

# **HORSCH**

## *Talking* **Spraying**



### **New Leeb PT**

Flawborough Farms is impressed by the latest Leeb 8.300PT

### **Moving to trailed**

Customers explain why they moved from self-propelled to trailed

### **Getting technical**

The latest sprayer developments that improve performance

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# Performance upgrades impress

The first new Leeb PT starts work at Flawborough Farms.



Since May 2019, a pre-series Leeb 8.300 PT 8,000-litre machine has worked at the family-owned Nottinghamshire farm undergoing final tests.

“We have a great relationship with HORSCH UK. It’s a family-owned business like ours, and the team is always keen to listen and talk,” explained Flawborough Farms partner and farm manager Tom Hawthorne. “We bought the

UK’s first HORSCH Leeb 8 GS trailed sprayer in 2012, having visited the factory and seen the incredible boom stability demonstrated. For us it’s about keeping £2.50 nozzles in exactly the right place to apply hundreds of thousands of pounds worth of chemicals, so having the confidence to operate booms low enough to maintain an ideal nozzle height above the target, even at high speeds, is essential.”



## **Unbeatable boom performance**

“Our experience of BoomControl ProPlus active height control on the trailed sprayer meant we specified it for the latest 8 PT,” added Tom. “It’s so good that the boom rarely touches anything, and the original boom on our trailed sprayer performs as well as it did when new, even after spraying well over 5,000ha per year. We specified 25cm nozzle spacing after discussing its advantages with HORSCH Leeb application systems managing director Theo Leeb. It’s not used all the time as Finer 02



“The superb boom stability allows the ideal height to be maintained whatever the speed.”

nozzles are more sensitive to blockages, and in some situations such as when it's windy, low-drift nozzles at wider 50cm spacing are more effective. But where maximising leaf contact is important, such as when applying pre-emergence herbicides and ear washes, doubling the number of nozzles gives us better results. And, although we spray far less against black-grass now than we used to, when we do the finer nozzles improve results.”

#### Higher work rates

Tom said excellent boom performance improves work rates. “For black-grass treatment we spray low and slow, up to about 12kph, but for most pesticides we average 14–16kph, and for fertiliser up to 20kph. ”

The new sprayer has a 310hp FPT power unit and hydrostatic transmission with hydraulic wheel motors replacing the previous mechanical

system, while also improving fuel efficiency.

Flawborough Farms' machine has optional HighPowerGear wheel motors delivering 18 per cent more torque at the wheels than the PT280, and Tom said its performance is very impressive, improving climbing ability on slopes while higher travel speeds save time.







Operator Lorne Boulton (left) and Tom Hawthorne.

The chassis is new with hydro-pneumatic self-levelling suspension. This allows height adjustment on the move with up to 1.35m clearance available. The boom is parallelogram linkage mounted, replacing the previous mast mounting and improving performance on bumpy ground, while keeping it closer to the rear axle.

The CLAAS-derived cab is quieter than the PT280's, with an improved ride largely due to the new suspension. A new ErgoControl armrest houses the main operating controls including a redesigned multi-function joystick.

### Increased efficiency

Liquid handling is improved, and a new CCS Pro operator station is standard with a touch-pad terminal offering automatic filling and cleaning functions, similar to the PT280 but an upgrade from Flawborough Farms' earlier PT270. The 57-litre induction bowl ensures rapid chemical mixing, and automatic filling programmes include pump speed adjustment between

10–100 per cent, and a pause when the liquid reaches any pre-set tank level allowing time to add complex mixes.

"That's a big advantage," said main operator Lorne Boulton. "Slowing down the fill rate allows time to check the mix is correct and helps avoid errors." Other functions include various wash-out programmes and Lorne said he is still getting used to them. "I use fully automatic tank and system cleaning most of the time which completes each section in a logical sequence," he explained. "The new automatic system is quicker and finishes with the spray lines and nozzles being purged by a high-pressure air blast leaving them clear of fluid."

Lorne said improved suspension gives a better ride and the sprayer feels more stable. "The tank holds enough for 80ha so care is always needed with that amount of liquid being carried, but the Leeb 8 PT handles it better and feels more stable than the PT270, and the extra power from the engine and transmission means performance doesn't vary much whether it's empty or full. The difference between this and the previous model is unbelievable, and it's a better working environment too."

David Williams found out how the new Leeb PT performs. Article reproduced by kind permission of Farmers Guide.

