



“We will challenge what is today and make it better tomorrow.”



Target: outstanding emergence

Väderstad launches
Väderstad has bold ambitions when it comes to seed emergence and celebrated its 60th birthday with the launch of a raft of new machines. CPM went to Germany to take a look firsthand.
By Melanie Jenkins

It wouldn't be unreasonable to wonder whether there'll come a point where cultivators are as good as they can get, where any changes are simply a case of 'new and improved' marketing spiel. But Väderstad claims it has a tradition of advancing groundworks started by its founders, Rune and Siw Stark, 60 years ago, through marrying both mechanical and technological breakthroughs.

At an international event in Magdeburg, Germany, in early October, Väderstad set out to celebrate its 60th anniversary with the launch a number of new products aimed at taking cultivations and establishment to "new levels".

"We believe that we have a very important job — one of the most important jobs in the world: to make sure all farmers can provide a growing population with food in an efficient and sustainable way. Our aim is to be a world-leading partner in outstanding emergence," announces the firm's CEO, Henrik Gilstring.

Ambition and vision

"In these challenging times, this matters. It's more critical than ever before and we have an ambition and vision for Väderstad. Buying a machine from Väderstad should mean entering into a partnership with us, so we want our machines to be reliable and with accessible service wherever they are sold."

As Henrik points out, being able to use machines to their full potential is down to the concept combined with effective agronomy. "We will challenge what is today and make it better tomorrow."

The company's chief agronomist, Nina Pettersson, outlines future developments based on autonomy and digitalisation, keeping productivity for farmers firmly in mind. "Precision is the key factor in this equation: minimising inputs and the impact of farming and maximising outputs."

This vision of the proverbial 'tomorrow' is echoed by colleague Johan von Mecklenburg: "Tomorrow our machines need to be autonomy ready — performing whether

there's a human in the tractor cab or not."

One action the firm is taking to try to make continual, useful improvements to its catalogue is its on-farm project, which involves trialling and testing its concept and new machines on a 52ha working unit in Lower Saxony.

"The original idea for this project was to just run it in Germany but now there's a lot of interest from other countries and companies," explains Väderstad's Karl-Hubertus Reher. "The site is used for serious farming, for training and networking. A lot of different crops are grown each year, in different ways and



Väderstad aims to be a world-leading partner in outstanding crop emergence, says Henrik Gilstring.

with different machine settings.

"Field trials are conducted with external partners — including Syngenta and Strübe — and these have involved moving from a continuous wheat rotation to a multi-crop one, permanently integrating cover crops and having a machine demo plot throughout the year."

But what about Väderstad's new machine offerings?

Proceed

Väderstad's prototype drill, the Proceed, was presented live to an audience for the first time in Magdeburg, sparking much interest. The Proceed is part of the company's ambition to create "outstanding emergence for plants" and according to the firm's Maria Cornelius, it does this through better seed placement.

"This means even seed placement between the rows, a good distribution of seeds within the row — avoiding too many seeds in one spot — and then there's depth placement. Getting this right is a big part of the challenge to get a uniform emergence," she says.

The Proceed has a two-point linkage and pivot packer to allow for redistribution of machine weight, meaning tyre pressure can

be adjusted and contours can be followed more closely.

The prototype has a 2200-litre capacity seed hopper with two integrated fans. One transports seeds from the hopper to the row units and the other is for singulation within the row units. "Users might think the hopper is a bit small but Väderstad field trials of the Proceed suggest they could lower seed rates and get better results," explains the company's Lars Thylén.

The trailed seed drill offers row spacings for cereals of 225mm or 250mm, but a quick change of the seed discs alters this to 450mm or 500mm for crops such as sugar beet or oilseed rape. Additionally, a further switch means maize or sunflowers can be planted with 750mm row spacings.

The row units are at the heart of the machine, according to Lars. "Prior to seed placement, individual pre-seeding wheels consolidate the field to ensure the same conditions for each seed. These are individually mounted, using hydraulic down-force to ensure high performance."

Once seeds reach the row units, an adapted version of Väderstad's PowerShoot singulation system takes control. Once a seed has left the seed tube, it's received by a stop wheel to optimise seed-to-soil



The Proceed is a prototype drill from Väderstad, aimed at fine-tuning seed placement.



Väderstad's new Inspire seed drill is the first 12m model the firm has produced.

contact, he adds.

"Each row unit is electrically driven and controlled via the iPad-based control system, Väderstad E-Control. Functions include ▶



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The latest disc cultivator from Väderstad comes in the form of its Carrier XL 725 – a 7.25m machine that bridges a gap in the current models.

► row-by-row shut-off and variable rate, dynamic tramlining, individual calibration, as well as real-time precision monitoring and control."

Inspire 1200S/C

The Inspire 1200 is a new seed drill from Väderstad and it's the firm's first 12m model. The Inspire S is a seed-only version and is equipped with a 5000-litre hopper. The Inspire C is a combi version which has a 7200-litre hopper and can hold both seed and fertiliser in separate chambers. After leaving the hopper, seed and fertiliser are mixed in the same airstream and will have the same placement in the coulters.

"You might have to be careful about how much fertiliser you put with the seed but this is a normal challenge for contact fertiliser Björn Jeansson.

The drill has eight distribution towers and the ability to control the seeding output in eight separate sections, with 1.5m per section, explains Björn. "To ensure a constant and even product flow from the large hopper to the seed coulters, the seeds and fertiliser are metered

out from the hopper via eight Fenix III metering units."

