

LET US SPRAY

instance for fairway work. Currently most work is carried out at a rate of 600 litres per hectare and pump output has proved sufficient. A range of materials has been put through the machine including both nitrogen in the form of Micro-flow, iron, herbicides and fungicides. The course which is ex agricultural land had a residue of clover and mayweed so significant fairway spraying was needed.

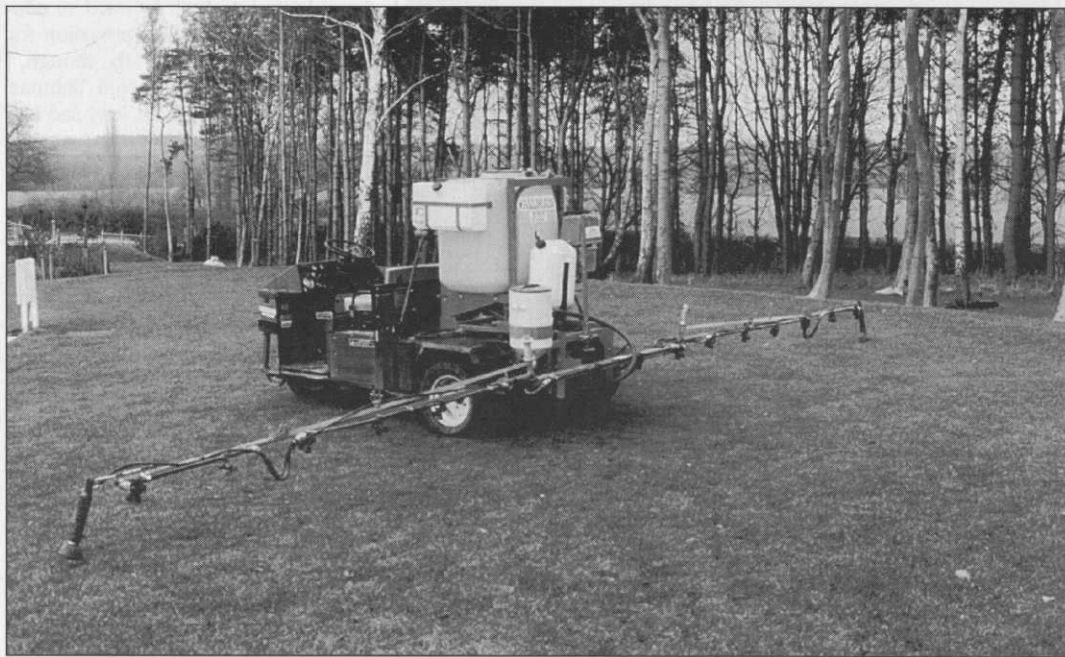
Calibration is simple but setting is now mostly based on the clubs own application log sheet. The boom has turreted nozzles making it easy to switch jet. Nozzle output checks are carried out from time to time. Driving accuracy is ensured by a foam bout marker, and Kevin considers this an essential "extra", far superior to dyes. For greens he uses the foam extremely dilute so that all he gets is little more than a stain on the turf, and no upset golfers. On fairways the full rate and blob is used.

The machine has a low level chemical induction tank and this works well, although as it does not have its own strainer stray bottle tops and seals can get into the plumbing. This induction system also allows a probe to be used to suck direct from original containers. Clothing locker and clean water tank are standard but are considered to rather clutter the machine.

Fitting the unit to the Cushman and removing it is not very easy, especially with only one person, nor did Kevin consider the three legs sufficiently strong or stable to take the machine with water in it. The legs are screw adjustable but are not considered suitable for jacking the unit off the bed. The unit has a single catch to lock it onto the chassis – not very firmly and Kevin said there are times when he is apprehensive about it detaching itself. The pump has a belt drive which mounts to the P.T.O. with a tensioning link.

Operating the sprayer is simple and, without a cab, the controls can be positioned on their arm very handy to the operator, likewise the bout marker control which is electric is close to hand.

No breakdowns or other major problems were reported and the



The Allman 300C skid mounted sprayer at Paulton's Golf Centre

machine has done all that has been asked of it.

ALS contract spraying service at Telford Golf & Country Club

Telford Golf & Country Club has its own compact tractor mounted Hardi sprayer, however the staff find this not suitable for fairways and semi rough because of time and labour pressure and other reasons thus they employ contractors Amenity Land Services of Wellington, Shropshire.

