

## **APP: Profitability Determination of Onion Cultivation**

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### **Abstract**

The onion production sector in the northern zone of Cartago faces significant limitations in accessing technological tools that support timely and reliable decision-making. Existing platforms in the market do not adapt to the conditions of national production, creating gaps in efficiency, profitability, and sustainability. The objective of this study was to develop and implement a technological platform that enables producers associated with the National Horticultural Corporation to determine the profitability of their onion crops and improve their economic management processes. The methodology followed a participatory and results-oriented approach. Farm visits were conducted to analyze production activities, collect and validate field data, and contrast them with economic factors. Based on this information, a platform was designed and tested using Azure, complemented by mobile applications, which integrates productive and economic data to provide farmers with personalized, real-time recommendations for crop management. The platform offers farmers access to accurate and practical economic information, strengthening strategic decision-making. Its implementation is expected to increase the efficiency, profitability, and sustainability of onion production in the region. In conclusion, this digital tool represents a strategic resource to optimize productivity, enhance economic management, and contribute to the sustainable socioeconomic development of the northern zone of Cartago.

**Key Words:** *APP, Onion, Agribusiness, Economic Information*