

James de Havilland takes a closer look at the intricacies of current machinery

The anatomy of...



Utility vehicle sprayers

How much thought goes into choosing your sprayer?

As was suggested in last month's issue, heavy-duty utility vehicles really start to come into their own when fitted with attachments that can include a sprayer. But how do you select the right sprayer for the job? James de Havilland offers some advice



(ABOVE) British sprayer manufacturers are strong in the amenity sector. Team Sprayers offers a choice of demount designs and choice of standard and shrouded booms. If you have a specific need, you do not need to buy 'off-the-peg'.

(INSET) The Toro Multi Pro 5800 reflects the demand for a vehicle that is well adapted to spraying duties. When looking for a demount sprayer, it pays to try out a system actually fitted to the vehicle you want to use it with.



Hardi sprayers include the Boss range of demount models. By offering a wide specification choice, as well as models tailored to fit a range of utility vehicles, the company is well placed to meet specific end user needs.



Spray Star sprayers from Ransomes Jacobsen are purpose built self-propelled units. Where a demount sprayer combination will be used full-time as a sprayer, it may be worth looking at a dedicated unit as an alternative.



A low profile, combined with a high standard specification, can make a complete demount sprayer package an attractive buy. John Deere Select Spray and ProGator combinations are increasingly purchased together.

In broad outline, heavy-duty utility vehicles have a nominal capacity of around 1200Kg.

By the time you have accommodated the weight of the operator and any attached sprayer, actual tank capacities can be up to around 800litres. Width wise, booms on offer will include those of up to 12m, the ability to work a portion of a partially folded wide unit offering the potential to operate at a range of narrower widths.

When considering a de-mount sprayer for a utility vehicle, it follows that capacity and width are a good point to start from. A key is to consider is that a higher capacity sprayer need not always be operated with a full tank, and that selecting a boom that may be able to operate at narrower widths may also increase its versatility.

As a guide, it can pay to look to the uses to which the sprayer will be put and how these uses may evolve. A good example is in the application of a growth regulator to fairways. It is obvious that a larger sprayer will help apply the material in less time, but if that same sprayer is also tasked with working on the greens, it needs to be right for that job too.

Other considerations can make actually choosing what is on offer more complex. It follows that the sprayer is designed to demount from the vehicle, the ease of doing this varying not just between the sprayer itself but to the vehicle to which it is attached as well. It is hardly a surprise to see a Deere ProGator married to a Deere sprayer or

a Toro Workman and Toro sprayer. But there are alternatives that are well worth looking into.

The fact that Ransomes Jacobsen now markets the Smithco range of dedicated self-propelled sprayers is also interesting. This move reflects the growing trend for many utility vehicles to end up spending their lives permanently fitted with a sprayer.

Other demount and sprayer considerations

On paper, it is actually difficult to do a proper sprayer comparison. The best buy is the unit that offers not just the right combination of features but also other vital details. These can include boom visibility - some tanks are tall and make it hard to see the offside extreme of the boom at narrow settings. The filters on some sprayers are spread around, making servicing less easy than it could be. You need to look over a sprayer to appreciate these finer points.

Then there are the controls. Simple mechanical controls are typically easy to operate, more complex automatic controllers initially seeming baffling in what they can offer. But in an increasingly regulated world, the ability to record spray data easily can make the investment in some of the more sophisticated controllers worth considering. Automatic rate control also helps improve spraying accuracy, which in turn can reduce costs.



Basic mechanical controls, with boom section shut-off and pressure gauge, are simple to understand and well suited to applications such as applying liquid feeds.



More advanced electronic controllers make precision spraying more straightforward. The key is to work out what is needed and how receptive the operator is to using this type of system.



Sprayers fitted with a fast flow water intake, such as the John Deere HD200 SelectSpray, may also have the option of specifying an electronic flow meter with auto shut off.

As a starting point, the following may help when considering a new sprayer...

- Centre of gravity. A low tank design may be a better choice when working on slopes
- Boom visibility. From the operators seat, can the extremes of the boom be seen?
- Pump choice. Some sprayers may be offered with a choice of centrifugal or piston pump. Will one design be better for your needs than the other?
- Manual controls. May offer independent boom shut off and will be fine where the main job is applying liquid feeds.
- Automated controllers. Vary in sophistication, but a key plus will be where automated flow rate control is required.
- Booms. Width and ability to operate at narrower width when folded. Ability to fit single or multi-head nozzle holders – triple bodies with standard, lo-drift and high volume nozzles can make life easier when switching between materials.
- Booms. Auto break back useful. Contour following wheels handy over undulating ground.
- Hose reel. A useful extra that can be used to operate a pedestrian boom on delicate turf or spot spray lance.
- Shrouded booms. Useful, particularly when spraying near watercourses and where tight environmental concerns demand minimal risk of spray drift.
- Foam marker. 'Blobs' have increased in popularity.
- Chemical induction hopper. Nice to have, but a low tank fill point will be fine for many users.
- Tank shape. The best designs will ensure the tank can be run completely dry.
- Fast fill point. Worth considering where fast water filling option available. Can have auto cut-off and flow meter.
- Easy clean and flushing. A clean water tank makes it easier to flush the sprayer through when the job is done.

Basic checks to keep spraying accurately

1. Ensure the sprayer is securely mounted to the vehicle and the boom is set so it runs about 50cm from the ground or target.
2. Every day, take out the suction filter and make sure it is clean. Look in the housing and check it is clear. Grease the threads and check the 'O' ring is seated correctly. Hand tighten the filter cap.
3. Remove and check the pressure filter. Again, smear grease over the housing threads. This will help seal the system and reduce the chance of leaks.
4. Pressure equalisation entails checking the pressure remains the same when flow to each boom section is opened and closed. This should always be done before calibrating the sprayer.
5. Grease the PTO shaft and sprayer pump. This should be done on a regular basis when the sprayer is in use and before the unit is first used after a prolonged lay up.



At a special 20%
discounted rate
for all BIGGA
members.

Make sure your wealth stays
with your family after you die

WRITE A WILL

York FM Ltd (BIGGA's pension administrators) offers the following...

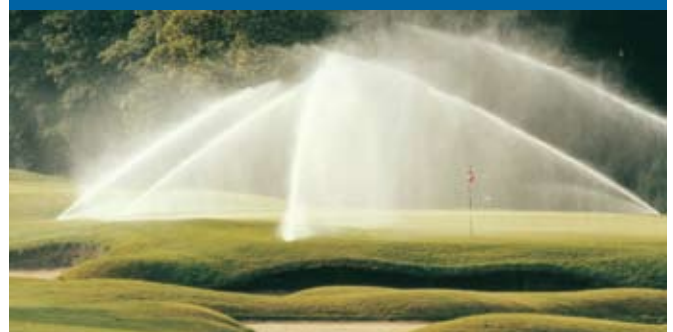
- Will Writing
- Estate Planning
- Lasting Power of Attorney
- Probate Completion



Please call **01904 767377** for details
Contact **Gareth Wigdahl**
or **Graham Carver** for more information

MJABBOTT

LIMITED



IRRIGATION SPECIALISTS

- System design & installation
- Supply of products & spares
- Maintenance & service contracts
- Reservoirs & water management

Bratch Lane • Dinton • Salisbury • Wiltshire SP3 5EB
Tel. 01722 716361 • Fax. 01722 716828
www.mjabbott.co.uk