Investigation of Benefits and Challenges of Using IoT Technologies to Enhance the Irrigation Method of Coconut Farming in Sri Lanka

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IoT implementation in Sri Lanka is limited. This research addressed 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, this study analyzed the challenges and overcoming them to adopt the IoT in coconut irrigation methods of Sri Lanka. The methodology used is qualitative study and data collected through in-depth interviews with the participants from the company that provides the IoT solution and the farms that implemented the solution. The findings proved 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. In conclusion, there are many benefits and values achieved by coconut stakeholders with the implementation of IoT hence recommend every coconut farm holder in Sri Lanka to adopt the IoT technology in the irrigation methods to enhance the coconut sector.

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