Telford is an 18 hole par 3 championship course, playing about 70,000 rounds per year and attached to a 100 bedroom hotel. It has 61 managed hectares, about half of which is sprayed each year for the control of broadleaf weeds. Course Manager is Ivan Beetlestone and he normally has a meeting with ALS's Bob Bolland early in the year to programme his requirements and discuss problems and solutions.

Ivan said that it just was not worth the aggravation and problems for his staff to try to do such a large area – which would tie up staff for several days – and be at greater weather risk. Because of the strength of their chemical buying and rate of work ALS are able to be extremely competitive so that it was possibly cheaper and certainly more cost effective

than for the club to undertake the work. ALS has specialist knowledge, larger equipment and dedicated experienced personnel which ensured a fast efficient job. Ivan said he has never had a complaint about their conduct on the course, nor did he have anything but praise for the job they did. They normally start work early on the fairways/semi rough and with two machines cover about 5 ha. per hour, each taking 9 holes so that they keep well ahead of golfers. The work is normally finished about 11 o'clock.

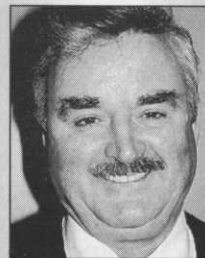
ALS use mostly 4x4 pick-up trucks which they customise, particularly with firmer springing, and a 9m Hardi boom sprayer. The comprehensive specification includes speed/area meters and foam bout markers.

At Telford a typical herbicide application would be a dicamba, MCPA and CMPP mix which ALS use at maximum label rate – to ensure maximum effect. Jonathan Carr of ALS said it is just not worth trying to cut the cost and then have to go back and respray. They also apply the active ingredient with the fairly high rate of water – 200 – 300 litres per hectare to get optimum coverage. He stated that increasing numbers of greenkeepers are asking for liquid fertiliser to be added so that the grass is pro-

moted as the weeds die out. The company said that spraying golf courses is their main and highest profile activity and there are a significant number of courses on which they also undertake significant work on the greens, mostly worm treatment and fungicides – which they aim to get on within a day of a call. For greens work they use a tandem axle trailed engine-on sprayer towed behind a compact tractor or ATV. ALS are also used at Telford to spot treat or "tidy" around tree areas for which an ATV is used with a sprayer mounted on it.

In summary Ivan said he had no hesitation in recommending ALS, he has found them to be efficient and very cost effective.

I THOUGHT BTME 96 WAS THE BEST YET BECAUSE:



"It gave me great pleasure to liberate two large haggis in Harrogate"

- Harry Diamond, Ayr Belleisle GC

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AD REF 61

Time to look to the future



Education Update

BY KEN RICHARDSON

Now that the dust is beginning to settle after a busy but successful week at Harrogate, it is time to look forward to education and training provision for the rest of 1996. Firstly, though, I would like to echo Neil Thomas' comments about the very sad loss of Geof Hills. We were just getting to know Geof and, especially as I had been recently working closely with him on the South East Region Management Courses, his untimely death was a great shock and I will miss him.

The rest of 1996 seems set to continue to be busy, starting with the Regional Management Courses. Although a great success in most regions, the Plymouth Course was very poorly supported and I have had to cancel it. Courses at York and Chester were very well supported with 32 delegates in total. Killarney, Birmingham, Brighton, Dover Bournemouth and Bristol were all well supported and applications are rushing in for the extra courses at Mildenhall and Bedford, with the Hemel Hempstead course already fully subscribed.

Massey Ferguson Tractor Appreciation Workshop

The first of three Tractor Appreciation Workshops for selected college students takes place at Warwickshire College from February 19 to 23. Further workshops will be held at Oaklands College from March 11 to 15 and at Elmwood College from April 1 to 4. Any college still wishing to nominate delegates should contact me as soon as possible. Nominated students will shortly receive joining instructions for each workshop.

Miracle Professional Premier Greenkeeper of the Year

As Mike Goodhind, the 1995 Miracle Professional Premier Greenkeeper heads for Florida and the GCSAA Exhibition and Show, the search for 1996's winner begins. A leaflet explaining the rules of the Competition, giving the prize list and containing an entry form is enclosed in this magazine, so why not enter yourself or nominate your choice. Remember, the winner will be heading for Las Vegas this time next year.

