



Press Release

Alpen and Spelle, September 2025

The experience of autonomous technology – Combined Powers at Agritechnica 2025

KRONE and LEMKEN to showcase practical autonomy solutions together

The focus is on the new generation of the process engineering unit (VTE 3.0), which is part of the companies' joint Combined Powers project and is equipped with intelligent implements for autonomous operation. These two agricultural machinery manufacturers are therefore sending a clear message that autonomous systems offer both practical relevance and viability for future arable farming.

Live at the trade fair and coming soon to a field near you

The VTE 3.0 will be showcased with two work processes at the KRONE stand in Hall 27. Firstly, stubble tillage will be demonstrated with the LEMKEN Karat 10/400 Smart Implement cultivator. The implement will be equipped with iQblue tool monitoring, iQblue flow control and iQblue slippage control for disruption-free operation. Secondly, there will be a demonstration of mowing with the KRONE EasyCut F 400 Fold smart mower. This disc mower features sensors that detect the mower's position (working, transport and headland), as well as any damage. The sensors also check the engine speeds and relief or contact pressure to ensure that the machine functions properly and delivers high-quality results. If the machine is equipped with a conditioner, the sensors also monitor the conditioner tines for damage. Sensor integration already enables virtually disruption-free autonomous use in the field. Both of these implements are examples of the intelligent sensor technology that is being developed as part of the project. They can also be used individually with standard tractors in automatic mode. The smart Karat cultivator can also be seen at the LEMKEN stand in Hall 11.

The environment monitoring capabilities of the VTE 3.0 are based on the intelligent evaluation of laser scanners that are integrated directly into the

carrier vehicle. This design also incorporates findings that are being researched in the context of AI-TEST-FIELD, a collaborative project with Osnabrück University of Applied Sciences and the German Research Centre for Artificial Intelligence (DFKI). The project is funded by the German Ministry of Agriculture, Food and Home Affairs (BMLEH) and the German Office for Agriculture and Food (BLE). AI-TEST-FIELD explores sensor setups with reproducible processes in the real conditions of an agricultural environment. These are then analysed with the assistance of artificial intelligence (AI) and developed further by specialist engineers. Networking with the Combined Powers project allows the insights gained from AI-TEST-FIELD to be transferred to real agricultural machinery and put to the test in genuine field applications. At the same time, findings and data from these trials are fed back to the interdisciplinary AI-TEST-FIELD research team in order to assess the suitability of the research, evaluation and development environment for highly automated agricultural systems.

One system – one vision: going forward together

The first smart implements will be available for use with standard tractors in automated mode in the coming years to reduce driver strain when controlling implements. Combined with an autonomous traction unit, these implements become process engineering units that support autonomous processes. A new concept has been developed for control: the central Human-Machine Interface (HMI), which enables processes to be planned, monitored and controlled on both desktop PCs and mobile devices.

At the same time, the two project partners are working on a joint sales strategy to bring the autonomous units to market from 2028 onwards. This strategy takes into account commercial evaluations, agricultural field sizes and process cost analyses, among other factors. Tools for evaluating autonomous use are already being developed. The traction units will be manufactured at the KRONE factory in Spelle, Germany, while the implements will come from the two companies' respective production sites.

Workshop Live & high-voltage training: electrifying knowledge

The practical relevance of Combined Powers will be further highlighted by an autonomous traction unit and a high-voltage training model, which will be shown as part of the Workshop Live in Hall 2 at Agritechnica 2025. The KRONE training centre in Spelle was officially certified as a high-voltage training centre by the German LandBauTechnik Association in 2024. This will allow commercial workshop staff to qualify as high-voltage specialists in the future – a key requirement for the safe use of electrified systems in the field. This will be crucial for the successful market launch of autonomous solutions.

The KRONE and LEMKEN stands at Agritechnica 2025 will offer a practical experience of the companies' innovative strength and close partnership in the field of autonomous agricultural technology.

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Image 1: There will be a demonstration of mowing with the KRONE smart mower at Agritechnica.



Image 2: The first smart implements will be available for use with standard tractors in automated mode in the coming years to reduce driver strain when controlling implements.



Explanatory video of environment monitoring: <https://youtu.be/aBBN2gUaq4g>