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Investor News

New predictive seed placement technology delivers strong results in 2018:

Bayer expands digital innovation pipeline at The Climate Corporation to bring breakthrough digital tools to more farmers

Leverkusen, Germany, January 8, 2019 – The Climate Corporation (Climate), a subsidiary of Bayer and the industry leader in bringing digital innovation to farmers, today announced strong harvest results for farmers using Seed Advisor, its new predictive seed selection and placement technology for corn. In addition to Seed Advisor, Climate accelerated 25 innovation advancements in 2018 through its global, digital farming pipeline to provide farmers more data-driven insights to sustainably improve their productivity.

[Announced in the United States](#) in August 2018, Seed Advisor empowers seed dealers with a predictive model that combines the industry’s largest, proprietary seed genetics library with regional seed performance data to help predict the best performing hybrids for each of a farmer’s fields. As part of Climate’s rigorous process for bringing new digital solutions to market, the tool was field tested by a group of farmers and their dealers through the company’s FieldView™ Innovators program across 100,000 U.S. corn acres in Iowa, Illinois and Minnesota during the 2018 growing season. Harvest results demonstrated an average yield advantage of 9.1 bushels per acre versus what the farmer would have planted without Seed Advisor recommendations, with a more than 80 percent win rate.

“It’s a simple tool for farmers who want to see positive results,” said farmer Rick DeGroot of Parkersburg, Iowa. “In 2018, I used Seed Advisor recommendations for 90 percent of my fields, and if my results prove anything, it’s that this technology will be adopted quickly when it’s widely available. I believe The Climate Corporation is the clear leader, and I look forward to more innovations they’ll bring my farm in the future.”

As Climate continues to expand its digital technologies to help more farmers access advanced agronomic insights, it adds new data layers to feed its global R&D engine and enables the development of new features for farmers through its industry-leading Climate FieldView platform.

“Our Seed Advisor results show that by applying advanced machine learning techniques to our robust seed genetics library and expansive field testing, we can help farmers make better decisions about the best hybrids to plant in their fields, ultimately helping them manage risk and maximize yield,” said Mike Stern, Chief Executive Officer for The Climate Corporation and Head of Digital Farming at Bayer. “We have entered the next phase of digital farming, and predictive seed selection and placement is only the beginning. From crop protection to fertility opportunities, we are [expanding our research to strengthen the data science models that power our tools](#), and quickly advancing projects through our R&D pipeline to deliver digital agriculture innovations to more farmers around the world.”

R&D Innovation Highlights

Seed Advisor 2.0:

In addition to expanding the pre-commercial test of Seed Advisor in 2019 to more farmers in Iowa, Illinois and Minnesota, Climate is also growing its seed selection and placement research to include Wisconsin, Indiana and Missouri. Predictive seed research is also underway in soybeans. An official launch of Seed Advisor is targeted for fall 2019 in the U.S., pending harvest results.

Disease Risk & Disease Identification:

Climate is driving towards an integrated, data-driven solution to help farmers protect their crops before yield is impacted. Climate’s disease identification research has added 15 corn and soybean diseases to its portfolio and is expanding into wheat, cotton and specialty crops. Climate has also made significant progress in predicting disease risk in fields before emergence through its advanced disease risk model.

Built on three years of in-field observations, the model forecasted the occurrence of disease more than 80 percent of the time in 2018, and can differentiate mild, moderate, and severe outcomes. Climate’s disease risk model is also helping farmers identify fields that have the highest likelihood of positive return on investment for an application of

fungicide. Expanded field testing with farmers for disease identification and disease risk is planned for the 2019 growing season.

Fertility Scripting:

With fertility prescriptions in FieldView, farmers and their agronomic partners can work together to sustainably optimize productivity through improved timing and rates of nutrient inputs. By capturing key processes that impact nitrogen levels in the field, Climate is currently testing and validating models that identify areas that would benefit from variable rate nitrogen applications. The company is continuing to invest globally to expand research on fertility prescriptions for additional crops, including soybeans, canola and wheat in parts of the U.S., Brazil and Argentina.

The Climate Corporation's mission is to help all the world's farmers sustainably increase their productivity through the use of digital tools. First launched in the United States in 2015, the company's Climate FieldView platform gives farmers a deeper understanding of their fields so they can make more informed operating decisions to optimize yields, maximize efficiency and reduce risk. FieldView is currently on more than 60 million paid acres across the United States, Canada, Brazil and Europe. It has quickly become the most broadly connected platform in the industry and will continue to expand into other global regions over the next few years. For more information, visit climate.com.

About Bayer

Bayer is a global enterprise with core competencies in the Life Science fields of health care and agriculture. Its products and services are designed to benefit people and improve their quality of life. At the same time, the Group aims to create value through innovation, growth and high earning power. Bayer is committed to the principles of sustainable development and to its social and ethical responsibilities as a corporate citizen. In fiscal 2017, the Group employed around 99,800 people and had sales of EUR 35.0 billion. Capital expenditures amounted to EUR 2.4 billion, R&D expenses to EUR 4.5 billion. For more information, go to www.bayer.com.

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