

**INDUCED BREEDING AND EVALUATION OF SUITABLE FEED FOR LARVAL
REARING OF THE ENDEMIC FISH *Mystus nanus* (SUDASINGHE,
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The striped dwarf catfish, *Mystus nanus*, recently recognized as an endemic species of Sri Lanka, is the focus of a study aimed at enhancing its conservation through captive breeding programs. This research evaluates the most effective hormone for inducing breeding and the optimal feed for larval rearing. A total of 27 males and 13 females were collected from the Kala Oya spill, North Central Province of Sri Lanka. They were fed with commercial feed for tropical fish (protein content 42%) ad libitum. After a month of acclimatization, the broodstock were used for induced breeding trials with a male-to-female sex ratio of 2:1. Three hormone treatments were tested, each with three replicates: Ovulin (sGnRH analogue + domperidone), LHRHa + domperidone, and HCG, with natural breeding serving as the control. Ten-day-old postlarvae were randomly assigned to four different dietary treatments with at a stocking density of 2 postlarvae/L (50 postlarvae /tank); soya yogurt, *Artemia nauplii*, microworms, and commercial feed (control), with three replicates for each treatment. All three replicates of the Ovulin treatment successfully induced spawning, while only one replicate each of the LHRHa + domperidone and HCG treatments led to successful spawning. Natural spawning did not occur during the one-month period. No significant differences ($P > 0.05$) were observed among the hormone treatments in terms of total eggs spawned, relative fecundity, fertilization rate, hatchability, and survival rate. The latency period varied across treatments: Ovulin (8–10 hours), LHRHa + domperidone (9–11 hours), and HCG (6–8 hours). Fry fed soya yogurt showed the best growth performance, with final length of 24.70 ± 0.17 mm, final weight of 178.50 ± 2.31 mg, weight gain of 173.96 ± 2.58 mg, length gain of 17.50 ± 0.19 mm, SGR-W of 12.46 ± 0.27 % per day, SGR-L of 4.11 ± 0.03 % per day, and survival rate of 78.33 ± 0.88 %. In contrast, the lowest growth and survival were recorded in fry fed with microworms ($P < 0.05$), with final weight of 50.36 ± 1.43 mg, final length of 15.13 ± 0.02 mm, weight gain of 45.90 ± 1.36 mg, length gain of 7.97 ± 0.25 mm, SGR-W of 8.04 ± 0.08 % per day, SGR-L of 2.49 ± 0.05 % per day, and survival rate of 25.67 ± 1.20 %. The length–weight relationship analysis indicated that fish fed with soya yoghurt exhibited isometric growth ($b = 3$). It is recommended that the use of Ovulin hormone at a dosage of 0.5 mL/kg body weight in females is more effective for inducing breeding. Furthermore, soya yogurt has been identified as the most effective feed for larval rearing under captive breeding conditions. These practices are expected to be adopted for the conservation of *M. nanus*.

Keywords: Hormone, Growth, Spawning, Survival, Soya yoghurt, Ovulin