

# Irrigation alternatives for sustainable management in rice cultivation

COLOMBIA / CHILE / PERU / URUGUAY



 Webstory



## The technological solution

The practice of irrigation management, which includes alternating periods of flooding and rainfed during the phases of non-critical growth of rice AWD (Alternate Wetting and Drying), can increase the efficiency in the use of water and at the same time reduce methane emissions, allowing a good yield in rice cultivation.



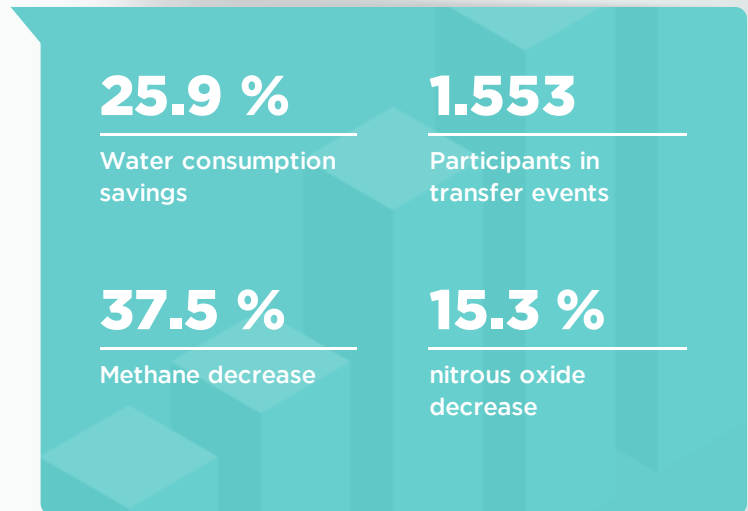
## Description

The future production requirements to satisfy the demand of the next generations implies incorporating new areas, improving productivity and lowering water consumption. Producing more rice with less water will directly affect GHG emissions.



## Results

- Regarding GHG, there are dissimilar results between countries, treatments and evaluation cycles. For Colombia, there were reductions between 66.7% and 98% of the accumulated net flows of CH<sub>4</sub> and of 21.9% and 100% in the accumulated net flows of N<sub>2</sub>O, except in the third cycle where due to the permanent rain conditions there was no decrease ; Chile presented a decrease in methane between 6.7% and 37% and 26% in N<sub>2</sub>O. In the case of Peru, a methane reduction of 37.8% was obtained up to 93% and an increase in the emission of N<sub>2</sub>O.
- There were differences in the reduction in water use with respect to the control: in Colombia, it was between 19.1% and 56.3%, in Chile between 3.4% and 28.8%, and in Peru between 15.5% and 23.2%
- Regarding performance, different results have been found in the evaluated localities, showing in general terms that there are no statistically significant differences.

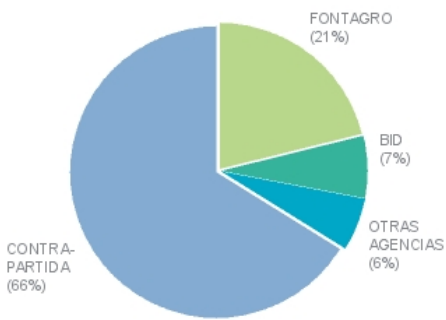


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FONTAGRO is a unique cooperation mechanism for agricultural innovation in Latin America and the Caribbean (ALC) and Spain, that works through regional platforms. It is composed of 15 countries that have contributed capital exceeding 100 million dollars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

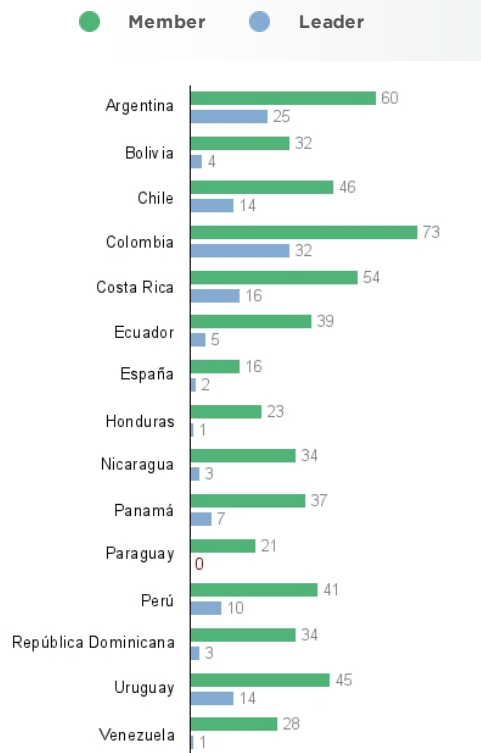


ORIGIN OF RESOURCES



- **Counterpart contribution**  
82.071.247
- **FONTAGRO**  
25.600.468
- **IDB**  
8.906.197
- **Other agencies**  
7.859.078

PARTICIPATION AND ROLE IN CONSORTIUMS SINCE 1998



FONTAGRO IN NUMBERS

**167** Number of projects approved

**124.4** Approved total amount US\$  
MILLONES

**7.9** Contribution from other agencies  
MILLONES

**31** Benefited countries

**63** Generated technologies

**15** New technologies for ALC

**8** Technology of global relevance

MEMBER COUNTRIES

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