Row spacings are set at 12.5cm, with 96 coulters on the machine. Seeding is controlled via E-Control from an iPad in the cab, and this can be connected with an ISOBUS task control system. The machine requires 250-300hp, according to Björn, has a low draft requirement and can fold up to a 3m transport width. The Inspire will be available from the end of 2022.

CrossCutter Disc Aggressive

Back in 2017, Väderstad first introduced its CrossCutter Disc to the market for ultra-shallow tillage at high working speeds, and for 2022 it has launched the CrossCutter Disc Aggressive. This new addition has sharpened TrueCut, cut outs that provide higher penetrative capabilities in challenging field conditions. "These cut outs reduce the surface that the disc has on the ground, and so increases the penetration ability," explains the company's Magnus Samuelsson. "This is needed when conditions might prohibit penetration of the soil."

Working at a depth of 2-5cm,



The new Carrier XT is Väderstad's next generation of compact disc cultivators.

it should move a lot less soil than a conventional disc, according to Magnus. The CrossCutter Disc Aggressive comes in two sizes: 450mm intended for a working depth of 2-3cm with the Carrier range of disc cultivators, as well as 510mm for a working depth of 3-5cm with Carrier XL. Both can be operated at working speeds of up to 20km/h. "The pressure on tillage is here to stay and we see this as a crucial advancement," adds Magnus.

Carrier XL 725

Väderstad's latest disc cultivator comes in the form of its Carrier XL 725 — a 7.25m machine that bridges a gap in the current models, which range from 4.25m to 12.25m. "The machine actually has a working width of 7.1m," says Magnus. "We chose to add this to improve the current range of Carrier XLs and because it should help reduce passes and cut machine-use costs."

Carrier XL 725 is available with 510mm TrueCut discs, CrossCutter Disc or the new CrossCutter Disc Aggressive. To suit different farming needs, it can be equipped with a full range of front tools and packer options, as well as the small seeder BioDrill 360.

According to Magnus, it's important on machines like this to counteract the forces going into it so there isn't movement in the wings at all. "We've made the machine stiffer to improve working depth and have made frame improvements with a strengthened packer parallel linkage."

Carrier XT

The new Carrier XT is Väderstad's next generation of compact disc cultivators, says the firm's Wolfram Hastolz. "There are three different types and three different working widths. It's available in a mounted, mounted galvanised and in a trailed version, and has working widths of 4.25m, 5.25m and 6.25m.

"The Carrier XT is based on the former



Väderstad's farm project in Lower Saxony, Germany, hosts trials and testing of the company's concept and new machines.



The Cultus HD 525 is part of a new family of foldable cultivators from Väderstad.

mounted Carrier X, but we have increased the strength of the mainframe and also of the rings, so it can hold both different front tool options and different runner options at the back," explains Wolfram.

A main feature of Carrier XT is its hydraulically rotating disc axles, he says. "There are two different disc set-ups; a W shape or an X shape. If the machine is equipped with CrossCutter discs or the new CrossCutter Aggressive disc, it always comes in a W-shape to improve the ultra-shallow work result. But if equipped with a 450mm or 470mm TrueCut disc, then it always comes in an X-shape."

Those machines with the CrossCutter disc also come with cylinder protection, for incorporation of slurry.

When it comes to roller options, there's modularity to the frame design, meaning that if a user wanted to change from a single runner to a double runner, it's easily possible, says Wolfram. "A cage runner, single soil runner, a double soil runner, a single steel runner and a double steel runner are available. But the mounted versions come with a double soil runner.

"The machine is easy to fold and easy to set, folding vertically with a hydraulic wing lock," he adds.

Mounted machines come with a Category 3 three-point linkage and trailed machines have two drawbar options; a stiff or a hydraulic drawbar, while users can choose between Category 2 or Category 3 three-point linkage.

Cultus HD 425 and 525

The Cultus HD 425 and 525 represent an entirely new family of foldable cultivators for Väderstad, says the company's Daniel Feilhaber. "Mounted cultivators have a long tradition all over our European markets, and the tractors and demands for mid-sized farms and contractors have grown over the

years. But with the Cultus HD we have the answer to this and to working heavy soils."

Available in working widths of 4.25m or 5.25m, the Cultus HD can work to depths of 30cm and is equipped with three tine axles, resulting in a tine spacing of 27cm.

The heart of the machine is made up of the new heavy-duty tines which have a release force of up to 680kg, allowing the machine to work in a full range of conditions, explains Wolfram. "If a tine meets a heavy obstacle in the soil, it is fully released from the soil to pass the obstacle. When the tine re-enters the soil, it keeps its full power to quickly return to its working position."

The depth is set from the cab and is equipped with a hydraulic wing lock and new leveller adjustment system — called Dynamic Control — to enhance the performance, he explains. "Dynamic Control ensures the levellers are always in the optimal working position and removes the requirement for manual adjustment, so they don't have to be changed when switching working depths. The distance between the discs and tines moves as the depth changes, so working depth alters but the discs only need setting once."

According to Väderstad's Erik Vagbrant, it's the strongest cultivator on the market. "We needed this machine to be as low weight, but as strong as possible. To do this we have tubes in the machine with a bigger outer dimension than most of our competitors," he explains. "This makes the tubes 30% stronger."

The Cultus HD is available with number of roller options: a Single SteelRunner, a CageRunner, a Single Soil Runner or a Double SoilRunner.

Väderstad expects to start delivering the machine from October 2023 and has a limited number of demo models available before then. ■