

# Management techniques for Cuero de Sapo disease in cassava

COLOMBIA / COSTA RICA / PARAGUAY



Webstory



## The technological solution

The "Cuero de Sapo" disease manifests itself in the roots of the cassava (*Manihot esculenta*) crop. The disease has been reported in Costa Rica since the end of the last century. Its causative agent is a form of bacteria called phytoplasma. The development of techniques to reduce the impact of this disease is important.



## Description

A certified vegetative seed production system was developed by using an in vitro system and thermal cameras to multiply healthy seed at low cost.



## Results

- 40 520 disease-free plants were multiplied in vitro. The material was distributed to researchers and producers.
- It was concluded that the precipitation and temperature are related to the expression of the disease.
- The in vitro system and the use of thermal cameras produced an incidence of 0% of plants with symptoms of the disease.

**503**

Beneficiary farmers

**5**

Thermal cameras implemented

**17**

Publications

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.

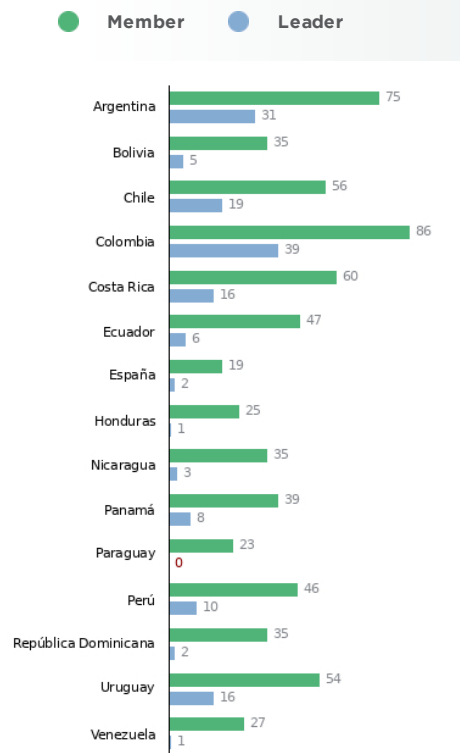


ORIGIN OF RESOURCES



- **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 |          |