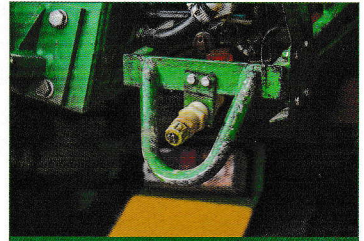




Paul wraps duct tape over this bracket to prevent it from snagging on tall crops.



Up in the cab, Paul uses Trimble EZ-Steer and EZ-Boom to make the most of GPS.



Paul has fitted a nozzle on the end of the right boom to cover areas around poles.

"For grassland and pre-emergence applications, it's a great system," he says. "And when there's tramlines to run on, you can see the end section doing its work."

The challenge of spraying effectively around poles and other in-field obstructions has been met by the addition of a single outward-facing nozzle on the right-hand end of the boom. Operated by an in-cab switch, it allows Paul to extend the spray pattern into these areas, keeping weeds pushed back from the crop.

"The additional nozzle just adds an extra dimension when keeping those isolated areas around telegraph poles and their wire stays, under control."

Currently he uses two sets of wheels and tyres, with the LGP option falling in the lap of Michelin's XeoBib one bar tyre. "Since I've had the Househam on XeoBibs, I've been brought-in to different farms to spray land where others have become stuck," he adds.

Logistically, he says an optimum water rate of 150 litres/ha allows 20ha of coverage per tank fill, and is enough to cover most field sizes and blocked areas of crop. The only drawback with the older self-propelled is its road speed, compared with more modern machines.

"Based where we are, I tend to run inland to reach other customers which means heading back towards and around Colchester so 32km/hr – 35km/hr is a bit steady," he says.

"I do have a 12,000-litre bowser that I use to improve output on potatoes, and a friend of mine hauls it to the more distant fields so I have access to a ready supply of water when working away from home."

Soft well water

Back at Willow Farm, an on-farm well keeps an 18,000-litre holding tank topped-up with soft water, contributing to output and spray performance at peak times. Typically, he says 80 – 100ha/day can be sprayed on a daily basis.

"There's a lot of smaller fields in this area, so a 3,000 litre spray tank has proved to be a useful size – both for areas covered and for overall machine weight," he says.

To make the most of available spraying opportunities – and that includes both ends of the day when light is not always its most generous – he has had additional lighting fitted to the sprayer. But it's not where you might expect it.

"I've had 48 LED lights fitted to the boom – one for every nozzle's working position," he says. "They are absolutely brilliant to help you see the spray pattern."

But there is an additional advantage – illuminating country lanes when travelling in darkness.

"Because of the way the 24m boom folds along both sides of the machine, I can have the benefit of 18 LEDs shining downwards over the outer edges of the sprayer," he says.

"They look just like marker lights down the side of a lorry trailer – and it's a great way to warn other motorists of what's coming towards them."

Who is Dave Bickers?

Dave Bickers runs his own independent crop sprayer service, repair and parts supply business from Ipswich, Suffolk.

He started developing his first nozzle in 2002 – fuelled by frustration: "It wasn't my intention to make a nozzle, but I had a customer who lost a section of a boom as he pulled over on a narrow lane to let a lorry past," he recalls. "His air-inclusion nozzles got snagged on the hedgerow and pulled a section of boom off his sprayer."

"I spoke to a few nozzle firms about this, and they told me it couldn't be done," he says. "So, I thought I'd make a shorter, sensibly-sized air-inclusion nozzle that would fit neatly into a cap – just like a standard nozzle."

In true UK eccentric engineering tradition, he spent long nights in his garage modifying existing air-inclusion nozzles. And when he finally created an air-inclusion nozzle that worked as it should – with a body length up to 25mm shorter than existing designs – he again contacted nozzle companies.

"They just weren't interested so I patented the design myself," he says.