

Utilization of Water Power Generator in The Tertiary Irrigation Canal for Paddy's Pest Handling

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| Title | Utilization of Water Power Generator in The Tertiary Irrigation Canal for Paddy's Pest Handling |
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| Abstract | The inadequate rice in Indonesian occur due to crop failure. Paddy's pest (e.g. bird and insect) contributes crop failure significantly. Besides for water delivery, tertiary irrigation canal enable to develop another function such as micro-hydro. The research objective is to find Wapoge (water power generator) that adequate in tertiary irrigation canal for paddy's pest handling (i.e. birds and insects). Performance test applied with water discharge variability (i.e. 48, 68, and 77 l/s) and 2500 m ² paddy field. Electricity was utilized for light trapping with white LED lamp's power variability (i.e. 3, 6, and 9 watt), while motion energy utilized for bird eviction (i.e. scarecrow and sounds). Visual observation was applied on pest counting with three repetition. Water recharge influence on turbine rotation and voltage. Light trapping, with LED 9 watt, show higher performance than 3 and 6 watt significantly. Wapoge adequate on bird eviction significantly during observation time (i.e. morning, noon, and afternoon). Renewable energy should be developed especially on supporting agricultural sector. |
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