

That's the spirit

"I'd estimate we've probably saved 5-10% on seed usage."

GEORGE BAKER



How long does it take to find the perfect drill? One farmer spent three years searching for the ideal establishment tool until coming across the Väderstad Spirit. CPM discovers what makes this drill special and how it's reduced seed use during its first season.

By Melanie Jenkins

Operating a 400ha mixed farm at Foxes Farm in Creeting St Mary, Suffolk, George Baker spent three years looking for the perfect new drill to run on his diverse soils until he came across a Väderstad Spirit.

Working mostly owned land alongside some contract farming, George's aim is to expand the contacting which means having the right tools for the job and in particular, one that's up to operating across variable conditions.

Growing combinable crops such as wheat, barley and beans, George also produces sugar beet, has a poultry unit and beef herd which he runs along with his father, Andrew. "We used to produce pigs, but we've moved away from this and want to push the arable side of the business more."

Using high levels of farmyard manure and pig and turkey muck means George prefers to take a mixed approach to tillage, ploughing where necessary. "It all depends on the year – during

a good, dry year we'll min-till but if it's wet then we'll plough more."

The varied soils he has to contend with also provide a significant challenge. "Our soils literally go from one extreme to the other. We work sand right the way through to clay loam and although this is a challenge, I enjoy it and it helps to spread our workload."

BENEFITS OF FYM

"Drainage has been something we've really tried to work on but I'm positive that because we've spent 40 years putting FYM across every hectare of our land it's really helped us during the past few wet years. When we take on new land we certainly find there's a noticeable difference," he observes.

Another obstacle for George to overcome is tailoring the rotation to manage weed control. "The new herbicide chemistry that's come to the market has certainly helped and supports us to produce more continuous

wheat or increase the amount of barley we grow; we just can't grow oilseed rape due to it being such a gamble.

"Although beans are an option, the value isn't there, so one alternative is to finish our beef animals and establish more grass leys as a break crop."

In an effort to ensure the profitability of the arable side of the business, George has worked hard to drive efficiencies.

"I've always felt that if you look after your



The perfect partner

George Baker spent three years looking for the perfect new drill to run on his diverse soils until he came across a Väderstad Spirit.

soils then they'll look after you. In the past we had a larger suckler herd and a lot of the heavier land was down to grass, which I think has contributed.

"But machinery is getting larger now and while there's a drive towards direct drilling, it only works on certain soil types. Our soils vary so much we just can't commit to it, hence we decided to invest in the Spirit."

The drill arrived on farm in late spring 2024 as an ex-demo machine. "It happened to be on a farm up the road when I saw it, and I liked that it could help us to undertake more variable seeding and potentially allow us to improve seeding accuracy, so decided to purchase it.

"Apparently it's pipped as a light land drill but I've found that it works well on all our soil types and in nearly every different condition, whether it has to deal with straw or ploughed and pressed land – I've even direct drilled some grass seed with it," he notes.

"I knew I wanted to drill well into good seedbeds, so when looking for a drill I started to assess other aspects such as the SeedEye for

accuracy of seed placement and this is largely why I took a bit of a punt on the Spirit," explains George.

"And due to the seed counting technology of the SeedEye, I'd estimate we've probably saved 5-10% on seed usage compared with our previous drill because it's so accurate in its handling," he observes. "I've certainly noticed it's saved seed both in the autumn and the spring."

IMPROVED PRECISION

"Previously, I've used everything I've ordered but I now have several bags left over. I think this is because it's gone from being applied on a metre square basis to only applying the exact amount of seed I want."

But because this is George's first season with the drill, he says he didn't quite trust that the technology would count the millions of seeds it processed accurately enough to reduce his planting rates. "Next season however, I'll certainly reduce them and include more variable seeding in my management. I feel the two will work really well hand-in-hand with this drill and I potentially think it could result



Seed saving

The SeedEye system on the Spirit drill has helped to reduce seed use compared with the farm's previous drill.

in me taking tonnes off the seed order.

"As the saying goes, 'well sown is half grown', and I've never had wheat look as good as what we've planted with this drill. This is despite the fact it's been a very dry year overall. There was one field that was very wet when we drilled it but even there the crop is even across the board."

George likes that the operator doesn't have to calibrate the drill but instead the technology automatically adjusts seed-to-seed or even bag-to-bag, and whether there's a seed dressing or variable specific weight. "The machine works this out itself – it's one heck of a piece of kit." ►



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A closer look

Examining the technical features of Väderstad's Spirit

Väderstad's Spirit 600 is a 6m pneumatic seed drill designed to prepare seedbeds and consolidate seed. The firm's Andrew Gamble highlights that although it's often perceived as a lighter land drill, this is in fact a myth. "We've always attested that it's a medium to heavy land drill but on the heaviest clays it may require further tilth creation so it can close the slot."

