#### IDIAF, INSTITUTO DOMINICANO DE INVESTIGACIONES AGROPECUARIAS Y FORESTALES, REPÚBLICA DOMINICANA

# More productive and efficient organic banana as small growers become more digital

Technologies to reduce losses due to red spot and increase productivity by improving soil health are being made available to banana families through the Ma \$ Banano application that facilitate data recording and analysis



Observations and data taken routinely to guide continuous improvement and facilitate benchmarking

### The implemented initiative

Research teams in the Dominican Republic, Peru, and Ecuador are designing a monitoring routine to register the implementation and effectiveness of the integration of soil health and red spot management practices into the banana production calendar. Indicators observed monthly, every three months, and yearly supports continuous improvement by growers who identify their opportunities to improve. Based on the performance parameters across all their growers, the associations can leverage benchmarking, a strategy that encourages improvement by proposing comparisons among growers, especially those with above-average numbers

Smartphone App Ma\$ Banano to guide the more timely implementation of bunch bagging and banana residue and fertilizer management aimed at reducing losses to red rust thrips and improving both soil health and banana productivity

## The technological solution

To scale these innovations of red rust and soil health, we are converting the routine of collecting key data, monitoring the effectiveness of practices, and recording costs and income into an application for mobile phones for the capture and transmission of data weekly to a database in each producer association. Real-time reports to be used by producers, their associations and sector platforms will facilitate discussions on the effectiveness of the work both on the farm and in packaging and in the association. In the first stage, 50 producers in each country are piloting the application for a year. A diagnosis of cluster management and soil health and productive parameters in each producer forms the basis for the formulation of an improvement plan. At the end of the first cycle, each producer and technicians in the area will convene 10-20 neighboring producers to share their experience and propose a new round of diagnosis, monitoring, continuous improvement, and benchmarking.

## Facilitating the scaling of ecological technologies among family producers with digital tools









#### 2400

Organic banana producers reducing losses and improving the health of their soils



## 45

Technicians applying continuous improvement and benchmarking



#### 15

Producer associations applying continuous improvement and benchmarking

## 500

Additional banana boxes / ha / year produced

#### **# A Flourish data visualization**

#### MÁS INFO



## Results

In 2 years of execution, the national teams have strengthened in their own capacity to use the tools of digital agriculture, have convened multi-partner platforms to complete a baseline on the digital habits of the organic banana sector, and are planning the selection of 150 pilot producers. The LanRef team from Mexico is developing the smartphone app Ma\$ Banano. The baseline report raises two conclusions: 1) Producers and technicians and their associations are equipped and connected to the internet with

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smartphones and use WhatsApp for communications, although the signal is variable and sometimes weak. 2) The collection and registration of different types of data occupy the efforts of growers and others on the farm crew and the technicians and personnel in different units of the associations. The different data are filed separately, have specific and mostly short-term uses, and are mostly not the basis for continuous improvement and benchmarking processes.

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