

PRESS RELEASE

July 2025

Nutrients to the point: RAUCH redefines fertilisation in special crops with SpotSpreading

With the SpotSpreading metering system, RAUCH Landmaschinenfabrik GmbH presents a sensor-based innovation that adapts fertiliser application in special crops specifically to each individual plant. Ultrasonic sensors detect the position of trees in real time, whereupon the machine opens the metering slides fully automatically and only supplies the root area of the plants. This high-precision process is controlled by an intelligent control unit that algorithmically evaluates the driving speed, sensor distance and desired fertiliser radii and controls them according to requirements.

Intelligent sensor technology for precise nutrient application

At the heart of this innovation is a sensor system that applies granulated mineral fertilisers or organic pellets only where plants can effectively absorb them, directly in the root area of the tree. This is made possible by ultrasonic sensors attached to both sides of the machine, which scan the terrain up to eight metres to the side. As soon as a tree is detected, the control system calculates the optimal time to open and close the metering slide, taking into account the driving speed, sensor distance and disc position.

A specially developed control programme also allows the exact fertiliser radius around the trunk to be specified – a measurement based on the root structure of the respective tree species. This results in dynamic, tree-specific application – fully automated and highly efficient.

Technological integration at the highest level

The system is based on the proven RAUCH MDS twin-disc fertiliser spreader in combination with an ISOBUS control system. This processes sensor data in real time, regulates metering slide positions and ensures that the desired application rates are maintained at variable speeds. The ability to apply both conventional mineral and organic fertilisers with precision underlines the versatility of the system.

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Economic and ecological advantages in figures

The potential of SpotSpreading is impressive. Under typical operating conditions – approximately 6 m tree spacing and 5 km/h driving speed – up to 44% of fertiliser can be saved. Across all applications, this results in an average reduction of 23%, which not only benefits operating costs but also significantly reduces environmental pollution. Based on 1.3 million hectares of European orchards, this corresponds to CO₂ savings of 43,000 tonnes per year, with no change in yield.

Technological advancement from RAUCH

With SpotSpreading, RAUCH impressively demonstrates its innovative leadership in the field of fertiliser application in special crops. By combining intelligent sensor technology, software-supported dosing logic and practical machine integration, the company once again proves its expertise in realising future technologies that are market-ready and user-friendly. In a market environment that demands both efficiency and sustainability, SpotSpreading sets new standards – both economically and ecologically.

A family company, RAUCH was founded in 1921 and today is an internationally active manufacturer of agricultural and municipal services technology. The headquarters of the company are located in Rheinmünster near Baden-Baden. RAUCH develops and builds high-quality machines for fertiliser spreading and spreading technology for municipal winter services. In addition, RAUCH is an original equipment manufacturer of seed drill technology components. In the 2023/2024 financial year, a turnover of 113 million euros was achieved with 438 employees. Around 72 percent of the products manufactured are exported.

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