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Integrating science-based evidence for the formulation of policies to scale up the use of bio-inputs in tropical agricultural systems

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Abstract

Tropical agricultural systems are generally characterised by low productivity compared to those of temperate regions and there are considerable scientific evidence as to how the use of bio-inputs (bio-fertilisers and biopesticides) reduce productivity gaps of tropical systems while responding to food security and nutrition, reduce GHG emissions, and conservation of ecosystem services. However, while there is evidence of the positive impacts of the use of bio-inputs on food systems, at the regional level, there are many barriers for scaling up the commercial use including: the challenge of transforming the agricultural technological-productive matrix to reduce the use of agrochemicals, comply with market regulations and promote environmentally friendly technologies.

Latin American and the Caribbean (LAC) countries are endowed with such a wealth of natural resources that the region is positioned as a potential world breadbasket. One of the essential resources for sustaining agricultural production is soil, which has physical, chemical and biological characteristics that are the basis for agricultural production and for providing the ecosystem services necessary to sustain life on the planet. In the tropics, soils are affected by high or very high severity of degradation (about 48 % in the Caribbean, 50 % in Mesoamerica). Management and quality of inputs added to the soil are key for soil health and regenerative agriculture.

Bio-inputs are a nature-based solution containing live microorganisms such as beneficial bacteria and fungi that improve soil health and promote biodiversity. While the region presents regulatory gaps for accelerate the adoption of bio-inputs and maximise their positive impact, on-farm production is a phenomenon that is positioning itself more strongly in the region. An innovative example is Argentina, which has created the category of biopreparations to address legislative limitations and facilitate the official registration of biological products of family farming. Governments, public and private sectors in the region are recommended to work on and strengthen regional cooperation in nomenclature, registration requirements, biosecurity standards and quality assurance.

This poster presents information on IICA´s work using scientific evidence to promote policies on the use of bio-inputs in tropical systems.

Keywords: Bio-inputs, LAC, policies, science, soil health, tropical agriculture

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