



## AGCO Enters into Targeted Spraying Technology Collaboration Agreement With Bosch, xarvio Digital Farming Solutions Powered by BASF and Raven Industries Inc.

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*Targeted spraying technology can provide a significant reduction in herbicide use in growing crops and fallow ground, as well as night and day applications*

DULUTH, Ga.--(BUSINESS WIRE)--May 28, 2021-- AGCO (NYSE: AGCO), a global leader in the design, manufacture and distribution of agricultural machinery and precision ag technology, announced it has entered into a proof of concept (PoC) collaboration agreement with Robert Bosch GmbH, BASF Digital Farming and [Raven Industries Inc.](#) (NASDAQ:RAVN), with the objective of evaluating targeted spraying technology to make the application of crop protection products more effective and efficient by reducing crop input costs while driving farm and environmental sustainability.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20210528005225/en/>



The targeted spraying proof of concept implemented on Fendt Rogator application equipment with technology from AGCO, Bosch, xarvio Digital Farming Solutions powered by BASF and Raven Industries Inc. (Photo: Business Wire)

To support the reduction in herbicide application, the targeted spraying PoC will focus on real-time sensing technology to make crop protection decisions. By detecting weeds in growing crops as well as on fallow

ground, day or night, this technology will execute precise targeted product placement down to the individual plant level. In addition to the environmental benefits, targeted spraying will help enhance farmer profitability by only spraying the herbicide where needed. This makes the use of more efficient herbicides affordable allowing for much better weed control. Where optimal herbicides are already used, the smart sprayer provides a volume and cost reduction.

The initial concept is being evaluated on a Fendt Rogator sprayer in Europe with plans to extend to North America in 2022.

“Farmers have long been searching for innovative ways to minimize chemical usage and reduce passes through the field to achieve their crop protection goals. Combined with the potential for further regulatory pressure, we believe this collaborative spraying effort advances our farmer-first focus and is further evidence that we will work with the best-in-class partners to serve farmers’ needs. This effort is aimed at validating targeted spraying solutions, delivering a reduction in product use to achieve the same results as broadcast spraying in both pre- and post-emergence with the flexibility of spraying day or night,” said Seth Crawford, Senior Vice President and General Manager, Precision Ag and Digital for AGCO.

Coupled with AGCO’s application equipment expertise, Bosch brings capabilities in hardware, machine learning and artificial intelligence as well as digital services. Xarvio™ Digital Farming Solutions provides an automated, real-time, in field agronomic decision-making engine for weed management and crop optimization. Raven Applied Technology is committed to sprayer efficacy and operational efficiencies that further enable precision control of chemicals for targeted spraying applications.

“Raven is excited for this collaboration. The expertise of each organization will undoubtedly provide industry changing solutions for some of agriculture’s greatest challenges,” said Dominic Walkes, Raven Applied Technology Director of Strategic Initiatives. “This smart spraying proof of concept is the first of many that will aid in advancing solutions for a more sustainable future.”

The combined power of the technologies that this collaboration is focused to deliver will empower farmers to drive greater efficiency in their operations while helping to protect the environment through reduced chemical usage in line with AGCO’s commitment to providing farmer-focused solutions to sustainably feed the world.

### About AGCO

AGCO (NYSE: AGCO) is a global leader in the design, manufacture and distribution of agricultural machinery and precision ag technology. AGCO delivers customer value through its differentiated brand portfolio including core brands like Challenger®, Fendt®, GSI®, Massey Ferguson® and Valtra®. Powered by Fuse® smart farming solutions, AGCO’s full line of equipment and services help farmers sustainably feed our world. Founded in 1990 and headquartered in Duluth, Georgia, USA, AGCO had net sales of \$9.1 billion in 2020. For more information, visit [www.AGCOCorp.com](http://www.AGCOCorp.com). For company news, information and events, please follow us on Twitter: @AGCOCorp. For financial news on Twitter, please follow the hashtag #AGCOIR.

### About Bosch Group

The Bosch Group is a leading global supplier of technology and services. It employs roughly 395,000 associates worldwide (as of December 31, 2020). The company generated sales of 71.5 billion euros in 2020. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology.

As a leading IoT provider, Bosch offers innovative solutions for smart homes, Industry 4.0, and connected mobility. Bosch is pursuing a vision of mobility that is sustainable, safe, and exciting. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source.

The Bosch Group's strategic objective is to facilitate connected living with products and solutions that either contain artificial intelligence (AI) or have been developed or manufactured with its help. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in some 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world.

With its more than 400 locations worldwide, the Bosch Group has been carbon neutral since the first quarter of 2020. The basis for the company's future growth is its innovative strength. At 129 locations across the globe, Bosch employs some 73,000 associates in research and development, of which nearly 34,000 are software engineers.

### **About Bosch Mobility Solutions**

Mobility Solutions is the largest Bosch Group business sector. It generated sales of 42.1 billion euros in 2020, and thus contributed 59 percent of total sales from operations. This makes the Bosch Group one of the leading automotive suppliers. The Mobility Solutions business sector pursues a vision of mobility that is safe, sustainable, and exciting, and combines the group's expertise in the domains of personalization, automation, electrification, and connectivity. For its customers, the outcome is integrated mobility solutions. The business sector's main areas of activity are injection technology and powertrain peripherals for internal-combustion engines, diverse solutions for powertrain electrification, vehicle safety systems, driver-assistance and automated functions, technology for user-friendly infotainment as well as vehicle-to-vehicle and vehicle-to-infrastructure communication, repair-shop concepts, and technology and services for the automotive aftermarket. Bosch is synonymous with important automotive innovations, such as electronic engine management, the ESP anti-skid system, and common-rail diesel technology.

### **About xarvio Digital Farming Solutions – a brand by BASF Digital Farming GmbH**

xarvio Digital Farming Solutions is at the forefront of the digital transformation of agriculture, optimizing crop production. xarvio offers digital products based on a global leading crop model platform, which delivers independent, field-zone-specific agronomic advice that enables farmers to produce their crops most efficiently and sustainably. xarvio products SCOUTING, FIELD MANAGER and HEALTHY FIELDS are being used by farmers in more than 100 countries. xarvio FIELD MANAGER is used by 60,000 farmers (total area of more than 7 million ha) in 17 countries, and xarvio SCOUTING is used by more than 4 million farmers and consultants. For more information please visit [www.xarvio.com](http://www.xarvio.com) or any of our social media channels.

### **About Raven Industries, Inc.**

Raven Industries (NASDAQ: RAVN) provides innovative, high-value products and systems that solve great challenges throughout the world. Raven is a leader in precision agriculture, high-performance specialty films, and aerospace and defense solutions, and the company's groundbreaking work in autonomous systems is unlocking new possibilities in areas like farming, national defense, and scientific research. Since 1956, Raven has designed, produced, and delivered exceptional solutions, earning the company a reputation for innovation, product quality, and unmatched service. For more information, visit <https://ravenind.com>.

### **About Raven Applied Technology**

For decades, Raven Applied Technology has been committed to maximizing operational efficiencies through its innovative agriculture technology. The company's autonomous product suite is an extension of that core. From field computers to sprayer and planter controls, GPS guidance steering systems, logistics technology, and autonomous solutions — Raven provides precision agriculture products designed for ag retailers and growers to remain competitive and profitable into the future. Learn more at <https://ravenprecision.com>.

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