

**The Effectiveness of Drones sprayer in Controlling the Golden Snail
(*Pomacea Canaliculata* L.) on Rice Plants (*Oryza Sativa* L.)**
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ABSTRACT

In the 4.0 era drone Sprayers are considered to have the potential in controlling pests, especially the golden apple snail (*Pomacea canaliculata* L.). Although various drone applications have been made through cultivation, the effectiveness of this technology needs to be studied further. This research was to examine the effectiveness of the drone sprayer in controlling the golden snail pest on upland rice plants. The research was conducted in Balung Lor Village, Balung District, Jember Regency in August-October 2022. A non-factorial design was used in this study where the Drone sprayer and Knapsack sprayer were compared in several parameters including working time, golden apple snail populations, damage intensity, and grain dry weight per clump. The result of this study showed no significant difference in the grain dry weight per clump between the drone sprayer (58.23 g) and the knapsack sprayer (51.37 g) while in the variable of golden apple snail population and damage intensity, the knapsack sprayer is significantly better compared to the drone sprayer. However, in the variable of working time, the drone sprayer has a shorter working time (0.17 hours/ha) compared to the knapsack sprayer (11.57 hours/ha). Although the drone sprayer can work in a shorter time than the knapsack sprayer, the techniques for its application need to be re-examined to increase its effectiveness in controlling the golden apple snail pest.

Keywords: Drone sprayer, Golden snail, Knapsack sprayer, *Smart farming*