

Colombia and Ecuador work on sustainable agro-production, based on the synthesis of nanofertilizers

The project proposes to establish a knowledge-intensive agricultural system, emphasizing productivity and sustainability, where innovation plays a central role.



Support for agricultural producers with new technologies and production methodologies.

The implemented initiative

The purpose of the project is to identify the most efficient formulations and doses of nanofertilizers, in order to propose a production and commercialization

scheme for nanofertilizers, with technical support, training and socialization of the technologies.

Quantify the use of nanofertilizers in fertilization efficiency.

The technological solution

Synthesize and characterize titanium dioxide, zinc oxide and zeolite nanofertilizers to evaluate their effect on

fertilization, nutrient use and nitrous oxide emissions.



500
Producers who apply nanofertilizers.



1500
Producers to be trained.



48
Projected experimental plots.

MÁS INFO



Results

- Images and histograms with particle sizes of the synthesized nanofertilizers.
- X-ray diffractograms and XPS spectra.
- Categorization with the environmental impact of nanofertilizers on a terrestrial organism under laboratory conditions by means of the average effect concentration (EC50) of the nanofertilizers evaluated.

- Evaluation of the increase in nutrient uptake and nutrient use efficiency of plants with the addition of nanofertilizers.
- Evaluation of the effect of the nanofertilizers on the physical, chemical and biological characteristics of the soil.
- Publication of a scientific articles.