Toro/Lely/PGA European Tour Student of the Year

The 1995 Student of the Year,

James Braithwaite, is struggling through the snow in the USA at the start of his 10 weeks in the States. Entry forms and explanatory leaflets have been sent to colleges so please think about your entries, ensure that you meet the entry deadlines and make sure that any student nominated understands the rules, and more especially, that the Regional Finals will take place in early September with the National Final taking place in early October.

BIGGA Lending Library

The number of titles now exceeds 200 with more books on order. Remember, it costs nothing to borrow books for up to six weeks except the return postage. For more information or for a copy of the book list, contact me at HQ.

National Education Conference and BTME

Finally, thank you to all delegates who attended the Workshops, National Education Conference and BTME seminars at Harrogate last week, for making the Learning Experience a success. Those that did not attend missed some excellent opportunities to add to their greenkeeping knowledge and skills. However, video tapes of the Conference and Seminars will be available, for purchase, soon. Anyone wishing to buy a tape or tapes should contact me at HQ. The cost of each tape will be:

Per National Education Conference and Seminar speaker £6 per tape, except Dr Joe Vargas Seminar at £10 per tape.

Written transcriptions of each session of the Conference will also be ready for purchase during February.

I THOUGHT BTME 96 WAS THE BEST YET BECAUSE:



"I actually met THE Richard Barker in the flesh."
- Jimmy Richardson,
Matfen Hall GC

Machinery maintenance

hydraulic systems

Hydraulic systems are commonplace on today's machinery and like the engine these require regular attention if problems are to be avoided. On some applications systems work at extremely high pressures – often as much as 10,000psi.

For this reason and to obtain long life only the correct oils should be used.

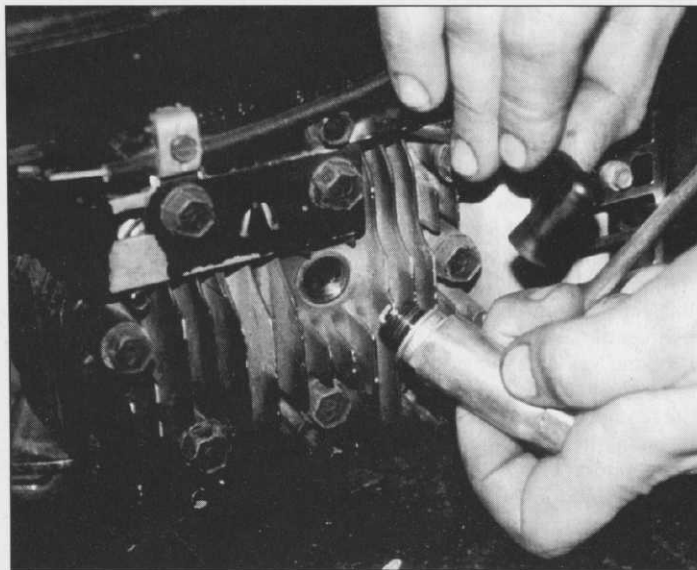
One of the most important factors to bear in mind when dealing with hydraulic systems is cleanliness. The introduction of any dirt or water will spell disaster.

A daily inspection of the whole system is recommended and particular attention should be paid to the following:

- Is the oil at the correct level? A drop in oil level could mean a leakage. It may only be small at this stage, but it needs further investigation.
- Does the oil look dirty?
- How is the system performing, are there signs of it slowing down? A pump may be wearing.
- Is it noisy? This is often the symptom of a blocked filter.
- Has the operating temperature increased? The cause needs to be found.
- Hydraulic hoses which show signs of chaffing need to be re-routed or replaced. Signs of leakage from joints also need attention.

Periodically clean or replace any filters in the system in accordance with the machine's instruction manual.

If a problem does occur then call in a hydraulic specialist.



Grease

Sealed bearing assemblies are today commonplace and require no attention. However, greasing points can be found on some pieces of equipment. It is very easy to over-grease, so care is needed – overdo it and the grease is forced back out of the nipple or seal where it hangs in a blob, attracting dirt, sand and any other foreign matter that is floating around.

Belts, Chains and Guards

These days, chain or belt drives usually have an automatic adjuster. It is worth making sure that these are working correctly and that the belts are not fraying or splitting. In the case of chain drives these will require some form of lubrication.

Guards that are showing signs of fatigue or damage should be repaired or replaced.

Cutting Systems

In the introduction we talked about the safety aspect regarding cutting systems.

