Corteva Agriscience Harnesses Nature to Unlock Plant Disease Resistance

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Research Proves Natural Movement Of Disease Resistance Genes And The Potential Benefit Of Precise Gene Editing Technology To Support Sustainability Practices And Improve Farmer Yields

INDIANAPOLIS, June 12, 2023 /PRNewswire/ -- Corteva Agriscience (NYSE: CTVA) today announced publication of research confirming the natural movement of disease resistance genes within a corn plant's genome. The research has implications for the application of new breeding techniques to reduce the devastating impact of plant diseases while improving yield potential and crop resilience. Published in a recent issue of *Molecular Plant Pathology*, the findings reveal that gene editing tools such as CRISPR can mimic this naturally occurring process, unlocking the ability to relocate multiple disease resistance genes, speeding plant breeding progress, and delivering enhanced high-performing products to farmers.

In March, Corteva announced that the early-stage use of proprietary gene editing technology to address several North American corn diseases was advancing through the company's R&D pipeline. Using CRISPR, the company can precisely co-locate disease resistance traits that already exist within the corn genome. With this recent peer-reviewed research, Corteva demonstrates that disease resistance genes move naturally to help plants fend off attacks from pathogens - but do so very slowly.

"A plant deals with a wide variety of pathogens, prompting its genes to naturally move around in the genome to resist disease and increase survivability," said Wendy Srnic, Vice President Biotechnology, Corteva Agriscience. "However, this natural gene mobility occurs too slowly to effectively address the rapid growth of disease and climate-related pressures facing farmers around the globe. Through our research, we have validated the ability to mirror the movement of genes, enabling us to apply new breeding techniques to deliver seed that can better withstand field-level challenges."

In 2021, Northern leaf blight, Southern rust, gray leaf spot and anthracnose stalk rot combined to cost North America corn growers more than 318 million bushels in production. By leveraging new breeding techniques, Corteva is not only simplifying disease management options for farmers but also improving on-farm sustainability by reducing the need for additional crop protection product applications to help combat disease pressure.

"By innovating with advanced breeding techniques, we aim to create transformational change," added Srnic. "With these techniques, we can harness and replicate naturally occurring processes that accelerate the development of seeds with improved resilience and yield. We are committed to giving farmers more planting choices while continuing to safeguard our natural resources for generations to come."

About Corteva Agriscience
Corteva, Inc. (NYSE: CTVA) is a publicly traded, global pure-play agriculture company that combines industry-leading innovation, high-touch customer engagement and operational execution to profitably deliver solutions for the world's most pressing agriculture challenges. Corteva generates advantaged market preference through its unique distribution strategy, together with its balanced and globally diverse mix of seed, crop protection, and digital products and services. With some of the most recognized brands in agriculture and a technology pipeline well positioned to drive growth, the company is committed to maximizing productivity for farmers, while working with stakeholders throughout the food system as it fulfills its promise to enrich the lives of those who produce and those who consume, ensuring progress for generations to come. More information can be found at www.corteva.com. Follow Corteva on Facebook, Instagram, LinkedIn, Twitter, and YouTube.

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This release contains certain forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended, which are intended to be covered by the safe harbor provisions for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995, and may be identified by their use of words like "plans," "expects," "will," "anticipates," "believes," "intends," or other words of similar meaning. All statements that address expectations or projections about the future, including statements about Corteva's expectations related to regulatory approvals, product development, product offerings and product, financial or sustainability performance are forward-looking statements. Corteva disclaims and does not undertake any obligation to update or revise any forward-looking statement, except as required by applicable law. A detailed discussion of some of the significant risks and uncertainties which may cause results and events to differ materially from such forward-looking statements or other estimates is included in the "Risk Factors" section of Corteva's Annual Report on Form 10-K, as modified by subsequent reports on Form 10-Q and Current Reports on Form 8-K.

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