the manufacturers' recommended rate. This is an alarming fact from both an environmental view and in terms of wastage and cost. In addition, the potential damage that can occur to fine turf if double dosing takes place under conditions favourable for damage puts this area into the high risk category.

Yet surprisingly, though the chemical debate has been with us for years and more people are worried about the role of chemicals in recreational areas, greenkeepers in the main still rely on sight and 'experience' when it comes to judging the application of sprays. Judging the correct application of solutions comprising 99% clear water is very risky: spray becomes almost invisible when applied to grass, making it impossible for the operator to follow the spray line accurately, causing an inevitable overlap.

In the past the practice of drawing chains behind the sprayer to mark bout width margins on the turf has been tried with little success. Anyone who has seen chains snaking across a fairway and knocked off line by every hump, hollow or twist will soon realise that the chain does



not reflect the true spray margin and can be almost impossible to see.

Another method, originating from the agricultural industry, uses a special piece of equipment which produces in a transportable tank a foam mixture that is pumped out of pipes at the ends of the boom. This foam is dropped as 'blobs' – at intervals behind the sprayer – with the object of marking the position of the spray boom width. Though clever in its conception, this method rarely works well in practice due to factors such as variability of time the 'blob' takes to disappear (golfers do not take kindly to seeing fairways and greens festooned with foam balls) and the lengthy set-up and clean down time. There is also a significant investment in the initial capital outlay and on-going maintenance. Even if it could be argued that 'blobs' give the operator some guidance on spray bout width, it does not identify any 'skips' or misses due to uneven ground or reveal problems due to faulty spray equipment.

It may have been argued in the past that the chain or 'blob' method of identification was better than nothing. However, neither alternative has widespread appeal and both have their detractors, who see them as flawed.

In the early 1980s some greenkeepers on the other side of the Atlantic, fed up with the 'blob' or chain methods, were obtaining industrial dye products in an attempt to colour their spray solution, which could then be seen by the operator during application. However, many of these were found to be unsuitable – they caused not only long-term staining of the grass, adjacent walkways, fencing and stone 52



Top picture: See clearly where you have sprayed.

Centre: Blocked or clogged nozzles are easily spotted.

Bottom: Spray pattern indicators can be used to check spot treated areas.

Cost savings indicator

PRODUCT	ROVRAL GREEN	SUPER VERDONE	CASTAWAY PLUS	TURFEX	FLO-GRO
USE	Fungicide	Herbicide	Worm-Killer	Wetting Agent	Liquid Fertiliser
AREA TREATED	500 sq.mts 600 sq.yds	10,000 sq.mts 12,000 sq.yds	1,000 sq.mts 1,200 sq.yds	5,000 sq.mts 6,000 sq.yds	500 sq.mts 600 sq.yds
RATE OF USE	1 ltr	10 ltrs	1 ltr	5 ltrs	4 ltrs
COST OF PRODUCT	£21.72	£45.29	£14.12	£70.00	£5.00
Extra COST OF 25% OVERLAP	£5.43	£11.32	£3.53	£17.50	£1.25
TOTAL SPRAY SOLUTION	26 ltrs	310 ltrs	76 ltrs	300 ltrs	28 ltrs
RATE OF BLAZON	52 mls	620 mls	180 mls	600 mls	56 mls
COST OF BLAZON	.57p	£6.81	£1.67	£6.60	.61p
COST SAVINGS A-B-C	£4.86	£4.51	£1.86	£10.90	.64p
COST SAVINGS 18 GREENS (one spray)	£87.48	£4.51	£18.60	£21.80	£12.80

'Through this, the whole nature of spray application changed'

51 → work but also of the equipment and operators themselves! Many were found to have unacceptable levels of heavy metal concentrates and were expensive to use in practice.

It was around this time in the USA that Milliken Chemical, a research based textile company, identified the problems associated with the industrial dye products and, through the technology at their disposal, formulated a speciality spray colourant – for use on turf.

Through this, the whole nature of spray application changed, turning an educated, though unreliable, guess into an accurately applied science. The product is not a dye, but a unique water soluble polymeric colourant which, when added to a spray solution, produces a temporary blue/green colour on turf, allowing operators to easily see where they have – or have not – sprayed. The colour disappears completely and naturally following rain, dew, irrigation – or even sunlight alone, claim the manufacturers. Formulated as a liquid concentrate, greenkeepers can soon select the ideal colour for their personal preference and adjust it to suit seasonal changes in grass colour, height and light conditions at the time of spraying.

With its use in the spray solution, problems of missed areas, repeat spraying, turf damage and double dosing due to overlap are eliminated. Spray operators will see immediately the spray pattern being applied and detect at a glance problems such as worn, faulty or clogged nozzles. By eliminating spray overlap the additional cost of the spray colourant is offset by the amount of chemical saved. In the case of fungicides, greenkeepers can save almost £5 every time they spray a tee or green (see table on Page 51) and as an additional feature, the colourant has been used with success to enhance greens' colour prior to a tournament.

From an environmental point of view, the use of spray pattern indicators are an invaluable aid in eliminating the wasteful use of pesticides and preventing excessive build-up of undesirable chemicals in the soil. In addition, the colourant can assist with cleaning spray equipment: when the colour has gone, the operator can be confident that the equipment is free from chemical contamination.

Spray pattern indicators are also ideal training aids for greenkeepers taking their Ministry Certified Spray Operators examination and should be regarded as standard practice for all spray applications on turf.

