





Solving Weather Riddles

Eric Snodgrass approaches weather forecasting as a daily problem to understand and to solve. The process of continually learning about the weather keeps him intrigued.

Snodgrass got into atmospheric sciences more than 20 years ago because he enjoyed applied math and applied physics. The field has taken him from leading the undergraduate atmospheric sciences program at the University of Illinois; to operating a startup business doing seasonal, long-range weather forecasting; to his current role as science fellow for Nutrien Ag Solutions.

"We are still in the infancy of understanding atmospheric processes and predicting them," Snodgrass says. "Every day there's a new problem to solve."

Much of his position with Nutrien involves helping farmers and others make decisions based on the influence that weather around the world could have on their operations.

"I provide decision support with respect to weather and its risk on production agriculture," Snodgrass explains. "I produce daily weather forecasts and weather briefings that go out all over the world that show folks this is what we've been seeing, this is what we're anticipating seeing, and this is how it might impact the ag world. Primarily, it is a focus on is there going to be any sort of disruption in production, or yield, or operations."

Snodgrass produces audio and video recordings as well as free daily email reports. He also contributes to the direction Nutrien is going with its study of plant nutrition. Snodgrass states that Nutrien is

developing some new tools to assist farmers with that decision making.

Snodgrass will bring his insights and expertise to the 2021 Northern Corn and Soybean Expo. His virtual presentation will focus on lessons from the past that can be applied to farming operations in the future.

"We'll look at the frequency of disruptive events, look at the way 2020 shook out and look at what we have to anticipate for winter," Snodgrass says. "We'll also talk about big climate drivers like La Nina, which is going to dominate the winter here."

Snodgrass will also discuss what's happening in other parts of the world, including weather in South America, that could affect markets for corn and soybeans; how that weather has affected the size of the crop; and what that situation could do for prices. Snodgrass also expects to address severe weather, including hail.

"It's really a walk-through of how weather can be disruptive in agriculture, but weather can also be the



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key to success in agriculture," Snodgrass says.

Snodgrass describes how farmers, commodity traders and others in agriculture are compulsive consumers of weather information and with good reason. Farmers also consume weather information differently than anyone else in the world because that knowledge is an integral part of their planning, not only for their operations, but also for other decisions such as when to market grain.

"What makes agriculture so challenging with regards to weather is that a farmer needs to know what the weather is doing on the 40 acres behind the house and on farmland they own across the county," Snodgrass explains. "They want to understand how their crop reporting district is doing, how the state is doing, how the country is doing, what's going on in Brazil and if there are any long-term things they need to know about to possibly suggest a change in their overall strategy in the time going forward."

Snodgrass recognizes the importance of accurate weather information to agriculture and many other industries. Although predicting weather can be an inexact science, Snodgrass says that forecasting is remarkably accurate given the constantly changing conditions.

"Every morning I wake I up, there's a new problem proposed right in front of me, and it's a fun one to solve," Snodgrass states. "You just hope that, over time, you get better at solving them and more accurate, and more people want to hear you explain your solutions."

—Story by Daniel Lemke, photo courtesy Nutrien Ag Solutions

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