

How Can Cloud Computing Help the World's Smallholder Farmers Ward Off Crop Disease and Increase Yields?

Every day, smallholder farmers around the world must look out at their fields and make crucial decisions that could drastically affect their livelihoods. These farmers will also play a critical role in meeting the ever-growing food production needs of our planet. Waterwatch Cooperative's mission is to make essential information about weather, water supply, and crop conditions more easily available to farmers and every other player across the food agriculture value chain.

Working with SAP and using SAP® Cloud Platform, Waterwatch developed the Crop Disease Alert app. The app gathers data from a variety of sources to alert farmers from their smartphones if a given field is in danger – allowing them to act quickly to avert potential disaster. Farmers can also provide feedback, which helps Waterwatch further customize its services to a specific field, crop, or farmer's needs – all for a cost to the farmer of US\$1 per year. The result has been a significant reduction in pesticide use and crop disease for farmers using the app. It is no wonder that Waterwatch is eager to continue the co-innovation partnership and spread use of the app to more than 500 million farmers worldwide – helping support global food security for us all.



“Our Crop Disease Alert app monitors a crop’s growing conditions and the overall environment to detect any change that might cause a specific disease. Farmers are then **immediately alerted via smartphone of any potential threat.** It is really quite revolutionary.”

Ad Bastiaansen, Chairman, Waterwatch Cooperative

The Crop Disease Alert app from Waterwatch Cooperative provides farmers with real-time, reliable, local information and decision support so that they can make well-informed choices on growing their crops and protecting them from disease. This helps reduce reliance on pesticides and increase farmers’ yields and incomes. Data on weather and other crop conditions is gathered from a variety of sources and processed through SAP® Cloud Platform.



First

Continent-wide database on vegetation in Africa



25%

Less water consumption for wineries in Africa using Waterwatch apps



US\$1

Yearly cost for a farmer to use Crop Disease Alert





Co-Innovating with SAP to Develop a Crop Disease Alert App on **SAP® Cloud Platform**



Waterwatch Cooperative
The Hague, The Netherlands
<https://waterwatchcooperative.com>

Industry
High tech

Products and Services
Solutions to support global food security

Employees
10 FTEs

Revenue
€1 million

SAP® Solutions
SAP® Cloud Platform, the SAP Cloud Platform API Management service, SAP Cloud Platform Big Data Services, and SAP Cloud Platform Mobile Services

Working with SAP, Waterwatch Cooperative built the Crop Disease Alert app to alert farmers when their crops are at risk of disease. This helps farmers reduce disease, raise yields, and increase their incomes.

Before: Challenges and Opportunities

- Gather and analyze data on weather, crops, and more from satellites to help predict water shortages and crop disease and to alert farmers before these events happen – helping improve crop yields
- Set up a global network of apps that will allow local companies and universities to take advantage of Waterwatch solutions to reach 500 million farmers worldwide

Why SAP

- Extensive expertise in how high tech can be applied to the agricultural sector
- Robust cloud platform that can process massive amounts of data and enable predictive analytics on demand
- Ability to build powerful mass-market applications that are simple to understand and use
- SAP Cloud Platform API Management to simplify the integration of apps with back-end IT solutions, manage the business entirely in the cloud, and enable a shared revenue model between partners

After: Value-Driven Results

- Speedy action informed by real-time, field-specific data made available to farmers on their smartphones
- Simple interface – traffic light icon for crop disease that shows green (good), yellow (warning), and red (danger – immediate action required)
- Farmer feedback option, further improving and enhancing the data and enabling user-specific services
- Significant reduction in incidents of disease for farmers using the app
- Increased yields and income for smallholder farmers
- More sustainable food agriculture value chain with less pesticide use

“The challenge is making huge amounts of data and very complex algorithms very easy to use. That is the beauty of Crop Disease Alert. SAP Cloud Platform gives us **the power to make it all possible.”**

Ronald Lanjouw, Technology Officer, Waterwatch Cooperative

98%

Reliable data, with 100% reliability close on the horizon

25%–40%

Reduction in incidents of crop disease for farmers using Crop Disease Alert

15%

Reduction in pesticides applied by farmers using Crop Disease Alert



Hear more about how Waterwatch Cooperative and SAP are working to improve the lives of farmers worldwide.



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