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# Data-driven pest elimination

**Make smarter crop management  
decisions with DTN AP's insights**

By Ben Brame, DTN vice president of agriculture  
product management

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## Enabling better decisions

Technology is an enabler and not a replacement. The goal is not to exchange it for human decisions, but rather to enable better, more efficient decisions with the data. Technology should be a force multiplier, supporting the expertise of farmers and their trusted advisers; it is the human expertise that makes it successful.

DTN Agronomic Platform (AP) is designed to help farmers and their advisers make decisions together that protect yields and profitability through targeted recommendations. It currently provides insect, weed, and disease management advice for soybeans and corn. DTN AP includes tools that help identify in-season problems in time to control them — and it informs optimal control decisions.

With DTN AP, farmers and their service providers can do a better job of scouting — finding more insect, weed, and disease problems during the growing season. When problems are found, they can use its data to decide if applying additional crop protection makes economic sense. It also helps determine the ideal timing of those treatments. As a result, farmers and their advisors can build more effective, trusting partnerships.



In 2018, DTN performed a successful  
corn disease scouting pilot project.







## The integral role of data

Ultimately, the technology and data that DTN AP generates are only as good as the decisions made with them. To maximize the investment, farmers and their advisors must understand how the tools can help them effectively find and act on specific problems. From there, they can create a timely plan, identifying which fields will be scouted, how often, and any key risks.

Data is essential to managing crop production systems. DTN AP's risk models can find more problems in time for farmers to control them. It generates alerts that tell which fields are at risk for specific insects and diseases, as well as the growth stages for optimal herbicide applications.

Its accurate weather and crop growth stage models help prioritize fields, ensuring that producers and advisors visit each field during key growth stages when problems are likely to occur. These alerts are based off of DTN's own large, proven ag weather station network, which provides critical insights for rural areas. DTN AP weather-based risk models can also predict disease susceptibility and combat foliar disease by identifying the ideal timing for post-emergent herbicide or fungicide applications.

Degree-day-based phenology models can help farmers and advisors anticipate insect flights. DTN AP works with DTN Smart Trap; the automated, electronic hardware device detects insects present in fields and wirelessly reports the data. Data can be cross-checked against third-party traps as well. DTN anticipates risks by combining its hyper-local weather station and Smart Trap data with satellite imagery and human observations.

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## Three steps to make the most of data

### Collect & report data efficiently

Data collection should be done through a scouting app and other field and weather sensors. Vet your devices to ensure they provide reliable, consistent data. Select technology that is easy to install and that makes data retrieval easy. Some imagery can help you monitor field health and pinpoint the location of problems. Photos can help confirm what action should be taken, while a scouting app can collect more robust data for compelling reports.

### Use data to make economic spraying decisions

Tools like economic impact calculators support intervention decisions by showing the monetary impact of problems, based on their severity. DTN's calculator takes into account the problem's severity, the farmer's yield goal, and the commodity price to estimate a total cost of the problem. It then compares the figure to the cost of the application, estimating the profitability of the decision. This helps farmers and advisors understand if a control decision makes economic sense for a particular problem.

### Use data to time spraying

When planning an application, review labels so you know the optimum weather conditions for the product. A good forecast source is critical to ensuring the appropriate temperature, wind, and humidity conditions for a specific field. Be aware of sensitive surrounding fields and use an inversion model to further reduce risk — especially for highly-volatile chemistries. Growth stage models can help prioritize fields and ensure application during optimal stages.