

## ABSTRACT

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One of the problems in agriculture is how to expel or eradicate pests without damaging the ecosystem in the rice field area. In some cases of crop failure, in addition to weather factors, *pests* are also one of the causes of crop failure. Based on these problems, then made a tool to repel *pests* (kaper, planthopper, rat) by utilizing *ultrasonic waves* and *solar energy*. This tool is built with IC555, Solar Panel and LDR (Light Dependent Resistor) Sensor. IC555 is used as an ultrasonic wave timer and multivibrator. Based on testing that has been done, this tool can emit ultrasonic waves up to a frequency of 50KHZ. When the device emits frequencies, the mouse cannot adapt and go to avoid the ultrasonic.

Keywords: *Ultrasonic Waves, Solar Energy, pests.*