Development of a non-live feed as an alternative for live feed in Seahorse (*Hippocampus kuda*) mass scale fry rearing

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All seahorse species in the world have been placed under CITES II (Convention on International Trade in Endangered Species) since 2004, because they have been over-exploited for traditional Chinese medicine and aquarium trades. Aquaculture has been recognized as a long-term solution for sustaining the seahorse trade while minimizing wild collection. Seahorses are not high-speed predators and they adopt a sit and wait ambush strategy. Newly hatched juveniles are needed to be fed exclusively on live prey, a practice that requires the culture or collection of live prey organisms such as rotifers, *Artemia*, mysid shrimps and copepods. Most of the ornamental species, including seahorses, are reared using rotifers and *Artemia* nauplii as live prey; use of these zooplankton species does not always promote optimal survival due to their inadequate fatty acid profile and, in some cases, due to their inappropriate size. This experiment was carried out to identify non-live feed for culture of *Hippocamous kuda* fry in captivity. In this study, seahorse fry were fed with three diets, *Artemia*, hatchery prepared egg custard, and commercially available feed golden pearl. The final weight of fry after twenty weeks of feeding experiments showed that the growth performance of *H. kuda* under three treatments were significantly different from each other. The final fresh weights (after 20 weeks) of *H. kuda* fry for egg custard, *Artemia* and Golden pearl were 1.120 g, 0.587 g and 0.508 g respectively. The fry fed with hatchery prepared egg custard with *Artemia*, achieved the highest fresh weight of fry. The weight gain per week of fry, fed with egg custard, was significantly higher from the second week until the fourteenth week, than in the other two treatments. The growth rate of seahorse fry fed with egg custard has begun to increase significantly after three weeks and has lasted for the rest of the culture period. The lowest growth rate of seahorses was observed in fry fed with golden pearl, while fry fed with egg custard showed the highest growth rate.

Keywords: seahorse, aquaculture, *Artemia, Hippocampus kuda*

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