

# Co-Alliance helps farmers optimize their yields in three states with environmental monitoring



## Supporting agriculture's next generation with data

### OVERVIEW

Co-Alliance is a service-oriented company supporting agriculture in their local community across Indiana, Michigan, and Ohio. Their services include propane and liquid fuel delivery, agronomy insights, grain contracts, swine production enablement, and more. Overall, their goals are to help area growers maximize their returns and make agriculture accessible for a new generation of farmers. In 2010, they began a major project: to create a comprehensive environmental data monitoring network across their service area that would help all their customers by providing weather and soil data that could be used for growing degree day calculations, nitrogen modeling, and more.

## Overcoming agricultural challenges

Co-Alliance needed a private network of weather stations and soil monitoring sensors that could support their customers in three different states. When they laid a grid over the map of their service area, they realized they would need about 300 individual setups. Of course, these devices needed to be rugged, reliable, and cost-effective to deliver value for Co-Alliance and their customers. Generally, their three main goals were:

### 1. BUILD A ROBUST MONITORING NETWORK

Co-Alliance's two-million acre service area required a rapidly deployable, scalable weather & soil monitoring system.

### 2. CAPTURE ALL THE RIGHT INFORMATION

The solution needed to capture weather data as well as soil temperature and moisture to provide accurate modeling.

### 3. BRING ACTIONABLE DATA TO CUSTOMERS

Weather data from the monitoring network needed to be extrapolated to Co-Alliance's DataOnTouch grower dashboard.



## Using data to empower farmers

The worst thing a modern farmer can do is wait until the harvest to find out how successful they've been. Optimal water and fertilizer use are key to guaranteeing the best possible yield, and it's impossible to optimize without the right data. Weather information, alongside soil moisture and temperature data, can help growers predict their yields with a high degree of accuracy and time their watering and fertilization efforts to maximize return. Co-Alliance partnered with Davis Instruments to get the hardware and connectivity framework they needed to connect their customers with that data.

“We couldn't do what we're doing today without the backend connections we can make using Davis Instruments' API service. The connectivity is a major difference-maker. It's a reliable weather station, and the APIs allow us to bring our data directly to the customer through our app.”

— **Steven Mason**  
Ag Technology Specialist, Co-Alliance

# The Solution: Davis Instruments monitoring tools & data services



## VANTAGE PRO2™ WEATHER STATIONS

Davis' customizable station allowed Co-Alliance and their customers to monitor all relevant weather data with cellular connectivity.



## COMPLETE WIRELESS SOIL MOISTURE/TEMPERATURE STATIONS

By adding a sensor to the Vantage Pro2, Co-Alliance was able to provide customers with accurate data for nitrogen modeling and GDD calculations.



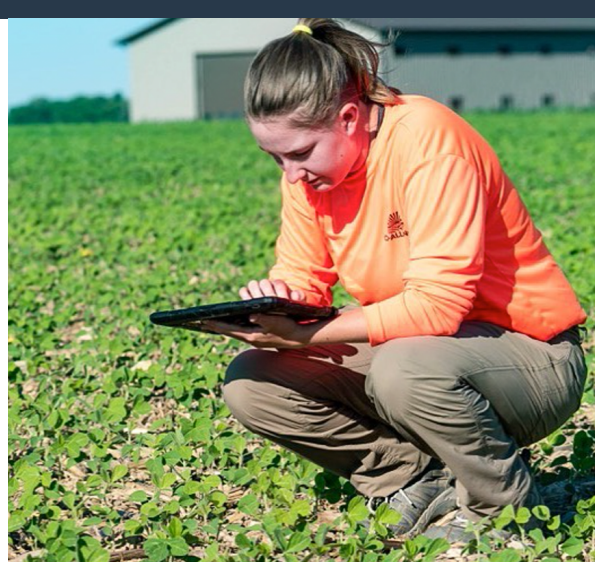
## WEATHERLINK API



Leveraging Davis' API service, Co-Alliance was able to bring data from Vantage Pro2 stations to their DataOnTouch app for analysis and customer viewing.

## Translating AgTech into Ag Profits

Now, Co-Alliance's YieldPro agronomy team can support customers better than ever to maximize the harvest in their service area. Using data from Davis stations, the YieldPro team's growing degree days scouting program can also provide farmers with a better-than-ever glimpse into their exact yield and optimized times for fertilization or watering. High-accuracy soil sensors allow for nitrogen modeling, ensuring farmers can make the best use of their fertilizer while also protecting the community and environment.



## WHY DAVIS INSTRUMENTS

Optimal water and fertilizer use are key to guaranteeing the best possible yield, and it's impossible to optimize either without the right data. Weather information, alongside soil moisture and temperature data, can help growers maximize their watering and fertilization efforts to increase return.

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## KEY BENEFITS

### 1. Affordable high-quality sensors

We provide weather stations, remote telemetry systems, and numerous sensors at accessible prices so farmers of all sizes can practice modern data-powered agriculture.

### 2. Agricultural expertise

We have a dedicated team of agtech experts who can show you how to address farming's biggest challenges using data.

### 3. Actionable insights

Our EnviroMonitor and Mobilize apps turn weather station and sensor data into reports farmers can use to optimize operations.