

Design and Build Solar Charger System for Dragon Fruit Sprayer

Ahmad Fahriannur, ST.,MT (*minithesis counselor*)

Dani Oktavianus

Study Program of Renewable Energy Engineering

Majoring of Engineering Department

ABSTRACT

Solar energy in Indonesia is very large, because the territory of Indonesia stretches across the equator, so that the radiation reaches 4.80 kWh/m²/day using solar panels. Solar energy can support the results of a production, for example in agriculture. Currently, farmers are racking their brains so that they can reduce production costs in the process of controlling pests on dragon fruit plants in gardens that do not have electricity. Farmers use insecticides with plant sprayers, the tools used by farmers in general are still manual sprayers. The research will implement solar panels on a sprayer with a solar panel design that can be accepted in all fields or agricultural land. In this study will also monitor the current and voltage on the sprayer pump.

Keywords: *Solar Panel, tank, DC pump, voltage and current*