THE INVESTIGATION OF BENEFITS AND CHALLENGES OF USING IOT TECHNOLOGIES TO ENHANCE THE IRRIGATION METHOD OF COCONUT FARMING IN SRI LANKA

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Abstract

The research conducted addresses the need of adopting IoT technologies in irrigation of coconut farming in Sri Lanka to examine the situation before the IoT implementation and the benefits after the implementation of IoT. Also, the study analyzes the challenges and overcoming them to adopt the IoT in coconut irrigation methods of Sri Lanka. The dissertation is focused on qualitative data collected through interviews conducted with the participants from the company that provides the IoT solution and the farms that implemented the solution. The findings prove that not only IoT technology provided a competitive advantage, but it has also improved ROI, yield efficiency, and decreased water and electricity consumption. However, major challenges such as lack of knowledge in technology, poor internet usage, and social media usage need to be overcome with the mechanisms provided by IoT solution providers. Coconut farm holders need to be encouraged to adopt IoT in the irrigation of coconut farming. Hence, these are proved through relevant models and theoretical concepts. The conclusion summarizes that there are many benefits and value achieved by coconut stakeholders with the implementation of IoT and recommends every coconut farm holder of Sri Lanka to adopt the IoT technology in irrigation methods to enhance the coconut sector.