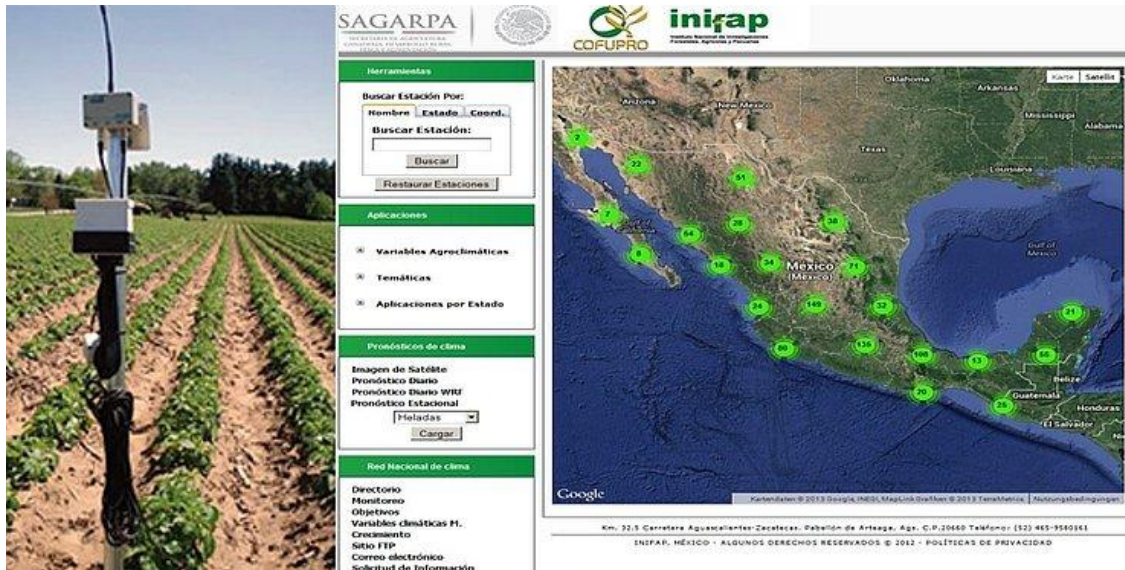


adcon.com Projects Mexico: INIFAP (Ministry of Agriculture) & COFUPRO

Yield prediction and disease advice, frost warning

The National Mexican Weather Station Network



Case Study

Application

Yield prediction
disease warning, so

Location

Mexico

Products developed

Adcon ETO
Adcon rain
Adcon soil i

Contributors

Agrience

Participants

INIFAP (Min

Parameters

Air temperature
Solar radiation
Wind speed
Precipitation
Leaf wetness
In some locations
barometric

Intro

Mexican agriculture is characterised by family farms. Large scale, commercial operations, are the exception, not the rule. Unfortunately small farmers have little access to finance (for lack of collaterals, e.g. insurance), are usually not covered by insurance (therefore no access to credits), and have a hard time to get decent climatological information with relevance to their own micro-climates. These people definitely needed help.

What made the situation even worse was the onset of climate change, which led to frequent and often dramatic crop losses, and the development of renewable energies in the US, with methanol production putting a lot of pressure on corn prices. Something had to be done!

The Task

With this background in mind, the responsible organizations for agriculture and forestry in Mexico, SAGARPA, INIFAP, and COFUPRO, came up with a bold plan: to establish a 1.000+ network of full-fledged weather stations, covering all agricultural areas in all Mexican States, to provide yield forecasts, disease and irrigation advice, frost warning and create a data base to allow for weather index insurance projects. All data should go online, in real time, and be available for anyone, free of charge. A revolutionary project at the time!

The Solution

After conducting a series of extensive comparative tests, ADCON Telemetry, represented in Mexico by [Agrience SA de CV](#), in Hermosillo, became supplier of choice in this project. Major criteria for this choice was the capability of building large UHF networks covering entire provinces with no or bad cell phone coverage, managing these networks automatically from an A840 Telemetry Gateway (the base station at

the time, predecessor of the A850), and feed the data through the internet to the various institutions participating in the project. It was furthermore a must that the stations could be rapidly deployed, could easily be expanded with additional sensors, and would be fully autonomous in terms of energy consumption.

Until now more than 1200 ADCON stations have been established. The measurement network consists of ADCON ETo and ADCON A723 soil moisture monitoring stations

Summary

There are two elements that make this project absolutely unique on a worldwide scale:

- 1) This project is driven by Mexico's major farmers cooperatives as much as by the government. The farmers organizations have recognized the importance of real-time weather data for better managing crops and resources to improve quality and profits. They have therefore offered to share 50% of the cost of this network, with the Mexican government paying the other 50 % - which allowed to make the network much larger as if it would have only been financed by the government. This will also make sure that the output of the stations will be better and faster accepted by the users.
- 2) The government will provide a basic set of data free of charge to everyone. All stations are accessible via the [INIFAP homepage](#) and supply current weather readings, statistical data (daytime lows and highs, average values, precipitation totals). Beyond this farmers can choose to subscribe to INIFAP's consulting services, which will then supply them with historical data and crop specific advice, if so desired.

ADCON Products deployed in this project:

[A850 Telemetry Gateway](#)

[A753 addWAVE UHF](#)

[A751 addRELAY UHF](#)

[A723 addIT UHF](#)

[A753 addWAVE GPRS](#)

[540mA Solar Panel](#)

[Adcon RG Pro](#)

[Adcon TR-1](#)

[Adcon SP-Lite](#)

[Adcon LP02](#)

[Adcon Wind Pro10/2](#)