The front system features a Disc Aggressive, similar to a Carrier and with the same disc profile, explains Andrew. "This is there to produce tilth, remove weeds, lumps and clods and create a seedbed."

To consolidate the seedbed, staggered wheels then pack ahead of seed placement. The staggered set-up helps to prevent the bulldozing of soil which happens when wheels are lined up, and the wheels are set at a wider width to allow for an improved weight footprint.

The 380mm coulters are hydraulically controlled to produce up to 80kg of pressure, says Andrew. "The double disc system allows for the first disc to cut the slot while the second opens it. The seed is then slotted into the furrow before the shaft so it's not dropped into contaminated



Simple adjustments

The Spirit features a Fenix II metering system which is an electric system to simplify adjustments between seed types.

soil off the back of the disc."

OPTIMUM WORKING

The wide coulter wheels help maintain working depth and the following harrow works between the seed rows to preserve moisture. "I always call the drill a power-harrow combination but we're doing everything mechanically: creating the seedbed, consolidating it, running coulters through this and then pressing behind these – it's a very traditional system," says Andrew.

On the S version of the machine

the 5000-litre hopper is a single tank but on the C models this is split for the combined application of seed and fertiliser, either at 50/50 or 60/40.

The drill features the Fenix II metering system which is an electric system to simplify adjustments between seed types, and connected to the SeedEye system it can minimise calibration, adds Andrew. "The fleeted rollers are simple to change depending on seed type, whether growers are drilling oilseed rape or beans."

The SeedEye system itself will count and calibrate seed on the move, accounting for 100% of the grain weight and adjusting for any inaccuracies. It has real-time blockage monitoring which alerts operators to any obstructions and allows them to make adjustments from the cab, he comments.

E-Services allows wireless access to the machine via an iPad located in the cab whereby operators can monitor every coulter, input maps and control tasks. "It's cross-platform compatible so will work with whatever tractor brand you're operating."

The Spirit also features contouring coulters to improve accuracy on hilly terrain, as well as automatic headland management and half-width shut off, says Andrew. "In addition, the oil is constantly running to maintain pressure, turning on and off when required."



Preserving moisture

The wide coulter wheels on the Spirit help maintain working depth and the following harrow works between the seed rows to preserve moisture.

- The previous drill George ran was a Horsch Pronto and although a similar concept to the Spirit, with discs and rear coulters, it couldn't handle the conditions during the especially wet season of 2017/18. "After this we moved to a mounted Lemken coulters drill and then to a combination setup with the same drill on the back of the tractor. We still have this and use it to drill spring barley, but so far this year we haven't used it at all because the Spirit has been more than capable."

George anticipates purchasing a tine drill for use as a back-up during wet weather, but expects this to only be used when conditions are really bad and therefore nothing else will run. "This past winter we were able to drill everything except 40ha with the Spirit and I'd honestly thought that due to the wet conditions it wouldn't even come out of the shed."

Because he'd previously run a combination drill and knew the Spirit was a similar concept, George was confident the drill would be able to work well across his land. "One thing I liked about the spirit compared with our previous drill was the amount of pressure we could put on the coulters which is up to 80kg. So although

purchasing the drill was a bit of a gamble, I knew it was equipped to do what I wanted it to on our heavier land and with it being a Väderstad, I knew it was going to be a good well-built machine."

And while George had anticipated having to work more of the soil in front of the Spirit, this hasn't been the case. "It does a remarkable job whether it's on our lighter or heavier land."

The Spirit is usually pulled using a Cat Challenger 745 which produces 270hp. "We've also operated it behind a Fendt Vario 718 which has 180hp and did manage to pull the drill in wet conditions. The Spirit is so much lighter than our previous drill, coming in at 5.5t empty it's half the weight of the Lemken. This also means that it's probably costing us at least 20% less to run and we're getting no less drill either."

The kit hasn't been without teething issues, but these have been minimal, he adds. "The only problem has been with one of the folding sensors which is perhaps over-engineered. It sits behind the tyre packer and so clods of mud flick onto it and then the drill wouldn't fold. However, this only required a minor adjustment



Drilling in all conditions

The Spirit has been used to drill autumn and spring crops at Foxes Farm and has proven capable across different soil types.

and was simple and easy to solve."

Overall, George finds the Spirit a well-thought-out machine with a good-sized seed hopper. "I also like that I can use an iPad to set seed coulters pressure and adjust the front tool depth, making the machine really accessible."

As far as producing a return on investment, George argues that because the farm required a stock machine, it's already done this. "I also think that as a Väderstad machine it'll hold its value. Plus running costs are fairly low at the moment and alongside the seed saving, it's already proved its value – I've been very impressed so far." ●

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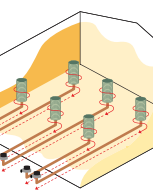
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