The Irrigation advisory systems and information and communication technologies
ARGENTINA / NICARAGUA / URUGUAY / HOLLAND / SPAIN

The technological solution
The water balance of crops in real time, using various sources and platforms, will provide answers to decision-making on irrigation scheduling. The innovations will be adapted to the particularities of family agriculture.

Results
The main result of the project is the development of the Irrigation Advisory Service (SAR) platform, which provides an answer to the two basic questions of irrigation scheduling: when and how much to irrigate? The SAR shows, graphically and numerically, the soil water availability. When the soil water content falls below a threshold (which mainly depends on the crop and the soil type), the irrigation alert is given. The simplified version of the SAR gives information that is also useful for monitoring the water status of crops, such as the reference evapotranspiration and the crop evapotranspiration (for the last 30 days and an estimation for the next 7 days), and the crop coefficient of the last 30 days. The SAR has been tested on alfalfa, cotton, strawberry, tomato, pepper and bean. As complementary results, it can be mentioned: the diagnosis of the pilot areas of the project, mainly the irrigation practices; strengthening agrometeorological information networks, through the installation of 6 automatic weather stations, 5 having online access; the use of satellite images for soil moisture estimation through algorithms, using predictor variables such as bulk density and texture of soil, and spectral indices; the bases for scaling up the project were established and its results were communicated through reports, workshops and seminars.

Description
The general objective of the project is to generate a study to identify how to reduce the yield gap of selected crops, by using irrigation schedules adjusted to the water requirements.

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<tr>
<th>6</th>
<th>98</th>
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<tbody>
<tr>
<td>Strengthened institutions</td>
<td>Directly trained farmers</td>
</tr>
<tr>
<td>5040</td>
<td>1550</td>
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<td>Area of influence of the project (hectares)</td>
<td>Potential number of beneficiaries</td>
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<tr>
<td>26</td>
<td>29</td>
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<td>Fields with irrigation recommendations</td>
<td>Knowledge products</td>
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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: 90,549,266
- FONTAGRO: 27,869,468
- IDB: 9,922,700
- Other agencies: 9,479,078

PARTICIPATION AND ROLE IN CONSORTIUMS SINCE 1998

- Member: 193 projects approved
- Leader: 137.8 million US$ approved total amount
- Contribution from other agencies: 9.5 million US$
- Benefited countries: 32
- Generated technologies: 63
- New technologies for ALC: 15
- Technology of global relevance: 8

MEMBER COUNTRIES

- Argentina
- Bolivia
- Chile
- Colombia
- Costa Rica
- Dominican Republic
- Ecuador
- Honduras
- Nicaragua
- Panama
- Paraguay
- Peru
- Spain
- Uruguay
- Venezuela

FONTAGRO IN NUMBERS

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