



NEWS RELEASE

# Industry's first autonomous spreader debuts at Farm Progress Show

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Case IH and Raven Industries collaborate to deliver an advanced, driverless spreading solution

BOONE, Iowa--(BUSINESS WIRE)-- Case IH and Raven Industries introduce the agriculture industry's first autonomous spreader: the Case IH Trident™ 5550 applicator with Raven Autonomy™. Unveiled at Farm Progress Show 2022, this innovative solution delivers on customers' demands for autonomous equipment to help solve labor challenges and increase productivity on their operations.

The Case IH Trident™ 5550 applicator with Raven Autonomy™ allows for one or more driverless machines in the field without an operator present in the cab, providing the flexibility of full control in or out of the cab. (Photo: Business Wire)

"This is a significant milestone in our accelerated product development efforts between Case IH and Raven, highlighting

our intense collaboration and robust product innovation following CNH Industrial's acquisition of Raven in late 2021," said Scott Harris, Case IH global brand president.

The Case IH Trident 5550 applicator with Raven Autonomy combines proven driverless technology with an agronomically designed spreading platform for a flexible autonomous solution. The technology stack is powered by guidance and steering, propulsion control, perception, and path planning software developed by Raven.

"The core of today's ag tech is rooted in Raven's customer-centric approach: simplifying farming processes to gain tremendous efficiencies," said Eric Shuman, Raven general manager. "This integrated solution empowers customers



to make their operations even more efficient, encouraging them to thoughtfully adopt increasing levels of automation and autonomy.”

From a mobile device, operators can plan and complete an entire field operation based on mapped field boundaries. The Raven Autonomy perception system, through a series of advanced cameras and radar system, is constantly sensing a 360-degree environment around the machine for obstacles and motion initiation while operating. With artificial intelligence, Raven’s perception controller processes the continuous stream of images, which interprets and detects obstacles. The remote operator can view the cameras through the mobile device at any time.

If an obstacle is detected, the machine will safely come to a stop and an alert will pop up on the mobile device. From there, the operator can evaluate the situation and determine the next course of action. A variety of machine tasks and functions can be viewed remotely through the mobile device, including but not limited to fuel level, Diesel Exhaust Fluid level, speed, revolutions per minute (RPM), bin-level status, Universal Terminal information and diagnostic trouble codes.

“The Raven Autonomy perception system provides an advanced, reliable solution for autonomous operation and is tailored specifically for the spreading application with a self-propelled machine,” Shuman said.

This first-to-the-market innovation comes as a result of ongoing research following the Case IH **autonomous concept vehicle launch** in 2016 about the desire for and priority of autonomous technologies. Findings concluded that spreading is among the most utilized autonomous tasks that customers would adopt.<sup>1</sup>

The Case IH Trident 5550 applicator with Raven Autonomy allows for one or more driverless machines in the field without an operator present in the cab, providing the flexibility of full control inside or outside the cab. By operating at a constant speed and with precision, the autonomous applicator provides the ultimate spreading consistency — with no human error — and allows for repeatable performance with sub-inch accuracy.

“The Case IH Trident 5550 applicator with Raven Autonomy allows us to do more work in tight time frames, run our operation efficiently and combat operator fatigue — it’s a huge benefit,” said Brady Fahlman, owner/operator of Fahlman Acres in Holdfast, Saskatchewan, Canada. “Autonomous equipment can perform a consistent job each time, which is very important to me, as we’ve built our farm’s reputation on being flawless and doing high-quality work.”

Raven continues to showcase its commitment to growing ag tech through its Sensing and Perception Program, which focuses on understanding the diversity of data sets for growing its artificial intelligence. This program has expanded to Scottsdale, Arizona, providing the engineering team with direct access to two local testing sites and the



opportunity for more rapid integration and testing capabilities.

The Case IH Trident 5550 applicator with Raven Autonomy will be operating in the North American market with limited availability in 2023.

“This is the first of many integrations that automate the established iron platforms of Case IH as we continue to craft a fully autonomous crop production cycle,” Harris said.

At the Farm Progress Show, and open to the public, the Case IH Trident 5550 applicator with Raven Autonomy will run in the autonomous field demo area from 10 a.m. to 3 p.m. Aug. 30 to Sept. 1, 2022.

For more information, visit <https://info.caseih.com/CIHAutonomy.html> and [www.ravenind.com](http://www.ravenind.com).

1 Forward Group for CNH Industrial, “Autonomy in Agriculture,” May 2022, 515 respondents.

## About Case IH

Case IH is a global leader in agricultural equipment, committed to collaborating with its customers to develop the most powerful, productive, reliable equipment — designed to meet today’s agricultural challenges. With headquarters in the United States, Case IH has a network of dealers and distributors that operates in over 160 countries. Case IH provides agricultural equipment systems, flexible financial service offerings and parts and service support for professional farmers and commercial operators through a dedicated network of professional dealers and distributors. Productivity-enhancing products include tractors; combines and harvesters; hay and forage equipment; tillage tools; planting and seeding systems; sprayers and applicators; and site-specific farming tools. Case IH is a brand of CNH Industrial N.V. (NYSE: CNHI / MI: CNHI).

## About Raven Industries, Inc.

Dedicated to advancing farming through innovation and technology, Raven Industries provides innovative, high-value products and systems that help farmers serve the world. For decades, Raven has been committed to maximizing operational efficiencies for growers. Today, its groundbreaking work in autonomous systems is unlocking new possibilities in farming — driving tractors down the field, wirelessly connecting the office and the cab, and protecting the environment with controlled outputs. Raven is a subsidiary of CNH Industrial (NYSE: CNHI / MI: CNHI), a world-class equipment and services company specializing in Agriculture and Construction.

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