

ABSTRACT

DESIGN OF A PEST CONTROL AND MONITORING SYSTEM FOR TOMATO PLANTS BASED ON THE INTERNET OF THINGS

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Tomato production in South Sulawesi, particularly in Gowa Regency, fluctuated between 2018 and 2021. One of the reasons is pest attacks, usually addressed with chemical pesticides. However, the use of these pesticides can pose risks to farmers. Therefore, an InternoT-based pest control and tomato plant monitoring system was developed. This study employed a prototype method and demonstrated that the system could monitor soil moisture and schedule pesticide spraying. The research findings indicated an average soil moisture of about 74.33%, with a minimum of 60%. This system helps enhance agricultural productivity and reduces the risk of chemical pesticide exposure to farmers. The collected data are stored in the Antares platform and accessed through the MIT App Inventor application. This system enables more effective pest control and reduces reliance on manual chemical pesticide applications.

Keywords: tomato production, pest control, chemical pesticides, Internet of Things, South Sulawesi, Gowa Regency.