

International Conference on

# AQUACULTURE & MARINE BIOLOGY

June 25-27, 2018 | Rome, Italy

## Growth performance, diet digestibility and protein sparing of hybrid grouper (Tiger grouper, *Epinephelus fuscoguttatus*, ♀ × Giant grouper, *E. lanceolatus*, ♂) juveniles fed different dietary levels of carbohydrate and protein

Rossita Shapawi, Ruziah Ismail, Annita Yong Seok-Kian and Lim Leong Seng  
Borneo Marine Research Institute, University Malaysia Sabah, Malaysia

A feeding trial was carried out to investigate the effect of five experimental diets (two levels of protein and two levels of carbohydrate; coded as 45P25C, 45P30C, 40P25C and 40P30C, respectively, and a diet containing 50% protein and 20% starch (50P20C) as a control diet) on growth performance, diet digestibility and protein sparing of hybrid grouper, TGGG (*Epinephelus fuscoguttatus*, ♀ × *E. lanceolatus*, ♂). These diets were fed to triplicate groups of fish juveniles (12.12±0.08g mean initial weight) at satiation level for 57 days. At the end of feeding trial, body weight gain (576.62-618.91%), feed conversion ratio (1.48-1.59), survival rate (93.33-98.33%) and body indices (except for viscerasomatic index) were not significantly influenced by the dietary treatments. In contrast, the proximate compositions of whole-body fish and liver were dependent on the test diets. Meanwhile, ADC of protein and lipid were considered high in all experimental diets (ADC protein

88.12-92.12% and ADC lipid 95.51-97.89%). However, poorer ADCs especially for dry matter were observed in diet 40P25C (39.85% as compared to 51.02-65.96% in other diets). Overall, diet with protein level lowered to 45% and carbohydrate level increased to 30% (45P30C) performed as good as the control diet. It can be concluded that TGGG showed the ability to utilize dietary carbohydrate as an energy source to spare protein.



### Biography

Rossita Shapawi is the professor of aquaculture at the Borneo Marine Research Institute (BMRI) at Universiti Malaysia Sabah (UMS). She is the director of BMRI since Dec 2014. She received her Doctorate degree in Aquaculture from UMS, Malaysia. She was also an alumnus of University of Tasmania, Australia where she completed her masters of applied science in 2001. Her research interest is on aquaculture nutrition and feed development.

rossita@ums.edu.my

### Notes: