

WayBeyond™

## CASE STUDY

# Agrícola Chaparral – Late Blight Prevention in Tomato Crops through Data



# Case study overview



## Agrícola Chaparral

Agrícola Chaparral, part of Grupo Chaparral, is a leading agricultural operation in Mexico with a legacy dating back to the 1960s. Specializing in tomatoes, bell peppers, and hot peppers, the company operates three units that set an international benchmark for productivity, quality, safety, and social responsibility.

Late blight, a fungal disease caused by Oomycete phytophthora infestans, poses a significant threat to tomato production in Sinaloa, Mexico. Favorable weather conditions for the disease's development make it especially difficult for farmers to manage. Without access to real-time data, many growers, including Chaparral, rely heavily on reactive measures like regular fungicide applications, which often led to inefficiencies and higher costs.



## The Problem

- Late blight causing significant crop loss and economic impact.
- Lack of access to real-time data to predict the risk of late blight.
- Relying on reactive measures like regular fungicide applications, which can be inefficient and costly.

## The Solution

Agrícola Chaparral implemented WayBeyond's **FarmRoad platform**, deploying it across tomato crops using:

1. The **sensor network** to monitor real-time climate data.
2. FarmRoad's platform for **data analysis** and visualization.
3. **Real-time alerts** notifying the pest and disease team when conditions were ideal for late blight development, allowing proactive actions to prevent the disease.

## The Outcome

- Improved remote crop management decision-making.
- Reduced risk of crop damage from Late Blight.
- Savings in treatment costs.
- Higher yield and quality

# The Problem

## Helping growers to monitor environmental conditions

Late blight affects a wide range of crops and it is a serious threat for tomatoes.

Many farmers lack access to digital solutions that can help them monitor environmental conditions and act before the disease takes hold.

Without these insights, growers face significant risks, often reacting too late to prevent damage.

## Why Prevention is Key

Preventing late blight is far more cost-effective than treating it. Without access to real-time climate data and advanced crop management tools, farmers often face higher costs and environmental impacts from reactive chemical use.



# The Solution

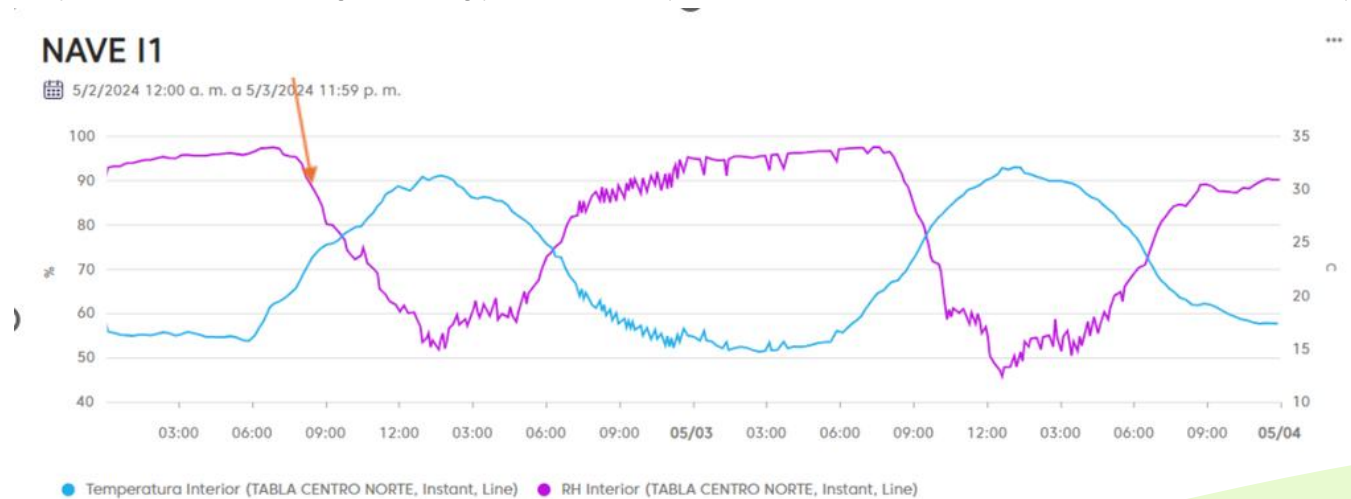
## Partnering with a digital agronomy industry leader

By installing FarmRoad, Agrícola Chaparral received alerts when the ideal conditions for Late Blight infection presented itself. This allowed the team to take action before the disease could spread. Engineer José Luis Noris, head of pests and diseases, applied agrochemicals earlier than usual based on FarmRoad's alerts, effectively preventing the disease.

### Key Actions Based on Data Insights:

- Applied preventive fungicides before the disease could take hold.
- Plant pruning to enhance air circulation and reduce the spread of pathogens.
- Implemented early agrochemical applications, minimizing the environmental and health impact.

Analysis in FarmRoad showing correlating parameters (temperature and RH) which form the ideal climate for the development of the disease.







## **COST SAVINGS:**

**Proactive measures helped save approximately USD 500 to USD 750 per hectare in machinery, labor, and agrochemical costs. This is not including the cost due to potential loss of tomato production.**



# The Outcomes

## A Successful Partnership

WayBeyond's ongoing partnership with Agrícola Chaparral was instrumental in the success of this project. Regular training, and continuous support helped Jose Luis and the Chaparral team get the most value from FarmRoad, improving their crop management practices.

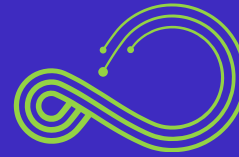
## Key Benefits of Adopting FarmRoad's Crop Management Solution:

1. Cost Savings : Proactive prevention led to reduced disease treatment costs.
2. Environmental Protection: Reduced use of agrochemicals, protecting both the environment and farm personnel.
3. Increased Efficiency: Real-time climate data allowed for better resource allocation and decision-making.
4. Disease Prevention: FarmRoad's alerts helped prevent a potential late blight outbreak, safeguarding crop quality and yield.

Agrícola Chaparral's success in preventing late blight and reducing costs demonstrates the transformative power of digital agronomy solutions like FarmRoad. By leveraging real-time data, the farm enhanced crop management practices, protected both environmental and human health, and significantly optimized its use of resources.







# WayBeyond™

## About WayBeyond

Founded in 2016 and launched in 2021, WayBeyond creates technology for a better world. Its vision is to transform horticulture to enable sustainably grown fresh produce for everyone on the planet.

WayBeyond's integrated digital agronomy solution combines data, artificial intelligence, and plant science, to assist low to mid-tech commercial growers and seed producers to increase production yield and quality. With a clearer picture of their growing environment and plant health, growers can respond to daily farm challenges with certainty, whilst improving growing practices. WayBeyond is a B2B business that advocates The United Nations Sustainable Development Goals, while supporting the next generation of growers through community education programs.

## About FarmRoad

FarmRoad is the integrated digital agronomy solution for protected fresh produce growers. It comprises of a climate and environment sensor network, an app for digital data capture of phenology and scouting information, and a data visualization and analysis platform.



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