

# Genomic location of resistance to Yellow Rust and Spot Blotch in Barley

URUGUAY / PERU / SYRIA / UNITED STATES



Webstory



## The technological solution

Identification, characterization and localization of QTLs for resistance to Yellow Rust (*Puccinia striiformis*) and Spot Blotch (*Cochliobolus sativus*).



## Description

A barley population of 330 lines was phenotypically characterized for resistance to Rust and Spot. Genotypic characterization was carried out using 1536 SNPs.



## Results

- 22 QTLs were detected for resistance to Spot and Rust, the majority in genomic regions without previous reports, which allows to conclude that they are new resistances.
- A resistance gene pyramid construction process was started using the already known resistance and some of the new resistance detected.
- A network of collaboration and technical support was consolidated between the project participants and other collaborators.
- Human resources were trained in the use of genomic tools in support of genetic improvement.

9

Yellow Rust resistance QTLs

13

Spot Blotch resistance QTLs

2

Scientific Publications

15

Conference Presentations

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.

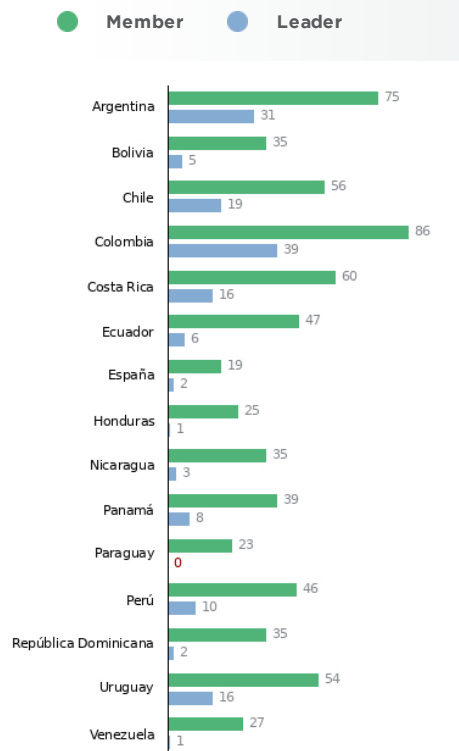


ORIGIN OF RESOURCES



- **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 |          |