

A team of scientists in Colombia are hoping to boost local banana growers' productivity with the use of a high-resolution camera mounted onto a drone. 

The camera that will provide real-time information on the topography of the soil and the type of weeds in the area is part of a 'technological package' engineered by the Medellín Phytotechnology Research Group of the National University of Colombia.

This package aims to increase banana productivity of the Urabá and southwest regions of the Province of Antioquia, which, despite being widely known as major production areas, lag behind countries such as Peru in terms of technological development.

"We hope to offer banana producers a comprehensive alternative that's easy to implement and manage," Agronomic Sciences Department professor Darío Antonio Castañeda Sánchez said.

The drone project, which started back in 2013, is comprised of a software program, a real-time soil analysis method and an environmental impact banana management plan.

The management system obtains data from a GPS, enabling the farmer to better manage their land. It can also provide information on the amount of plants and raw materials required.

 Another innovative contribution is the soil nutrient and foliar system diagnosis method that uses a spectrometer to analyze light wavelength frequencies in real-time.

"So if there was a nutritional stress issue, in the 20 days the previous method would take to provide the results, the scenario would have changed," he said.

Team member Yasir Álvarez Albanez said that spectrometers had been used before for banana production, but now technologies would be standardized in one single method.

As well as providing a detailed assessment of the environmental impacts produced by the production chain, the system can come up with a management strategy for banana waste, generating an added value for production.

"We hope to obtain environmental sustainability guidelines for farmers which will enable them to have cleaner plantations, but also profitable ones which can provide added value to the market which now demands these kinds of practices," Faculty of Mining Environmental and Development's Elisa Valenzuela Vergara said.

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