Maintenance and Upkeep of Electronics in the Automatic Pesticide Sprayer (Green Guardian)

Fendik Eko Purnomo, S.Pd., M.T. (Thesis Supervisor)

Muhammad Reza Rabani

Study Program of Mechatronic Engineering Technology
Majoring in Engineering

ABSTRACT

The advancement of agricultural technology has driven the development of automatic spraying systems that utilize water pumps, solar panels, and batteries, requiring planned maintenance and upkeep. This study aims to design an electronic equipment maintenance schedule to ensure efficiency and extend the lifespan of components. The Research and Development (R&D) method was used, involving literature studies and expert questionnaires. Data analysis resulted in a maintenance schedule, including water pump cleaning, solar panel inspection, and battery capacity monitoring. This schedule is expected to maintain device performance, extend service life, and reduce unexpected failures while serving as a basis for further development in optimizing the maintenance of technology-based agricultural equipment.

Keywords : Maintenance, Upkeep, Electronic equipment, Water pump, Solar panel, battery.