

The way to spray

by JON ALLBUTT

The work of the consultant requires that he tread the turf of many a hallowed venue as well as that of the small Club. You would think that the level of equipment would be in keeping with the size of the budget, but not so! It is true that there is usually an impressive array of new tractors, Cushman's etc at the larger Clubs, but there is certainly no consistency with sprayers. There are many smaller Clubs with carefully maintained old sprayers that are still doing a very good job and there are also a fair number of new sprayers about too. What is surprising, at least at some of the larger Clubs, is to find some very tatty specimens indeed, often found in the corner of the sheds and covered in old hosepipe or fertiliser bags, and full of something very smelly and unidentifiable! Although the general standard of spraying equipment has improved over the last five years, there is still a long way to go.

To update or replace?

There is a temptation to upgrade an existing unit and in some cases this is a good idea. However, there are some important points to consider before making such a decision.

The Amenity Code of Practice sets the criteria whereby it should be possible to spray and minimise the impact to the environment. To meet this criteria, all sprayers must now be capable of applying a pesticide using nozzles and pressures that will ideally eliminate spray drift.

To ensure that nozzles do not drip they should be fitted with diaphragm or nozzle filter type check valves. Some old sprayers will not easily convert and may require new booms. Over the years, old pipework will have become worn, along with an accumulation of residues from old pesticides that will flake off and block filters. In addition, and this may come as a surprise to some, the inside of the main tank must be free of all residues. In reality, many aged tanks are so stained they are impossible to clean.

The sprayer should be fitted with a clean water tank to allow for the rinsing of containers away from the yard and also for emergency wash down. Some of these older sprayers are only ideal for use in applying seaweed and other liquid soil conditioners, and it may now be considered wise to purchase a new sprayer to apply pesticides, wetters and liquid Iron.

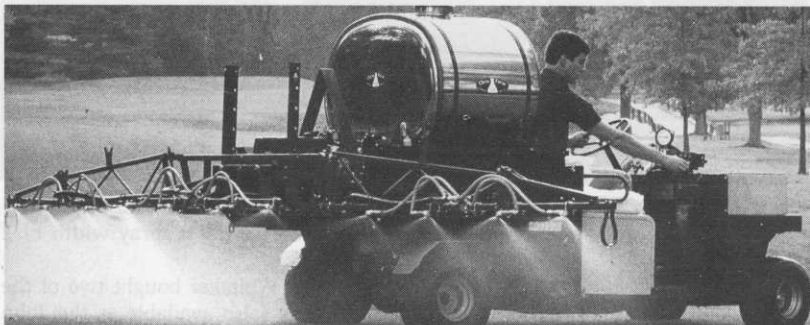
What to buy?

Compatibility with the tractor or other prime mover is a first consideration. Never assume the sprayer will fit, but always specify the prime mover when ordering new equipment. Make sure that the sprayer has all the necessary features to enable the operator to spray in accordance with the Code of Practice. These can be categorised thus:

- Bout markers. These are important to allow accurate spraying of fairways.
- Pump capacity. One that will allow all nozzles to apply at 1100 litres per hectare at low pressure with medium spray quality is desirable.
- Nozzles. Specify low pressure nozzles, or at least nozzles that will give good performance at 1-2 bar pressure, with no spray drift.
- Hand lances. The ability to use a hand lance directly from the main tank is important when applying growth retardants to banks; making spot treatment around trees; or total weedkilling of paths, not to mention the ability to apply a drench spray to greens when using fairy ring destroyers, wetters etc.

Electronic or manual controls?

The traditional method of operating sprayers is to manually



ChemPro/Cushman spray unit



Innovative Equipment spray unit

switch a valve on or off; pressure being set by turning a control valve one way or the other to achieve a desired setting. On tractor mounted equipment this usually requires the operator to turn around in his seat and operate the controls behind his head through an open window. It is difficult enough trying to keep a straight line without making matters worse by taking one's eye off the line of direction. In health and safety terms it is important to always be in control of the machine, for when operating on undulating ground and frequently looking away from the direction of travel, the work can be potentially dangerous.

Most manufacturers will supply electronic controls that operate the booms and pressure, these operated from within the cab. Some machines are also available with a control console which not only operates the booms and pressure but also ensures that the sprayer always sprays at the rate set, even if speed or pressure drops. These are very useful technical aids to safe spraying, but they do need to be checked regularly by calibration.

