

Goal

The Rice Pathology Lab at the Alliance of Bioversity International and CIAT, Americas Hub, is part of the rice team strategy which main goal is contribute to a more sustainable crop production in LAC. The focus of our research is to support the selection of resistant germplasm to the most economically relevant diseases affecting rice production in LAC, contribute with data for other global emerging diseases, and to train partners on disease diagnostic and field assessment. To accomplish this goal, our Lab performs systematic controlled pathogen characterization, adapt phenotyping tools to the demand, and updates information about variety performance at production zones, and design research activities to respond to the necessities of rice breeders and ultimately the farmers.



Where we work

Colombia



How we do it

- **Pathogen characterization and selection for rice germplasm testing:** Target diseases are defined in conjunction with the breeding program based on the necessities at the production zones. The most relevant diseases for our research are Rice Blast and Panicle Bacterial Blight.
- **Germplasm Evaluation under artificial conditions:** Pathology Lab tests rice germplasm under greenhouse conditions with two main purposes, select parents resistant to specific diseases as Panicle Bacterial Blight caused by the bacteria *Burkholderia glumae*, and confirm station-based resistance against multiple races of rice blast caused by the fungus *Magnaporthe oryzae* on the best advanced lines obtained by the breeding program.
- **Resistance validation under field conditions:** Greenhouse screening is validated in field by collaboration with different partners at Colombia and LAC.
- **Multi-Stress Resistance :** Resistance to diseases is considered under natural scenarios where climate is a relevant force driving the plant-pathogen interactions. Internal collaboration with other alliance research groups, academia, and other research institutions are contributing to the development of holistic solutions and broader impact products.

Our partnerships



Technologies



Greenhouses are equipped with humidification systems.



A dedicated microbiology laboratory with pathogen collections.



Basic macroscopy setups for pathogen isolation, purification, and downstream processing.

To know more about the program, visit us:



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