Other problems are also associated with blunt or damaged blades:

- The power requirement to drive them increases considerably.
- Greater stress is placed on the engine and components such as bearings, belts and chains.
- The quality of cut rapidly deteriorates and the turf may be damaged.
- An unbalanced blade is highly dangerous and vibration sets up throughout the machine could cause metal fatigue.

In the case on a rotary or flail mower where it is known that the cutting system has come into contact with an obstruction, the blade carrier should be inspected thoroughly for any sign of broken welding or distortion and replaced if necessary.

Knowing your machinery is important factor in avoiding problems. Always be on the lookout for a change in the normal pattern.

- Does the engine sounding different or has it suddenly become

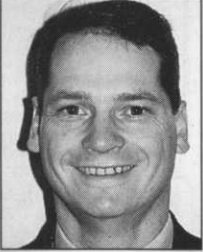
ing difficult to start?

- Are the hydraulics slower or noisier?
- Is there an alteration in the overall noise of the machine
- Are drives less smooth in their take-up?
- A hot spot is one of the biggest symptoms of a problem.
- Has fuel consumption increased for no apparent reason?

All these are strong indicators of a possible problem that needs further investigation. By acting immediately the chances of that frustrating breakdown at a most inconvenient time are greatly reduced.

Today's golf course equipment has to be cost effective, efficient and consistently produce a high standard of finish. This will only be achieved if is cared for, maintained and serviced regularly. Time invested in this is well spent and will pay dividends all round in the long run.

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"It was an amazing show and is getting bigger and better every year."

– Paul Murphy, Downfield GC

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"I want a Golf Club to be proud to have me rather than just be seen as a necessity – an asset to the club."

Mark's Spring Turf Maintenance Programme

Our spring maintenance is normally a continuation of our build up from winter. We start moving from the more physical maintenance – trying to put in drainage and doing construction – into the

realms of fertilisation to build up the grass for the coming season – girding its loins so to speak.

We give it a little bit of a kick with another application of winter feed 5-5-15 around mid March before getting into the realms of solid tining because the greens as so young – I wouldn't hollow tine yet.

We vertidrain with the Shattermaster last autumn we will hopefully solid tine again about April with an initial heavy dress-

ing of 80/20 top dressing. The fertiliser regime is all the way through the growing period with the teaspoon method keeping the grass fed but always on the want.

Not putting down full applications but putting down part applications but not leaving it too stressed that it is beginning to suffer. It needs to be wanting to put down roots to glean nutrients out of the soil.

Being high content sand greens it obviously leeches away rather quickly so that's another reason we do little and often. If we did apply large amounts of fertiliser it would only be leached away and it can be a very costly exercise.

The grass species which I use on the greens are fescues and bents are grasses which are associated with poor fertility and to encourage those types of grasses I want to keep them wanting rather than fat cat fed.

I change my fertilisers regime yearly as using the same over a period of years leads to problems. I'm not a great believer in straight fertilisers – sulphates of iron, sulphates of ammonias because I believe that restricts bacterial growth through the root zone.

Applications of organics through spraying Turfmaster Agrocrop etc.

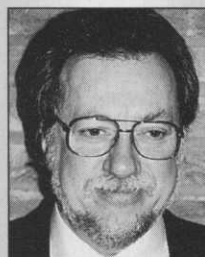
We do have to be careful with fertilisers, specialised chemicals, selected weed killer and fungicide worm control and wetting agents because it can affect the horses.

Our watering is from a bore hole. We handwater but hopefully if we make enough money I'll have a water system within the next couple of years. We've got water beside each of the greens and we lay out hoses and manual sprinklers.



Hard at work removing turf

I THOUGHT BTME 96 WAS THE BEST YET BECAUSE:



"Everybody you could possibly have wanted to see was at Harrogate during the week."
 – David Ward, Royal Porthcawl GC

Bark to basics

other parts. There are two contributory factors to this. Firstly because the majority of golfers slice the ball trees on the right hand side of a hole are always at greater risk.

Secondly trees which are positioned at 180 to 230 yards from the teeing ground are endangered, because they are more likely to suffer the affects of a ball travelling at near maximum velocity. Maximum velocity is achieved close after impact with the club head.

Therefore trees planted at such a distance on the right hand-side of the fairway are most certainly at peril. If new planting is to occur on golf courses, damage to trees can be reduced by avoiding these areas.

