

Sataenpong Khowhit 2008: Different Feed on Efficacy of Sex Reversal, Growth and Protein Utilization in Nile Tilapia (*Oreochromis niloticus*, Linnaeus) Fry. Master of Science (Aquaculture), Major Field: Aquaculture, Department of Aquaculture. Thesis Advisor: Assistant Professor Ruangvit Yoonpundh, D.Tech.Sc. 77 pages.

Eight experimental feeds, were shrimp feed No.0 100%, fish meal 100%, shrimp feed No.0 90 % + rich bran 10%, fish meal 90% + rich bran 10%, shrimp feed No.0 80% + rich bran 20%, fish meal 80% + rich bran 20%, shrimp feed No.0 70% + rich bran 30% and fish meal 70% + rich bran 30%, respectively. All feeds were mixed with 17 α methyl testosterone at 60 mg/kg feed to nurse the first feeding nile tilapia fry in 5.2 m³ nylon net cage suspended in an 100 m² earthen pond at the density of 1,000 fry/cage for a period of 21 days to evaluate the efficacy of sex reversal, growth and protein utilization, respectively. Results appeared that there were no statistically significant differences ($P > 0.05$) in the percentage of male sex reversal, growth rate, specific growth rate, survival rate, feed intake and feed conversion rate of nile tilapia fry among 8 experimental feeds. All those values were ranged 96 - 98 %, 0.0114 - 0.0115 g/fish/day, 11.32 - 11.35 %/day, 96.5 - 98.5 %, 2.85 - 2.86 g/fish, and 1.51 - 1.57, respectively. While efficacy of protein utilizations were statistically significant differences ($P < 0.05$) among feeds which were 1.44 ± 0.03 , 1.49 ± 0.02 , 1.52 ± 0.03 , 1.57 ± 0.03 , 1.65 ± 0.02 , 1.66 ± 0.01 , 1.75 ± 0.01 , and 1.77 ± 0.05 %, respectively. Net protein utilizations were also statistically significant differences ($P < 0.05$) which were 60.21 ± 0.56 , 60.78 ± 3.32 , 63.41 ± 1.34 , 63.43 ± 1.41 , 67.41 ± 3.25 , 67.28 ± 2.93 , 70.69 ± 2.68 , and 70.41 ± 4.91 , respectively. Therefore, fish meal 70% + rich bran 30% is the recommended feed in producing all male sex reversal nile tilapia fry commercially.

Student's signature

Thesis Advisor's signature