The golf industry should be aware, however, that industrial dyes are still being packaged and sold to greenkeepers as speciality spray colourants. The spray colourant referred to above, Blazon, is a patented formulation specifically developed for turf use and is unlike any other colourant sold in the UK.

AROUND THE GREEN

Keeping in touch with news and comment from the regions

MIDLANDS

June was bustin' out all over at Great Barr GC on the 4th, with the morning round of our Summer Tournament interrupted by a heavy hail storm, which left the course white in a matter of minutes. There were several players in 'the hunt' after the eventful morning round, the afternoon being more enjoyable as the weather improved.

In the event a winner emerged in the guise of Ted Evans, with Steve Wood a close second. The Gross prize was won by Paul Loffman.

The course was in excellent condition and a credit to the greenkeeping staff. For this we thank Great Barr GC, also for granting us the use of course and clubhouse and for catering that was second to none. Finally, a thank-you to our trade friends for supporting us so well.

Our next tournament will be at Edgbaston GC on August 20th and we look forward to meeting all of you again.

Best wishes go to Rhys Thomas on his new job as head greenkeeper at Great Barr GC.

DEAN CLEAVER

SOUTH WEST

'Drought'? does anyone remember a drought? Certainly in the Cotswolds the last six weeks have been a total wash-out. My neighbour (a keen gardener, few of us left!) was spotted staggering around his lawn with an umbrella, retrieving his garden sprinkler.

Knowle on June 5th, for our match Greenkeepers v Secretaries, was another fine example of a summers' day with incessant rain and a strong wind. But, as they say, it's an ill wind etc. etc. and the weather obviously upset the secretaries more than the greenkeepers, (you don't get cold winds and driving rain in nice warm offices or bars!), and thanks to our super-sub Chris Light, the head greenkeeper at Knowle, who came in with the best score of 36 points, we greenkeepers managed to beat the secretaries by just 11 points.

Thanks were also due to Chris, Kevin and the rest of the Knowle staff for the outstanding condition of the course and to the Club itself for the warm hospitality extended to both teams. We are also extremely grateful to Derek Holloway for organising the match and to Monro Horticulture for providing every member of the winning team with a prize.

I hope that you have all found entry forms coming through in order and if any of you have slipped through the 'regular entry' system and would like to have forms, please give me a call on 0285 651908.

Finally, congratulations to Laurence Pithie on becoming Britain's first 'Master Greenkeeper'. Laurence tells me it was eight months hard slog to prepare for the written exam, which he described as 'tough but fair'. Another first for the South West.

PAUL WORSTER

SCOTTISH REGION

The Scottish Region Championships were held at Alloa GC on June 25th, the previous weeks having been the wettest recorded in June for decades and

many Clubs were forced to postpone events due to torrential, almost tropical downpours and cloud-bursts that could flood a course in minutes. June 24th was a dry exception and so on the 25th it was with a sense of trepidation that we arrived to black skies and the Ochil Hills barely visible through mirk and gloom.

However, 9.30 came and the first 3 ball away to nothing more than a light spitting of rain and high hopes. Ha, fooled again! By 10.30 the rain was a constant downpour with the 14th green – viewed from the clubhouse – looking more like a curling pond in summer than a golf green.

All eyes on 'yours truly' as a mini-conference took place with head greenkeeper Duncan Peddie. Suspend play was the verdict.

On again by 11.40, the troops were still not convinced. Duncan Peddie and assistant Alec Nimmo, with the able help of Kevin Brunton (Souters) and Andrew Menmuir (STS), both ex greenkeepers, checked the greens. Our grateful thanks to you, lads. Was the Reg. Admin. right? of course he was, for by mid afternoon it was shirt sleeves and a sunshine finish for everyone. Though finishing later than planned, it turned out an excellent day and we were soon ready for the presentation, made perfect by the gracious attendance of Alloa Club Captain, Alan Goodwillie, who on this, their centenary year, presented each winner with a copy of the Club's history.

Exactly 100 golfers took part in the tournament, which may be a record. Originally 109 players were drawn but the conditions seemed to make some of our respected trade members a bit under the weather and unfit for play!

We must thank Alan Goodwillie and his council for their courtesy in hosting the Championship, Also club secretary, Alan Frame and green convener Jackie Vietch, who joined us for our day. To Margaret Harrison, club manageress, and her staff for friendly service, hospitality and delicious meals and Duncan Peddie – happy birthday Duncan to you and your crew for the excellent condition of the course.

The trophy table at The Scottish is a sight to behold. So many marvellous trophies to win and each containing a voucher contributed by our Scottish patrons – all generous to a fault.

On a personal note, my thanks to Cecil George and Jimmy Neilson for their valuable assistance and to my wife, Edna, for her hard work and support in dealing with 100 golfers. It was good to have old friends amongst us including Joe McKean, whose golf was curtailed by an accident with his caddie car (we hope you are healing nicely Joe!), and George Hampton, 'laughter is the best medicine', eh George? As usual, George donated a generous prize as did Kevin Brunton of Souters.

It was a long day but one to be remembered. Let us herald the Scottish Champion for 1991, Gordon Moir of Fraserburgh, with a scratch 75. Well done Gordon. Further results were: Best net; Wilson Morrison (Royal Aberdeen) 70. Best head greenkeeper: Duncan Peddie (Alloa) 80-9=71. Best assistant: Stewart Crawford (Ratho Park) 78-7=71. Best apprentice: Neil Chrichton (Tulliallan) 80-8=72. Veteran: Harry Diamond