There are several American sprayers now available in the UK and these units are usually fitted with electronic controls. If you decide to invest in one of these imports remember they are set up for US rather than Imperial gallons, so ask for information on capacities and outputs to be provided in litres.

The new sprayers manufactured by Innovative Equipment Inc., a Canadian company, and under serious consideration for marketing in the UK by Jacobsen, have some interesting features: the boom sections travel on their own wheels – allowing the booms to take the shape of the ground being sprayed – and the boom sections are covered in a hood called a windfoil, designed to minimise any spray drift (this, however, will require some careful cleaning after spraying and may cause problems in instantly identifying blocked



The Hardi PS300
Cushman

nozzles). To minimise compaction on greens, hose-fed walking booms are available, these giving a spray width of 2 metres.

At the Wisley course, David Whitaker bought two of the American Hahn MultiPro 418s (also available as the John Deere sprayer), these being used by Wisley head greenkeeper, Bob Gilbert, and his staff. Bob, who has vast experience in using many different makes of sprayer, described the Hahn as a fantastic machine – praise indeed! The sprayer has a 568 litre tank, is very stable and manoeuvrable on the undulating ground at Wisley and will spray very large volumes, making it ideal for applying wetters, Iron and fungicides. The computer control system will work in metric measure and both US or Imperial gallons and stores valuable information about the spraying operation, which is then used to check the job and aid entry in the spray log and operator spray record book. There is a manual over-ride system in case of problems. Bob experienced a computer breakdown recently and was delighted when a replacement came from America within a week, faster service, perhaps, than some manufacturers here in the UK!

At the Buckinghamshire Golf Club, soon to be opened,

'Perhaps high-tech is the 'way forward' for the British greenkeeper. Time will tell!'

THELMA HOLLIS

Chris Marsden uses the American Chempro sprayer, imported by RFE Turf Machinery, with the Wilker Walker boom as an extra attachment for spraying greens. The Chempro also has a floating boom, which can be fixed in position. The bout markers are by Hardi, fitted here in the UK, though markers can be fitted at time of manufacture as an extra. Chris has used the system to good effect, the Wilker Walker working very well, though a marker dye is found desirable to assist with accurate covering of the greens. Like the Hahn, the system uses large volume hollow-cone nozzles, which spray an acceptable spray quality.

These systems are more expensive than any equivalent UK sprayer of similar specification. For example, the new Hardi PS300 Cushman can be fitted with electronic controls for on/off at an extra cost of £235.00 and a similar computer control system would be an extra £1150.00. This would take the total cost of the PS300 to nearer £3500.00, which is somewhat cheaper than the £8700.00 quoted for the Chempro with walking boom and bout marker.

The operators of these high-tech machines are very happy with them, all saying they are superior to the older, more traditional specification manual systems. We will all need to take a great deal more care in the application of chemicals in the future, so perhaps high-tech is the 'way forward' for the British greenkeeper. Time will tell!

● The author, Jon Allbutt, is an independent technical consultant to the leisure and amenity industry, best known to greenkeepers as a no-nonsense trainer and lecturer in pesticide regulations and the Code of Practice.

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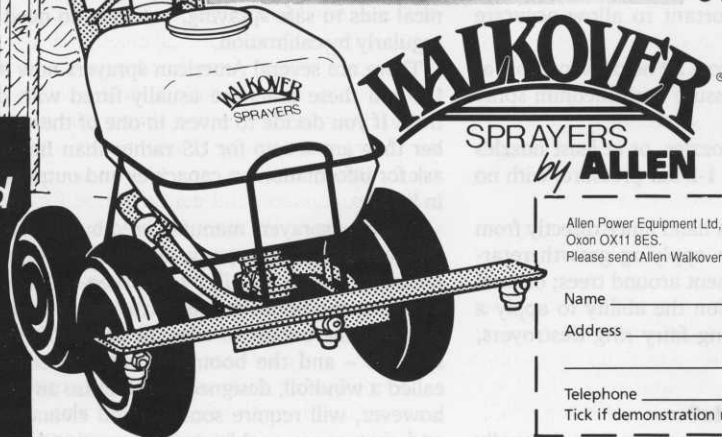


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