Design of an Automatic Pakcoy Plant Watering Tool in Polybags with a Solar Energy Power Source

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ABSTRACT

Energy is a major necessity in human life. Because the use of fossil energy tends to affect the contribution of air pollution and global warming, Therefore, it is necessary to innovate the use of new renewable energy, especially solar energy. One of the innovations in the use of solar energy is the application of solar-based plant watering systems. The soil moisture content, as detected by a soil moisture sensor, influences the function of this tool.In this study, the automatic watering design uses energy from solar panels that are supplied by a 12-volt battery. The collection lasted one day, with an estimated time range of 08.00 - 14.00 WIB and data collection every 10 to 15 minutes.By determining that this tool can function and run optimally by utilizing six sensors as moisture detectors in six pots, a 20-watt solar panel with the addition of an ssc, and a one-piece 12-volt battery,

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