FONTAGROTECH

Biologicals: Evidence for their adoption

COLOMBIA,URUGUAY,ARGENTINA,ARGENTINA,ARGENTINA,ARGENTINA,ARGENTINA,COLOMBIA,ARGENTINA,COLOMBIA,COSTA RICA,ARGENTINA,ARGENTINA

Webstory

Technological solution

The technological solution consists of a model for validating, measuring, and transferring the use of bioinputs in strategic production systems. Demonstration plots will be established in Colombia, Argentina, and Uruguay to compare producers' conventional management practices with an integrated management approach that incorporates quality-verified bioinputs and reduces the use of chemical fertilizers and insecticides.

Technological description

The solution is based on establishing demonstration plots in key production systems: crucifer crops in Colombia, grapevine and tomato in Argentina, and soybean and wheat in Uruguay. In these plots, conventional farmer practices will be compared with an integrated management program that incorporates quality-assured biologicals and reduces the use of chemical fertilizers and insecticides. Key indicators such as carbon footprint, environmental impact coefficient, microbial communities, and crop productivity will be measured. All this scientific evidence will be systematized and incorporated into a new PHB module featuring interactive tools, resource repositories, and networking capabilities. Finally, the solution includes outreach events and field days to transfer validated methodologies directly to producers.

Impacts and results

Compared to the initial context of high dependence on agrochemicals and uncertainty, the project is expected to empirically demonstrate that the use of biologicals can reduce the need for synthetic fertilizers by up to 50% and lower application costs, while increasing crop yields by up to 20%. Environmentally, improvements in soil quality and a measurable reduction in carbon footprint will be achieved. In terms of capacity building, the information gap will be addressed by training at least 2,500 direct beneficiaries and 5,000 indirect beneficiaries (producers, technicians, and academia) through the PHB platform and extension activities. By transforming research into accessible evidence, resistance to change will be reduced, facilitating the large-scale adoption of biologicals and positioning the region toward carbon-neutral agriculture.

+ 12
Workshop

~ 50
Technical digital documents

9
Evaluated plots

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