THE EFFECT OF LIGHT AND DARK CONFINEMENT ON THE GLUCOSE CONTENT, SKIN PIGMENTATION AND SURVIVAL RATE OF RED TILAPIA *(Oreochromis* spp.)

By

ABIGAIL CONRADO CAVITA

An Undergraduate Thesis presented to faculty of the College of Fisheries in partial fulfilment of the requirements for the degree of

BACHELOR OF SCIENCE IN FISHERIES

COLLEGE OF FISHERIES
CENTRAL LUZON STATE UNIVERSITY
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THE EFFECT OF LIGHT AND DARK CONFINEMENT ON THE GLUCOSE CONTENT, SKIN PIGMENTATION AND SURVIVAL RATE OF RED TILAPIA (*Oreochromis* spp.)[1/]

ABSTRACT

This study aimed to evaluate the effect of light and dark confinement in the glucose content, skin pigmentation and survival rate of Red tilapia (*Oreochromis* spp). Three treatments were used in this study namely the control (no black plastic cover), T_2 (covered with black plastic without top cover and plastic) and T_3 (covered with black plastic with top cover. In all the blood measurements, the blood glucose ranged from low to medium (34.11±2.51 to 74.53±16.46). No significant differences were found in glucose content. For skin coloration, the dorsal, caudal and belly portions were considered for comparison. Using the improvised color chart with intensity of 1 (light pink) to 13 (orange), T_2 had the highest color intensity. In terms of growth, the SGR was highest in T_2. For weight gain, T_1 obtained the highest. The mean survival rate was highest in T_1 and lowest in T_3. The low survival that was determined may be due to handling, fish injection and absence of light. In conclusion, this study revealed that light and dark confinement significantly affects the color of red tilapia. T_2 showed the best color of red tilapia as exhibited by its orange color. The blood glucose content was not affected by light and dark confinement.

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