Feeding habits of hatchery-reared grouper, Epinephelus suillus larvae

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The feeding habits of hatchery-reared *Epinephelus suillus* larvae were determined by examining their gut contents. The larvae (2.6 mm TL) were initially fed rotifers on day 2 and newly-hatched *Artemia* nauplii on day 21 (9.1 mm TL). The amount of rotifers initially ingested averaged 1.3 individuals/larva. The ingestion rate increased as larvae grew. Larvae immediately showed strong preference for *Artemia* to rotifers on the first day of introduction. *E. suillus* larvae showed diurnal feeding pattern at day 7 (3.6 mm TL), day 14 (4.9 mm TL), day 21 (9.1 mm TL) and day 28 (11.1 mm TL). Feeding incidence decreased in the evening and was nil at 2100-2200 h. Active feeding started earlier in older larvae and satiation was between 0900-1000 h. The results of this study will be used as a basis in developing a good feeding scheme for *E. suillus* larvae.

Effects of different feeding regimes using *Moina macrocopa* on growth and survival of sea bass, *Lates calcarifer* (Bloch) fry

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Experiments were conducted to evaluate the possibility of using the freshwater zooplankton Moina macrocopa as live food for sea bass, Lates calcarifer, larvae. Experiment 1, Moina was fed to sea bass of different sizes (3.6, 5.5 and 7.6 mm standard length, SL) at stocking. After 15 days of rearing, fish with initial mean SL of 3.6 mm had the highest growth rate (SGR, 18.8%/day). However, mean survival rate (65%) was higher for fish with mean initial size of 5.5 mm but not significantly different from fish with initial SL of 7.6 mm. Temporal changes in the mean number of ingested Moina increases with fish body size and length of feeding period. Furthermore, in a separate trial, sea bass larvae regardless of size, ingested comparatively equal numbers of Artemia and Moina. Experiment 2, live or frozen Moina or minced trash fish (control) was fed to 29-day old sea bass fry (8.3 mm SL; 13.4 mg BW). SGR (range: 2.6-5.8%/day) and survival (range: 30 to 90%) were significantly higher for fish fed live Moina. Frozen Moina and minced trash fishfed sea bass had comparable growth and survival rates. Results showed that feeding Moina to sea bass can effectively minimize the use of Artemia. However, fry survival can be enhanced by feeding live Moina to fry with mean initial size of 5.5 mm SL. Further studies are needed to improve methods of feeding frozen zooplankton to sea bass fry.