# Leeb PT powers up!

New PowerGear and HighPowerGear gearboxes improves its climbing ability

The new Leeb PT is available with two gearbox versions; PowerGear and HighPowerGear. Both offer improved power application to the wheels over the outgoing PT 280, which was already ahead of the competition. The new transmissions offer infinitely variable speeds from 0-50 km/h and have been specially optimised for the use in the plant protection sector with high efficiency factor in the main working range.

Intelligent all-wheel drive dynamically distributes drive torque to provide the best traction control for every tyre. Larger wheel motors at the rear axle means higher driving power at rear and enables the Leeb PT to manage any terrain easily. For those in very demanding conditions, HighPowerGear has even more torque at the wheel for the highest performance in the field.



Leeb PT maximum climbing ability

"Performance is very impressive, improving climbing ability on slopes while higher travel speeds save time,"

- Tom Hawthorne, Flawborough Farms

## ComfortDrive

The new ComfortDrive chassis concept offer a new level of driving comfort.

The ComfortDrive chassis with central frame and hydro-pneumatically spring-loaded individual wheel suspension is a completely new development. Active level regulation provides superb driving comfort on the road, in the field and on slopes. The wheel hub drive provides automatic load-dependent stepless drive and an anti-slip control.

The front cabin layout optimises weight distribution and the all-new cabin offers excellent visibility and space. The new ErgoControl armrest focuses on simple, safe and comfortable handling of all sprayer function. To guarantee maximum user protection the spacious cabin features Category 4 air filters to clean the cabin air.







# Moving to a trailed sprayer

What are the benefits of moving to a trailed sprayer?  
Five HORSCH customers discuss why they made the move from self-propelled.

“Cleaning out is effective and simple. We can go from Round-Up to fungicide in 30 minutes.”



“We’ve had self-propelled and trailed sprayers in the past and they both have advantages. The LT allowed us to get the best boom technology, increase capacity and keep costs down. Moving to 36m reduced our tramlines, and although we get a little more damage in OSR, we can knock out 60-70 acres in one fill.

“My priority is to get the product where it needs to be, which means keeping the boom low. We have some pretty serious hills and gullies so variable boom geometry is essential. I used to spend most of my time trimming the boom tips; it was like watching a tennis game! With BoomControl Pro I can have central sections up and the end down. I can work at 30cm above the crop and trust the boom to do the job; it works very well.”

User: Bill Spence at  
Swindon, Wiltshire

Model: Leeb 5LT

Use: Spraying

Area: 800ha

Crops: Winter & Spring  
Wheat and Barley,  
Spring Oats and Beans







"I was spraying at 18-19kph at just 25cm off the floor. Only a HORSCH boom can do that."

User: Ed Ford at  
Brentwood, Essex

Model: Leeb 6LT

Use: Spraying and fertiliser

Area: 600ha

Crops: Wheat, OSR, Spring  
Barley and Oats,  
Linseed, Beans

"We wanted to replace our 12-year-old self-propelled, but we wanted a larger tank on the same size chassis. That wasn't available and, with our move to liquid fertiliser, we had a spare tractor so we looked at trailed sprayers. As our zero-till regime allows us to take more weight without compacting the tramlines, we moved from 3000 litre capacity to 6000 litres. The LT not only has a higher output, but I can stay in the field longer and then refill centrally. ISOBUS is amazing, allowing me to drop or pick up the sprayer in 5 minutes. "

"All this has enabled me to streamline the business: I've dropped an engine, made good use of a comfortable tractor, reduced labour requirements and I don't need to replace the fertiliser spreader. Plus, the LT does a great job!"

"We expected it to be good, but the low levels of drift are unbelievable."



User: James Casswell at  
Horbling, Lincolnshire

Model: Leeb 7GS

Use: Spraying and fertiliser

Area: 1350ha

Crops: Wheat, OSR, Spring  
Barley, Sugar Beet and  
Linseed

"We were keen to move away from our old self-propelled and our dealer, CLAAS Eastern, has been brilliant. It was not our intention to move to a trailed sprayer but we're very happy with the machine. The boom stability is amazing. The guys were spraying on a quite windy day and there was no movement under the boom.

"It rides very well and although reversing into corners is more of a fiddle, we can travel more quickly over the rest of the crop so overall there's no loss in time. A move to a 36m boom means less wheelings and the GS tracks well; it's great machine that allows us to operate in a wider range of conditions."





"The LT is so reliable; it has never let us down. In three seasons, we've stopped once for 30 minutes!"

