

عنوان مقاله:

Embryonic development and growth performances of an endangered fish species *Nandus nandus*: effects of dietary polyunsaturated fatty acids supplementation

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خلاصه مقاله:

The present study explored the embryonic and larval development of an endangered fish species *Nandus nandus* and resolved larval growth performances with the dietary supplementation of different types of lipids. Fertilized eggs were collected from fiber glass tanks immediately after spontaneous spawning of *N. nandus*, which were fed with a 1% phospholipid (squid meal) supplemented diet for 3 months. Fertilized eggs were transparent, spherical, yellowish and sticky in nature. The first cleavages of eggs were observed 0.3 ± 0.01 h post fertilization at 26°C water temperature. Hatching started around 18 h post - fertilization and newly hatched larvae were found to be 1.2 ± 0.1 mm in length. First feeding started 64.0 ± 0.30 h post hatching. After rearing for 10 days, they were divided into 4 groups and separately fed with only dry tubificid worms, 1% docosahexaenoic (DHA) supplemented with dry tubificid worm, 1% phospholipid supplemented with dry tubificid worm and live tubificid worms as treatment I, treatment II, treatment III and treatment IV, respectively. After 50 days of the trial, larvae of treatment II showed significantly ($p < 0.05$) higher growth performances in length: 3.18 ± 0.13 cm, weight: 339.8 ± 36.94 mg and survival rate: 78 ± 2 % which were comparable to that of treatment IV, which showed the highest ($p < 0.05$) length of 3.4 ± 0.1 cm, weight of 406.6 ± 27.99 mg and survival rate of 97 ± 1 %. Larvae in treatment I showed the lowest growth performances in length: 2.73 ± 0.16 cm, weight: 259.8 ± 29.97 mg and survival rate of 63 ± 3 %. As this is the first record for the determination of embryonic and larval development of *N. nandus* with different lipid supplemented diets, it might be possible to save this endangered fish species by adopting this technology at field level.

کلمات کلیدی:

Docosahexaenoic acid, Embryonic development, Endangered fish, Larval growth, *Nandus nandus*

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