Gonad Development of Hatchery-Reared Spotted Scat, *Scatophagus argus* Linnaeus, 1766

Jirayuth Ruensirikul* Mavit Assava-aree and La-or Chusrirat  
Coastal Aquaculture Research Institute

Abstract

Gonad development of hatchery-reared spotted scat, *Scatophagus argus* Linnaeus, 1766 was investigated by examination of gonads sampled over 14 months culture period at Coastal Aquaculture Research Institute. Sexual dimorphism was first observed at the age of 6 months in both sex (16.36±5.01 g, 8.14±0.84 cm in female and 14.11±5.43 g, 6.83±0.95 cm in male). Almost of 6-10 months female occupied early development of ovary (stage 1,2). The first mature female (stage 5) was found at the age of 10 months old (82.81±15.51 g, 13.42±0.92 cm). Mean gonadosomatic index (MGSI) (5.83±5.59%) and number of matured female (54.50%) were highest at the age of 12 months (95.81±20.51 g, 13.41±1.12 cm). The first mature male was found at the age of 6 months (14.11±5.43 g, 6.83±0.95 cm). The highest MGSI (1.27±1.88 %) and the highest of matured male (50.00%) were found at the age of 13 months (56.03±11.91 g, 11.52±0.81 cm. Fertilization rate and hatching rate obtained from artificial insemination experiments from mature broodstock were reaching to 72.11% and 63.27%, respectively. The results was shown that the possibility of replacement of wild broodstock with hatchery-reared broodstock for spotted scat seed production.

Keywords: spotted scat, *Scatophagus argus*, gonad development

*Corresponding author: 1/19 Moo 3, Khaorupchang Sub-district, Muang District, Songkhla Province 90000  Tel. 0 7431 1895  E-mail : jruensirikul@yahoo.com