

ABSTRACT

Vaname shrimp or also known as *Litopenaeus vannamei* is an introduction shrimp. The native habitat of this shrimp is in the fresh waters and sea water of American such as Mexico, Nicaragua, and Puerto Rico. Then Indonesia develop, included vaname shrimp as a type of shrimp aquaculture. Feeding in shrimp cultivation is very influential on the rate of growth so that the results of good and bad harvest depends on how the feeding in shrimp in ponds.

To facilitate feeding in shrimp cultivation, in this final project will doing research and related to create feeding shrimp be automatically by controlling the feeder position, which position will be determined based on the location of the orange ball, from the data captured by camera will be planned to choose the nearest path to the ball point. So that the feeding can be given automatically and can provide feed as a whole, which is very much needed by vaname shrimp pond farmers in addition to increasing the growth rate also to reduce production costs.

This experiment by placing an orange ball on a pond. This test uses 4 scenarios to place the ball with the distance of each ball for 10 meters. From this test the feeding can be spread dynamically. The use of the path planning method can be used by placing the ball at a maximum distance for 24 meters and a minimum distance for 1 meter in front of the camera. For set position of the ball, the ball can be placed as far as 70 degrees from the camera. From this test it was also found that the time to use the shrimp feeder for 58 minutes to feed the shrimp and accumulator on this feeder was done to do recharging 3 days with shrimp feeding frequency 4 times a day and the distance of the tool 45 meters in one feeding.

Keywords : Vaname Shrimp, Path Planning, image processing, shrimp feeder