Planting in such areas is not only detrimental to the health of the trees, but may also eventually adversely affect, the strategy of the golf course. The strong hazard a mature tree forms often results in the player having no choice but to "chip out" sideways. Whereas trees which are planted in a more sympathetic position, between the landing area and the green will allow the skilful player to manoeuvre the ball around the obstacle, making for a fairer and more interesting game and giving the player the choice as to whether to attempt the adventurous shot or to simply play safe.

Damage to trees can be further reduced, by correct species choice and by appropriate protection. Thin barked species such as Sycamore and Beech are more vulnerable than the thicker or spongy barked species such as Oak, Ash or Pine. The exception being Lime, although thin

skinned its unique cell structure means that the damage incurred is not as critical as to most other species.

However all trees do suffer damage to some extent, the wound openings allow entry to fungal predators and the resulting stress further predisposes the tree to secondary pathogens.

Protection to new planting may be afforded in two ways, firstly physical protection by the use of guards and secondly protection through the rules of golf.

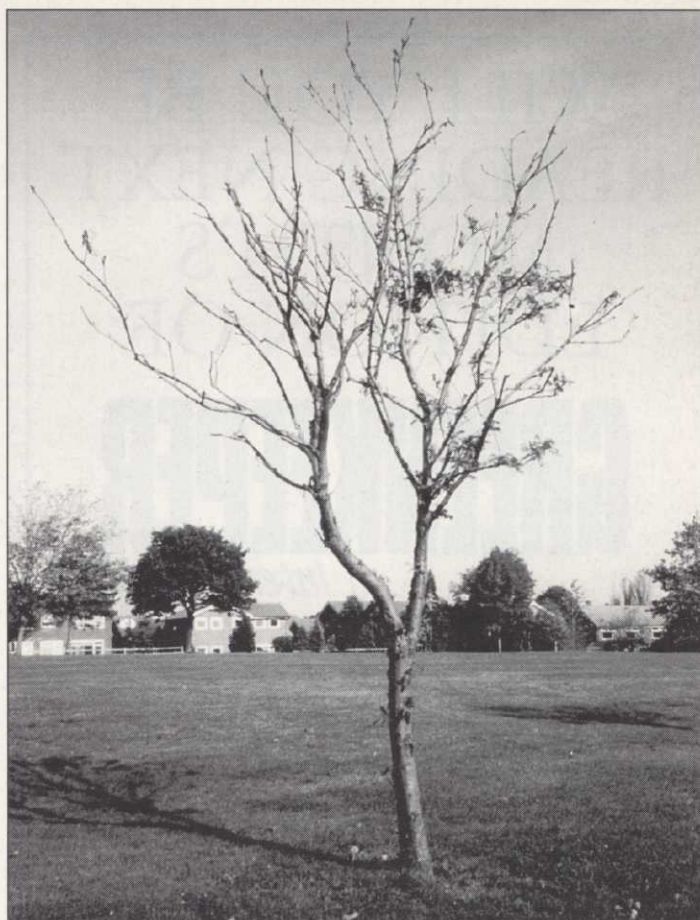
It is natural for golf clubs to have a reluctance to implement rules giving free drops from newly planted copses, as it disrupts play and is never popular with members. Tree planting is a long term strategy and therefore the implementation of a rule for the relatively short period, say 5-10 years would seem inconsequential. However the pressure committees are put under by members whose only interest is that their game is not disrupted is immense, this short term mentality is however detrimental to the long term management of the golf course.

It is therefore difficult for committees to implement rules for the protection of trees. One method may be to introduce dropping zones of long grass so no advantage is gained and so that the player has to find his ball first. This resolves the argument that a ball can not be lost in ground under repair and allows the grass around the trees to be left long reducing maintenance for the greens staff and benefiting the trees growth as long grass is less competitive for water and nutrients than close mown sward.

It is however still a brave decision for a committee to make, but it will ultimately benefit the course, save the members money and is the right thing to do.

To summarise, if you are about to plant trees on golf courses then you should consider the following:

1. Plant trees which are resilient to damage in areas of possible contact.
2. Establish trees in suitably sized tree shelters for protection.
3. Avoid planting trees at drive length on the right hand side of the fairway.



Typical die back semi mature rowan

4. Establish 'Dropping zones' adjoining fairways where damage away from newly planted areas is likely to occur from both directions.
5. Avoid planting between

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