

Efficient irrigation in potato crop using remote sensing information.

CHILE / ARGENTINA / COLOMBIA / SPAIN / URUGUAY

 Webstory



The technological solution

The monitoring of the development of the potato crop using the satellite vegetation index NDVI allowed to establish a useful crop coefficient to implement the FAO 56 methodology.



Description

The ability of satellite images to carry out frequent monitoring of the crop allows the routine implementation of the methodology known as FAO 56 which, together with the environmental demand of the site, allowed to precisely establish the water consumption of the crop and reach a high productive levels.



Results

The pilot was developed in the Coquimbo region, with an arid climate and environmental demand (ETo) of 437 mm during the development of the crop, which varied between 1.5 to 5.9 mm per day. The meteorological data were accessed from the public network agrometeorologia.cl. Crop monitoring was performed with the NDVI vegetation index available at <https://www.agrisatwebgis.com/app/agrisat/map>. Irrigation was provided with drip tapes and soil water availability was monitored with capacitance probes. Based on the implemented methodology, the volume of irrigation provided was 3,416 m³/ha (in traditional management 4,500 m³/ha) and the yield was 57 Ton/ha (28 Ton/ha regional average), which represents an effective saving of water. and high performance, increasing water productivity (WP) from 5.5 Kg/m³ of the traditional system to 16.5 Kg/m³ with the proposed methodology.

+100 %

Water efficiency

+1

Satellite Agricultural Platform PLAS FONTAGRO

+5

Technological pilot fields

+6

Precision irrigation

+20

Professional training sessions

+6

Regional water balance

ABOUT FONTAGRO

FONTAGRO is a unique cooperation mechanism for agricultural innovation in Latin America and the Caribbean (ALC) and Spain, that works through regional platforms. It is composed of 15 countries that have contributed capital exceeding 100 million dollars and the Inter-American Development Bank (IDB), which is its legal representative.

ORIGIN OF RESOURCES



● **Counterpart contribution**
93.177.555

● **FONTAGRO**
28.989.468

● **IDB**
9.922.700

● **Other agencies**
9.809.078

PARTICIPATION AND ROLE IN CONSORTIUMS SINCE 1998



FONTAGRO IN NUMBERS

193 Number of projects approved

141.9 Approved total amount US\$
MILLONES

9.8 Contribution from other agencies
MILLONES

32 Benefited countries

63 Generated technologies

15 New technologies for ALC

8 Technology of global relevance

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