

Design of a Fruit Fly Pest Trapper Using Electric Nets Solar Cell Based

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ABSTRACT

*More than 100 types of horticultural plants are thought to be targets, fruit and vegetable plants that are very susceptible to fruit flies include chilies, guava, starfruit, tomatoes, melons, apples, red chilies and mangoes. *B. dorsalis* complex can cause very severe damage to this type of plant. This can reduce fruit productivity. Fruit productivity can be increased using tools that are faster, more effective and environmentally friendly. This research aims to design UV-Trapping for fruit fly pests using solar panels as an energy source. This technology has the following advantages: 1) it can work manually; 2) utilize new renewable energy 3) have low current (DC) so it is safe and not dangerous for farmers; 4) can be used for rice fields that are far from the reach of PLN, because the electricity source comes from solar panels; 5) low operating costs, but the prototype designed is durable and can operate in the long term; and 6) the prototype can still run even if the PLN electricity supply is cut off. Fruit fly trappers use solar panels as an energy source and are equipped with lit stingers to trap fruit flies. The functional test results show that the designed fruit fly trap prototype can operate according to the design. Consumption energy the average stinger is 23.70 Wh. The average daily energy harvest is 26.85 Wh. The energy output from solar panels already exceeds the amount of energy required by the load used.*

Key Words: *productivity, pest trap, solar cell*