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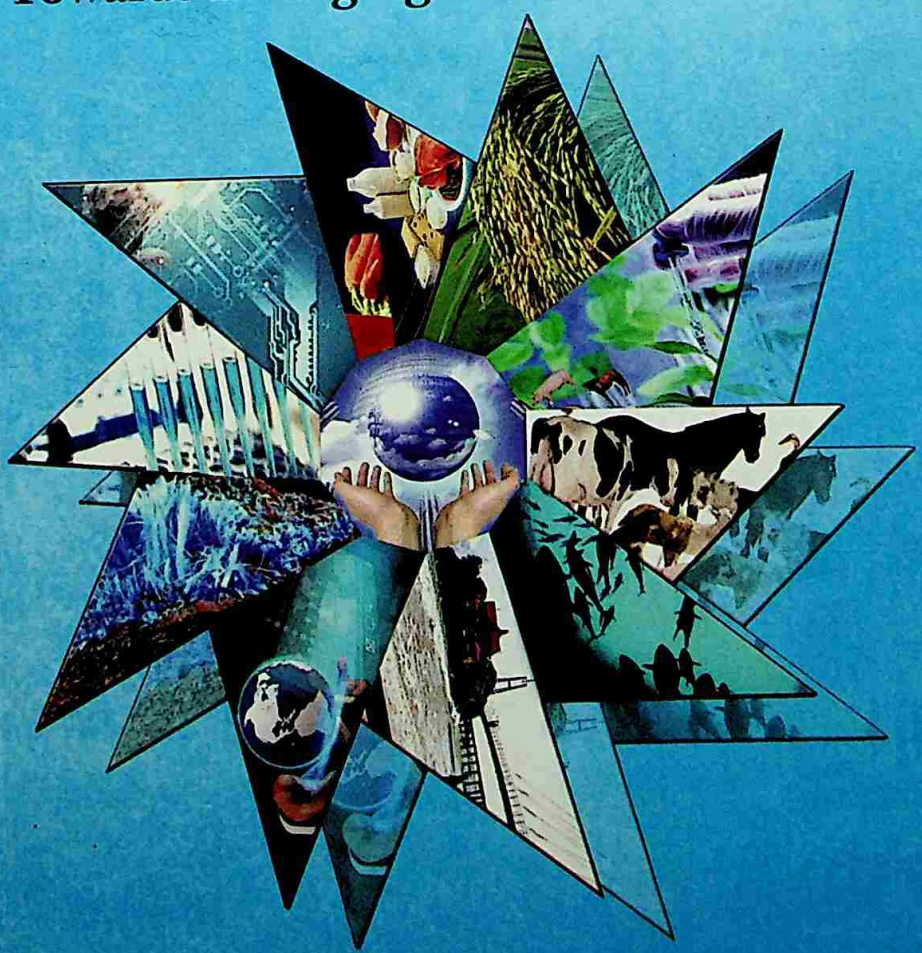

Uva Wellassa University of Sri Lanka

Strategies to Reduce Larval Cannibalism of *Pangasius sutchi*

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Ornamental fish industry is the most significance income earning approach in Sri Lankan economy. *Pangasius sutchi* (Thai pangus) is considered as the most popular ornamental fish species. In their early larval stage, they show cannibalistic behaviour which leads reduction of population. Then experiment was conducted to reduce the larval cannibalism of larvae within first 72 hours because it has been identified as the critical period of their cannibalistic behaviour. Therefore several types of feed, feeding frequencies and stocking densities were tested. We investigated the effect of two different types of feed(*Artemia* and Moina),three different feeding frequencies (3hr,4hr,5hr)and three different stocking densities(60.90.120)one square feet can hold 80 larvae and 22"×10×10glass tank can hold approximately 94 *P.sutchi* larvae. Each tank was randomly assigned to one of the treatment. At the end of the experiment numbers of survivals were calculated to determine the cannibalism rate. Five fish from each tank were sampled to measure body length. Then numbers of average body length were recorded. Data were statistically analized by using MINITAB 17 software. Significance levels were calculated to determine whether there is any relationship or not. Results showed that the feed types were not significantly ($p>0.05$) affect the survival rate and it only affected the body length. Feeding frequency was significantly ($p<0.05$) affected the survival rate and not affected the body length. And also results showed that stocking density affected the survival rate significantly ($p<0.05$) and not affected significantly for body length of larvae. Final results indicated that highest mean survival rate was recorded with 60 stocking density whereas lowest survival rate was recorded in 120.highest mean body length was recorded with the *Artemia* feeding with 3hour feeding frequency.

Keywords: Cannibalism, Feeding frequency, Stocking density, *Artemia*, *Moina*

Examine the Appropriate Ovulation Time to Determine Latency Period of Golden Tinfoil Barb (*Barbonymus schwanenfeldii*) Using Ovaprim™

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Fertility of the Golden Tinfoil Barb is very low when they are subjected to induced breeding practices. The research was carried out to determine the appropriate ovulation time for maximizing the fertility rate of Golden Tinfoil Barb, *Barbonymus schwanenfeldii*. Induced spawning of *Barbonymus schwanenfeldii* was conducted at different Ovaprim (sGnRHa and Domperidone) dose and latency period combinations to observe the appropriate ovulation time to increase the fertility. For the purpose, three doses of Ovaprim (0.4, 0.6 and 0.8 mL/kg of body weight) and three latency periods (4, 6 and 8 hours) were considered in nine combinations. Males were injected with half of dosage from female. Induced of breeding was carried out in the hatchery and same water source was used for maintaining the equal condition. After the injection, biopsy tests were performed for all the females after 4, 6 and 8 hours from the injection to detect the moment of ovulation. After eight hours, mean egg diameter was 982.81 ± 48.49 µm, germinal vesicle had broken down, follicle had already removed and ovulation had occurred. When ovulation was observed, hand stripping and then artificial fertilization was carried out. One hour after fertilization, between 40 and 60 eggs of three samples were taken from the hatching jar for each dosage and eggs were counted to calculate percentage of fertilization. Although all ovulation times were recorded in approximately eight hours after the injection, the recorded fertility rates were different. 4% fertility rate was recorded with the 8 ± 2.0 hours in 0.4 mL/kg, while it was 80% with the 8 ± 0.5 hours in 0.6 mL/kg of Ovaprim and fertility rate was 52% when 8 ± 0.5 hours in 0.8 mL/kg. The highest fertility rate was recorded in 0.6 mL/kg of dosage. Although 8 ± 0.5 hours ovulation time was recorded in 0.6 mL/kg and 0.8 mL/kg of body weight of female, their fertility rates were different.

Keywords: Fish breeding, Egg diameter, Hand stripping, GnRH, Fertility rate