Title: Farming of Paratilapia poleni in a controlled environment

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Madagascar is characterized by the scarcity of fish fauna and its high endemicity. Most endemic fish, especially Paratilapia poleni are getting extinct. The general objective of this study is to test the adaptability of this species according to the physical, chemical and trophic parameters (temperature, pH, turbidity, density, feeding) from farming in a controlled environment in an aquaculture farm in Toliara. The food used during the research consists of 38.65% protein, 26.55% carbohydrates and 7.66% lipids. The physical and chemicals parameters of the farming water were monitored twice a day in order to see their overall trends. The development and the growth of the species is monitored by weighing fry at the beginning and at the end of the study, the experiment was performed over 2 months.

The values of the physical and chemical parameters are recorded in two series of experiments: 25.07°C (at 6am) and 29.81°C (at 4pm) for average surface temperatures; 24.72°C (at 6am) and 29.14°C (at 4pm) for deep water. The pH of the water is between 7.7 and 9.6; and the maximum turbidity was observed at 9cm deep, which is mainly composed of phytoplankton.

The final survival rate is 100% and the weight gain obtained at the end of the experiment are 0.59g per individual. The density of fry has an influence on herd growth: the higher the density, the faster the growth because there is competition for food. Despite the relatively slow growth, Paratilapia poleni is resistant to the ecological breeding conditions and this proves its ‘elastic’ character to the ecological conditions of the environment. In short, the natural restocking of this species throughout the island can be assured from fry produced at farms.

Keys words: Paratilapia poleni, farming, controlled environment, growth, adaptability, conservation.