User: Pete Cartwright at  
Revesby, Lincolnshire

Model: Leeb 5LT

Use: Spraying and fertiliser

Area: 1100ha

Crops: Wheat, OSR, Spring  
Barley and Oats,  
Beans, Sugar Beet

"I drove a self-propelled sprayer for 12 years before managing another at Revesby Estates for 5 years, so moving to a trailed sprayer was not a quick decision. You've got to get the chemical where you need it and HORSCH has the best boom on the market. Leeb LT has all the technologies of a self-propelled and, even with buying a decent tractor too, we saw a 20% saving over a self-propelled. We have greater flexibility, less depreciation, saved on extra tractor hire and we can replace the tractor or sprayer independently.

"Drop off is as quick as a trailer. We're seeing less losses in OSR during desiccation as there's fewer parts sticking out and we've put on our own wheels. The LT gives the operator the confidence to keep going, doing that one extra tank knowing he'll be back in reasonable time."

"Our modern tractor can pull the sprayer on little more than tick over, reducing our fuel consumption and lowering our carbon footprint compared to a self-propelled."



"Moving from 7000 litres to 12,000 litres (two Leeb 6LTs) gave us the capacity to reduce to tank refills and the workload for our operators, Graham Crane and Graham Payne. They can now spray crops in a tighter working window and work more effectively at greater distances. On the narrow roads of Norfolk, with overhanging trees, they feel safer with less height and width that a trailed sprayer offers, and the sprayers are easy to drop and pickup.

"Now, with 36m booms, we can tramline in potatoes. HORSCH is not cheap but we knew we wanted the boom and our high-spec tractors and high-spec sprayers, with all the bells, cost less than self-propelled equivalents yet give us more flexibility."

User: Tony Bambridge at  
Marsham, Norfolk

Model: Two Leeb 6LTs

Use: Spraying and fertiliser

Area: 1200ha

Crops: Seed & ware potatoes,  
barley, peas, OSR,  
sugar beet, grass seed





# Optimum nozzle combination

## Theo Leeb reveals his perfect nozzle configuration based on his research

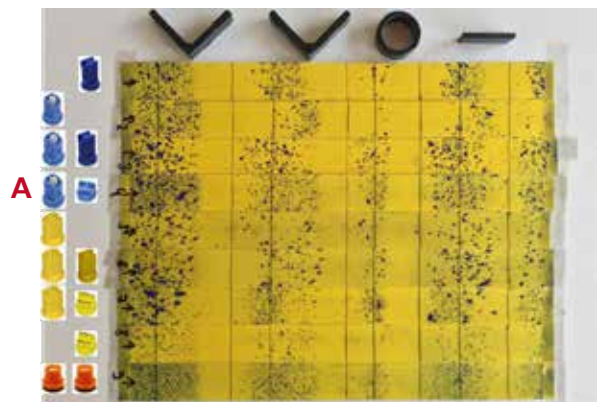
Each Leeb boom technology features Intelligent Application Technology that offers variety of nozzle combination at spacings of 25cm and 50cm. With a 25cm nozzle spacing, the target area distance is reduced to an optimum.

Pneumatic individual nozzle control enables individual and intelligent application with outstanding penetration and wetting of the crop.

Using a test rig (centre right) with angled, round and flat section to mimic soil clods on the surface, the amount of spray that was able to wet the Litmus strip was measured. With a driving direction of left to right, the darker strips show the nozzle combinations where more spray had been able to penetrate the test rig.

“When spraying for blackgrass, for example, it is essential to get under the clods where the young plants live. The most effective nozzle combination is able to target these areas by using microturbulences when hitting the ground and moistens the underside of the clods,” explains Mr Leeb.

The most effective combination (A) proved to be a forward- and rear-facing nozzle at every 50cm with vertical nozzle at every 25cm in between.



In tests, this combination provided the best penetration and wetting.

Forward-facing and rear-facing nozzle at every 50cm

Vertical nozzle at every 25cm between



# Getting technical

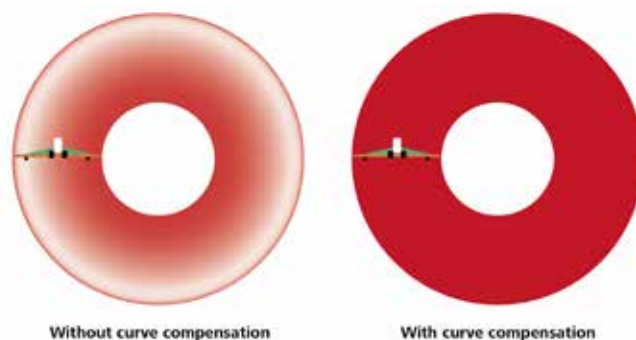
## New HORSCH PrecisionSpray integrates pulse width modulation directly.

