

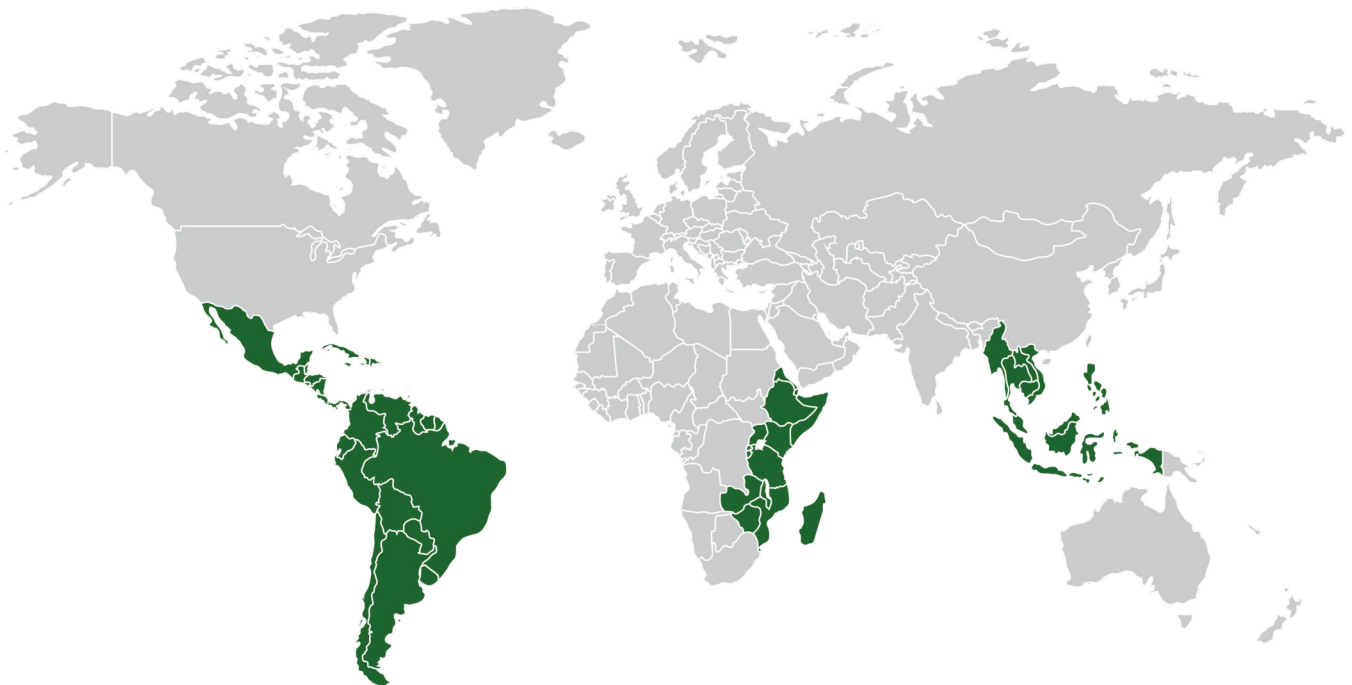
Goal

Generate knowledge on soil-plant-microbe interactions in tropical forage systems using molecular and biochemical tools to assess their impact on soil health, nutrient cycling efficiency, and environmental mitigation.



Where we work

Tropical regions of Latin America, East Africa, and Southeast Asia, supporting sustainable livestock initiatives based on tropical forages.



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

- DNA extraction from soil, root, and ruminal fluid samples for microbial community analysis.
- Quantification of functional microorganisms using qPCR.
- Assessment of soil nutrients, focusing on nitrogen (N) and phosphorus (P).
- Analysis of soil organic carbon dynamics, including SOM, SOC, POC, MAOC, and POXC.
- Measurement of soil enzymatic activity.
- Determination of mycorrhizal colonization and biological nitrogen fixation.
- Support for studies evaluating the impact of tropical forages on soil health.

The impact



Scientific evidence on how tropical forages improve soil functionality and reduce environmental impacts.



Identification of forage species and management practices that enhance carbon sequestration and microbial diversity.



Support for climate-resilient livestock strategies and the regeneration of degraded soils.

Innovations:



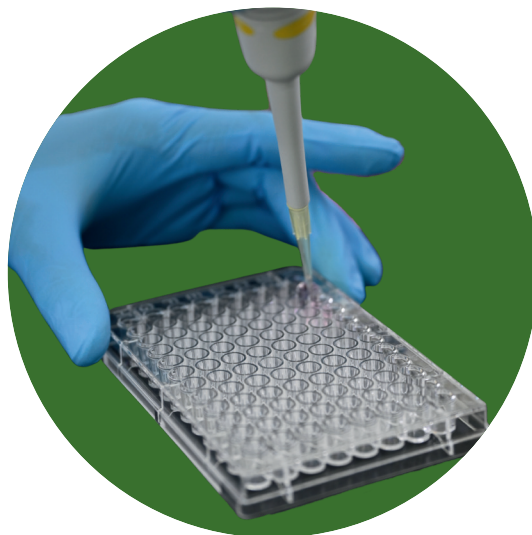
Application of standardized, cutting-edge methodologies to produce robust scientific evidence on soil health.



Identification of forage species and management practices that enhance carbon sequestration and microbial diversity.



Support for climate-resilient livestock strategies and the regeneration of degraded soils.



Our partnerships



To know more about the program, visit us:



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