ABSTRACT

Nur Zhafirah Marchalin. 24020119140120. **The Effect of Rhodobacter Bacteria Probiotics on Dumbo Catfish (Clarias gariepinus, Burch) Seeds Maintenance towards Growth Improvement and Water Quality**, under the guidance of Fuad Muhammad and Jafron Wasiq Hidayat.

The addition of Rhodobacter bacteria is one way that can be used to ensure the survival of the dumbo catfish population. Rhodobacter bacteria that are applied directly to the water can work by utilizing living microorganisms to protect the water environment as a living space for catfish from dangerous pathogenic bacteria. The bacteria contained in Rhodobacter probiotics will produce antimicrobial compounds that can help clean the water environment by destroying organic matter, food waste, and other organic waste. The purpose of this study was to determine the effect of Rhodobacter bacterial probiotics on water quality and the growth of dumbo catfish (*Clarias gariepinus*). The research method used a Completely Randomized Design (CRD) with five treatments and three replications. The treatments tested were A (control), treatment B (0.5 ml), treatment C (1 ml), treatment D (1.5 ml), treatment E (2 ml). This study was conducted for 50 days. The parameters observed were water quality parameters such as temperature, pH, DO, and ammonia. Then, other parameters were the growth in length and weight of dumbo catfish (*Clarias gariepinus*) which were observed every 10 days. Data analysis using the Kruskal-Wallis test. Based on the data obtained, the results of the study showed that the provision of probiotics to catfish with various treatments had an effect on growth and maintaining the quality of water for the maintenance of dumbo catfish. In treatment A, the control without probiotics was also still in a decent condition for the quality of the water, although the increase in growth was not optimal. Treatment with a dose of 1.5 ml of probiotics experienced higher weight growth and length growth, namely 8.107 gr and 13.05 cm when compared to other treatments. Meanwhile, the water quality parameters during the study showed results, namely the maintenance of dumbo catfish seeds (*Clarias gariepinus*) was still in a decent condition for dumbo catfish cultivation.

Keywords: *Water quality, Rhodobacter bacteria, dumbo catfish seeds*