Our new PrecisionSpray pulse nozzle system available on all new Leeb PT self-propelled and Leeb LT and GS trailed sprayers from 2020.

“Although pulse width modulation (PWM) has been available for some time from various manufacturers, PrecisionSpray is one of the first to integrate the technology completely into our own HORSCH sprayer software without requiring third-party controllers, making it easier to use.” explains Stephen Burcham, general manager at HORSCH UK.

PrecisionSpray uses the latest generation pulse width modulation nozzle controls to ensure spray volumes are consistent across the field despite variations in sprayer speed or changes in boom speed when turning.

As a sprayer turns, the speed of the boom across the ground is dramatically faster on the outside compared to the inside and this



differential increases the wider the boom width. PrecisionSpray's curve compensation alters the spray volume proportionally across the boom length to ensure the same volume of spray per square metre from the inside to the outside of the turn.

In addition to curve compensation, PrecisionSpray offers stepless adaptation of the volume flow at constant pressure and droplet size and is able to adapt the application rate without changing the spray characteristics.



New in 2021

### Leeb PT Adjustable Track Width

Arriving in 2021, the new Leeb PT will be available with adjustable track width, allowing it to increase from 1.8m to 2.25m at the touch of a button. Quick adjustments improve productivity, allowing the sprayer to move to differing crops easily.





# Take the pressure

ATP Control for intelligent and automatic control of tyre pressure.

HORSCH ATP (Adaptive Tyre Pressure) Control for is available on all Leeb sprayers and enables efficient plant protection while preserving soil condition. Spraying at just the right moment is critical but wet soil conditions can lead to excessive compaction, particularly with larger tanks sizes.

The ATP Control system automatically controls the tyre pressure, via an ISOBUS terminal, depending on the tank level and other parameters, such as driving on the road or in the field. This enables low pressure and large contact area when in the field and high pressure and control for safe driving on the road with the optimum tyre pressure set automatically and easily.



## Leeb TD for maximum capacity!

The tandem-axle sprayer with a 12,000 litre tank capacity is now available.

The Leeb 12 TD is aimed at large farms, those covering large distances or require a high application rate. The tandem axle is an intelligent solution for the load distribution. The boom widths are available up to 42m and derive from the new self-propelled sprayers Leeb 6.300 and 8.300 PT. The ISOBUS operational

concept has been developed by HORSCH and features user-friendly functions that facilitate adjustment, handling and monitoring including nozzle switching with a nozzle spacing of 50cm or 25cm. Together with BoomControl, it allows a 30cm boom height, ensuring optimal plant wetting and an enormous reduction in drift.



# Leeb Sprayer Range

## Leeb PT



- Tank** 6000 & 8000 litres  
Stainless steel
- Boom** BoomControl ProPlus  
18m to 45m
- Clean** CCS Pro

## Leeb TD



- Tank** 12000 litres  
Stainless steel
- Boom** BoomControl ProPlus  
18m to 45m
- Clean** Eco, CCS or CCS Pro

## Leeb GS



- Tank** 6, 7 & 8000 litres  
Stainless steel
- Boom** BoomControl Eco, Pro or ProPlus  
18m to 45m
- Clean** Eco, CCS or CCS Pro

## Leeb LT



- Tank** 4, 5 & 6000 litres  
Polyethylene
- Boom** BoomControl Eco, Pro or ProPlus  
18m to 42m
- Clean** Eco, CCS or CCS Pro

## Leeb AX



- Tank** 4000 litres  
Polyethylene
- Boom** BoomControl Eco or Pro  
18m to 30m
- Clean** Eco or EcoProfi

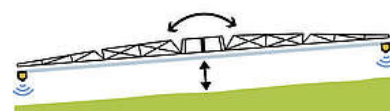
## BoomControl

All HORSCH Leeb trailed and self-propelled sprayers feature our unique BoomControl system for exact sprayer boom positioning. Booms from 21m to 42m are held rock steady at less than 40cm above the crop at speeds up to 30kph, even on hilly terrain.

Three versions are available;

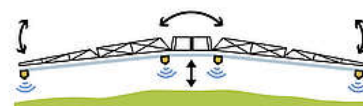
### BoomControl Eco

Boom tilt and height control



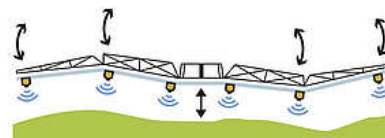
### BoomControl Pro

Boom tilt and height control & variable geometry



### BoomControl ProPlus

Boom tilt and height control & double variable geometry



Visit our website, your local HORSCH dealer or call 01733 667895.

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