Smart Cultivation System : Innovation Concept for Designing a Modern and Automatic Shrimp Farming Technology System Powered by Renewable Energy

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ABSTRACT

Shrimp farming are a commodities produced by aquaculture that need to be improved in both quality and quantity to achieve the target of increasing production. Shrimp cultivation often experiences harvest failures, most of which occur due to uneven electricity distribution. Equalitation distribution of electricity network in the shrimp farming industry will affect production quality by 80 percent. This system design concept was carried out by reviewing various official websites, scientific articles, journals and documents related to ideal pond development. In addition, data collection was carried out through direct surveys by interviewing a number of technicians and field officers at the farm. The Smart Cultivation System is equipped with an automatic shrimp feeder and timing technology to maintain an automatic opening and closing system according to specifications for feeding. There will also be a filtration system equipped with a microcontroller to be used to regulate the stability of pH and water temperature. Apart from that, the energy used in the pond system tends to use renewable energy such as solar, wind, and ocean wave energy, so that the energy needs will be well supplied to the pond.

Keywoard : *Automatic, Pond, Renewable Energy, Shrimp Farming, Smart Cultivation System*