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RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: Growth, Maturation, Induced Spawning, and Production of the First Generation of South American Catfish, *Pseudoplatystoma* sp., in North America

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Abstract: Growth, plasma steroids, and the appearance of gonads (histology and gonadosomatic index) were followed in South American catfish (surubim, *Pseudoplatystoma* sp.) raised in captivity in the aquaculture facility at The Ohio State University, Columbus, Ohio, USA, from 2003 until 2006. Broodstock growth showed a great individual variation and it did not seem sex dependent. The levels of 11-ketotestosterone were high in males during the reproductive season. Three out of six females spawned after receiving two doses of carp pituitary extract (0.5 and 5mg/kg) at 11-h intervals. Fertilization was performed in only one female in February 2006. Egg size was 0.73 ± 0.06 mm in diameter at stripping. Two males released sperm, and it was used for fertilization. Sperm concentrations were 24×10^9 and 15.5×10^9 spermatozoa/mL in Male 1 and Male 2, respectively, and viability was confirmed after activation in 0.3% NaCl. Embryo survival at 9 h after fertilization was 44 and 23% for Male 1 and Male 2, respectively. Embryos hatched 15 h after fertilization. Larvae were 3.53 ± 0.09 mm in length at hatching and were successfully raised (72% survival after 2 wks) using live brine shrimp nauplii.

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