Hugh Tilley takes a look at sprayers on the golf course

The requirements of health and safety have made hundreds of sprayers across the country obsolete and forced many clubs to review their spraying arrangements.

Spraying is not a preferred task, partly due to the mystic and concern which surround the whole practice. Nevertheless all clubs have some requirement for application of chemicals such as fungicide, fertiliser, herbicide and iron and perhaps fertilisers and growth stimulators to greens, tees and fairways. Although it is not a preferred task most greenkeepers still wish to keep control of the process and retain the ability to apply materials such as fungicides as necessary with minimum delay.

Thus while there are a number of contract spraying services available these tend to be used for specific tasks such as herbicide treatment of fairways or for specific chemicals which are regarded as more toxic or needing greater precision in application.

While there are many sprayers on the market many are adapted from basic agricultural models. However recently a few manufacturers have studied the amenity market and produced units both for mounting on turf maintenance vehicle and compact tractors which are designed for the golf course. Many golf courses also have pedestrian machines such as the Allen Walkover as well as knapsack or hand held sprayers, however these are admitted having one in their shed.

Pedestrian machines if equipped with a reasonable width boom would be suitable for a small 9 hole course but we did not find anyone regularly using such a machine, although several admitted having one in their shed.

Neither hand held and knapsack machines offer the precise application of a pedestrian machine, but are often used for spot treatments such as around the clubhouse, walkways or trees etc. Ultra low volume application using a hand held spinning disc machine is easier on the back if more expensive than a knapsack unit.

In theory controlled droplet application (CDA), using spinning discs, perhaps with air assistance, should be an effective option for several chemicals. However the need to stick to label recommendations has placed considerable restrictions on CDA particularly if seen as a means of reducing application rate. Development of products also being costed by the cost and complication of the disk/s, by its early championing of low rate usage and by the fact that conventional hydraulic nozzles have become considerably more efficient. No greenkeeper using a CDA machine was located.

Hardi AMPS 300 at Salisbury & South Wilts

Course manager Kerran Daly at Salisbury has a Hardi sprayer mounted on a Cushman Turf Truckster. Having used it for a year he remains very pleased with it and there have been no major problems although he is able to offer suggestions for detail improvements.

The combination is very manoeuvrable and has been used mainly on the greens for a variety of materials including iron, fungicides, herbicides and liquid organics. In fact during the season it seldom removed from the Cushman. The machine was purchased from T H White and Kerran said it represented good value for money. In addition it has a good parts and service back-up.

One of the most important reasons for selecting this machine was its boom, which is fan wide, and in Kerran’s view very stable, well made and securely mounted. He is particularly critical of other makes on which boom sag or bounce – thus preventing accurate application. The quick and simple fold and lock system for protection loop is only designed to protect against grounding. Another very important “like” is...
the easy of mounting and de-mounting of the unit with four sturdy legs and although these are not adjustable (between pin holes) this was not seen as a problem. Kerran was happy that the machine was safe on its legs even if full – a possibility if the Cushman broke down. The pump is driven through a short P.T.O. shaft which is easy to connect and gives a positive drive in contrast to the belt and under chassis drive Kerran has experienced with other machines. The Hardi has a two piston diaphragm pump, which is considered essential for use with iron which provides ample capacity.

Controls are mounted on an adjustable arm which enable them to be placed just where the operator wants them, and they are easy to operate. Calibration is simple to carry out, however after initial calibration rates are now taken off a chart. Once set the Cushman maintains its governor setting well and although there is some loss of speed when going up hill this is not considered to be a problem. Sighting poles are used to guide the operator and avoid misses or overlaps. Most spraying is accomplished using 640 litres per hectare, however the triple turret nozzle holder makes altering rates very easy.

Currently Salisbury have the original nozzle sets as supplied but think that it would be more ideal to have two sets of the most used ones in place so that the operator can simply flip one round should it get blocked when at work.

The unit has, as standard, anti-drip nozzles, clothing storage box and clean water tank. Filling is all through the top, this is relatively high and narrow so there is a danger of spillage. Kerran's wish list for Hardi is for a larger – 400 litre – tank with a wider flatter profile and a bigger filler. He commented that uprated axle on the Cushman could take the extra weight, and the extra width and lower profile would give better rear vision and stability. Another criticism is the tank contents gauge which operators find difficult to read and not very exact when it comes to part loads. One problem, which Salisbury have been told is unique, is that their tank suction hose has on several occasions washed out of its location when working and then "floated" on top of the chemical in the tank.

However the overall verdict is that the machine is a very professional unit, strongly made and will all the required features.

Allman skid mounted sprayer on a Cushman at Paulton's Golf Centre - Ower in Hampshire

This 27 hole private parkland club, mainly pay and play, was first opened about 18 months ago and the Allman was their first machine, although it was ordered from Rowes of Chichester by Course Manager Kevin Unsworth prior to his arrival on the strength of his past experience with Allman machines and their back-up. Paulton's Park also has an Allen Walkover machine which has yet to be used.

Again, mounted on a three wheeled Cushman Turf Truckster the unit is extremely versatile and manoeuvrable although with an eight metre boom Kevin considers that it is often too wide. The boom itself is in five sections with 1m two nozzle wing sections which fold independently, but the spray line is in three independent sections. There was a weakness in the boom mounting however Kevin mentioned this to Allman at IoG last year and they immediately came and fitted a modification free. It should be possible to isolate or remove the outer wing sections and Kevin is looking at inserting isolating valves, however he realises that the machine will then need recalibrating for a six metre width.

The 300 litre tank is relatively high, possibly higher than necessary and Kevin said he certainly would not like to have to put chemicals direct into it. He would like some means of positively locating the filler hose in the tank neck but reckoned that making something would not be difficult – it just needs a little thought and some time.

The Allman pump is a single diaphragm unit and Kevin has reservations about it's capacity to meet his output requirements should he want to apply larger volumes at higher speeds, for
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 makes it 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.

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

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 promoted 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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