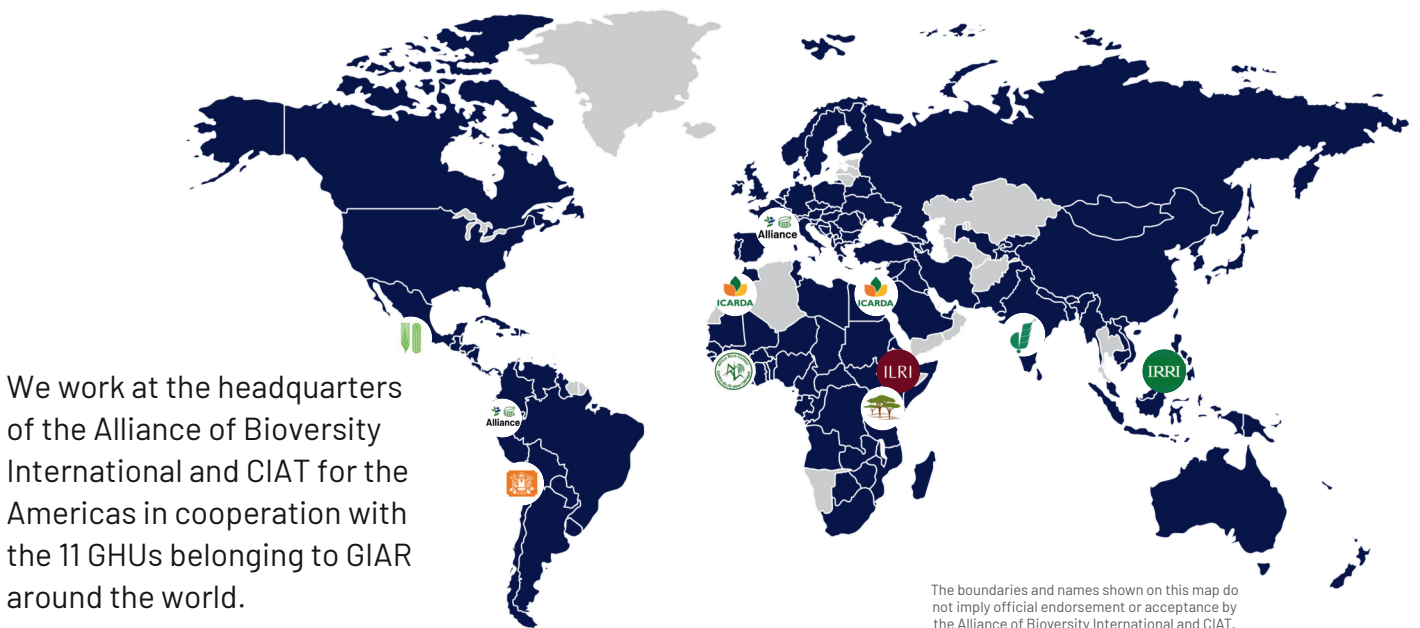


Goal

The Germplasm Health Unit of the Alliance of Bioversity International and CIAT is responsible for ensuring and safeguarding the phytosanitary quality of bean, tropical forages, cassava, and rice germplasm through the detection of quarantine pathogens such as fungi, viruses, bacteria, phytoplasmas, and nematodes. This is aimed at promoting safe conservation and responsible germplasm movement, both from the genebank and the Alliance's breeding programs, which distribute materials regionally and globally with a focus on agricultural research and food security.



Where we work



We work at the headquarters of the Alliance of Bioversity International and CIAT for the Americas in cooperation with the 11 GHUs belonging to GIAR around the world.

The boundaries and names shown on this map do not imply official endorsement or acceptance by the Alliance of Bioversity International and CIAT.

How we do it



We verify the phytosanitary status of the germplasm distributed by the Genetic Resources Program and other Alliance programs (beans, tropical forages, cassava, and rice), both nationally and internationally.



We carry out research to standardize and implement new diagnostic methodologies that are more sensitive and efficient, promoting training activities and knowledge exchange with national and international entities.



We work under the guidelines of the National Plant Protection Organization and in strict compliance with high international quality standards, as well as monitoring parameters of validation entities and development of tests for the diagnosis of quarantine pathogens (i.e., International Seed Testing Association – ISTA).



We promote the strengthening of capacities and the development of staff skills through collaborative projects between GHUs supported by a quality management system based on the ISO/IEC 17025:2017 Standard to guarantee the uniformity of our phytosanitary diagnostic work.

The impact



Over the course of 10 years, we have evaluated the phytosanitary status of approximately 39,000 bean accessions, 10,800 tropical forage accessions, and 16,300 cassava accessions from the resource program and other alliance programs.



We carry out early detection of pathogens in the regeneration fields of the genetic resources program through phytosanitary monitoring.



We provide national and international training on our diagnostic methodologies within the alliance, CGIAR centers, academic institutions, and plant protection authorities.



We contribute to the scientific dissemination of pathogen detection and identification methods developed and/or optimized in the laboratory through participation in congresses, technical-scientific activities, and national and international phytosanitary programs.

Actions for innovation

We are a laboratory registered with the National Plant Protection Organization—in the case of Colombia, the Colombian Agricultural Institute (ICA). We have the technical capacity to detect more than 110 pathogens that affect germplasm health.

We actively contribute to the cleaning and phytosanitary processes of the in vitro cassava collection, with a specific focus on the detection and identification of contaminant bacteria that may arise during the propagation and conservation of germplasm.



Harmonization of key points between the CGIAR germplasm health units for continuous improvement of the quality management system



Application of next-generation sequencing (NGS) techniques for characterization of phytopathogens



Implementation and validation of more sensitive detection methods



We verify the phytosanitary status of the germplasm distributed by the Genetic Resources Program and other Alliance programs (beans, tropical forages, cassava, and rice), at both national and international levels

Our Partnerships



To know more about the program, visit us:



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