

Strengthening the potato production system in response to climate change

Apply potato breeding processes in the Andean region to obtain early maturing and drought-tolerant cultivars, to reduce climate vulnerability and contribute to food security.



Technical cooperation to strengthen genetic breeding programs in the Andean region, reduce vulnerability of family farming to climate change, and promote food security for communities

The implemented initiative

The Colombia, Ecuador, and Bolivia consortium, along with the actors of the potato production chain in the Andean Region, aims to reduce vulnerability to climate change by incorporating new families and advanced clones, with early maturity and resilience to drought, into breeding programs to promote sustainability in food production and enhance food security. For this purpose, advanced clones identified by the International

Potato Center (CIP) will be evaluated in different environments. Participatory genetic improvement programs will be strengthened for material selection and future cultivar adoption. Additionally, a regional genetic breeding platform will be created to promote the use of standardized phenotyping and genotyping method.

Strategies for the evaluation and identification of early maturing and drought-tolerant materials aimed at ensuring sustainable production and food security

The technological solution

The project aims to reduce the economic and food security risks for small and medium potato producers in the Andean region, who are affected by climate variability.

Participatory selection processes will be implemented, involving both men and women in the evaluation of materials adapted to the agroclimatic conditions of each country, with special attributes for consumption, thereby promoting their adoption by farmers.

The incorporation of these new elite lines and advanced materials will reduce production costs by eliminating

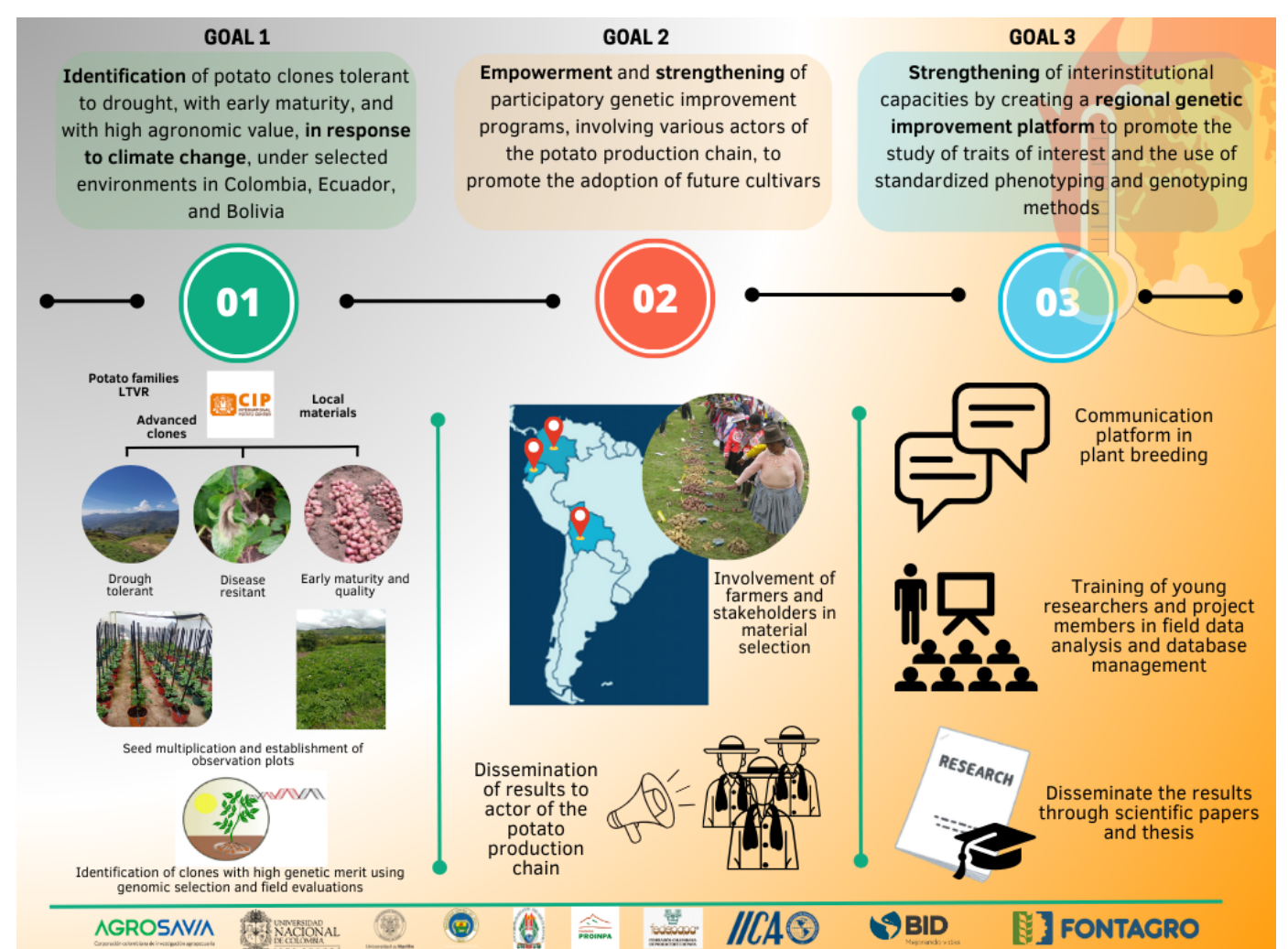
the need for irrigation infrastructure and decreasing the use of labor and agrochemicals.

The goal is to provide farmers with greater harvest security, ensuring that potato production is at least 1.5-3% higher than current cultivars in conditions of low precipitation.

This initiative will also establish a communication platform to promote the generation of knowledge, standardized methodologies, and the exchange of regional experiences.



Project plan



- 5**
It is expected to do trainings
- 3**
It is expected to publish scientific papers
- 3**
It is expected to write thesis
- 350**
It is expected farmers to be involve in Participatory varietal selection
- +3000**
It is expected people training
- +8**
It is expected to select potato clones

Results

It is expected to obtain at least 8 elite clones with drought tolerance, early maturity, and high agronomic value, identified from a group of potato families or progenies and local materials. It is also expected to identify at least 2 advanced clones for multi-environment evaluations, future variety registration, and/or as parents in the next breeding cycle in each of the countries breeding programs. The aim is to promote the use of participatory selection methodologies

through integrative analyses that highlight the role of the farmer in selecting promising materials, as well as the interaction among member countries and the use of common methodologies. Finally, training and mentorships will be promoted through the training of project-associated researchers, students, and members of the potato production chain, through five virtual workshops, three thesis, three journal papers, and dissemination events of project results.

MÁS INFO



Main donors

Participating Organizations

