

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.



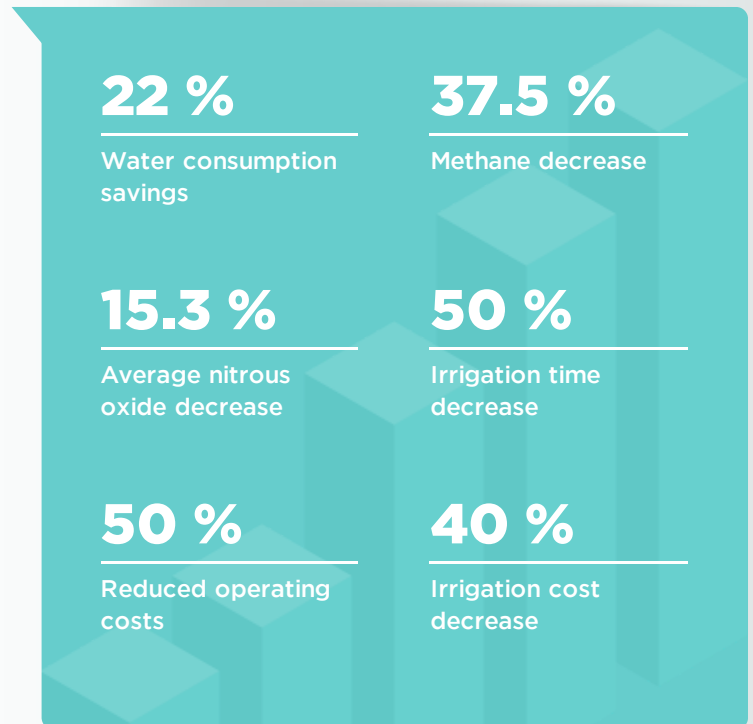
Description

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

- About GHG, there are dissimilar results between countries, treatments and evaluation cycles. For Colombia, there were reductions between 68% and 100% in the accumulated net flows of CH₄ and from 3% to 100% in the accumulated net flows of N₂O, except in the third cycle where, due to permanent rainy conditions, there was no decrease. ; Chile presented a decrease in methane between 16% and 37% and between 8% and 26% in N₂O. In the case of Peru, a reduction in methane from 37.8% to 93% and an increase in N₂O emissions were obtained.
- There were differences in the reduction in water use compared to the control: in Colombia it was between 18% and 42%, in Chile between 3.5% and 28.9% and in Peru between 15% and 23%.
- Regarding yield, different results have been found in the evaluated localities, showing, in general terms, that there are no statistically significant differences between the treatments.



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.

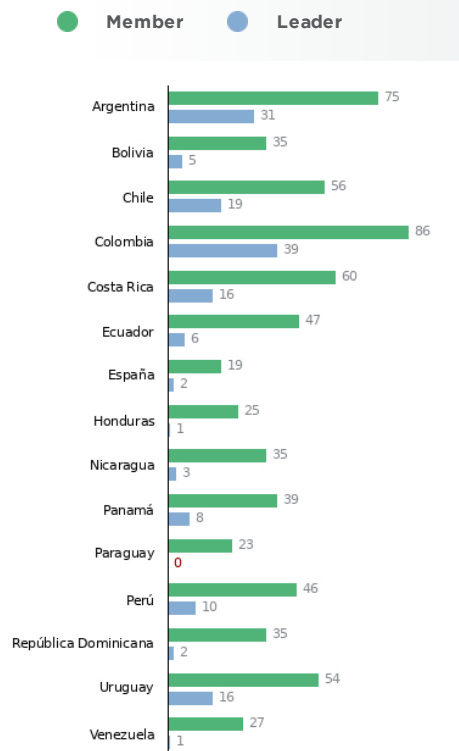


ORIGIN OF RESOURCES



- **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

MEMBER COUNTRIES

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