

FEEDING AND NUTRITION OF COBIA, *Rachycentron canadum*, IN FLOATING NET CAGES: PERFORMANCE AND DIGESTIBILITY

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This study is concerned with the 10-weeks evaluation of five different dietary feeding regimes under controlled cage culture conditions with fingerling cobia, *Rachycentron canadum*, at the Oceanographic Institute, Ubatuba, SP, Brazil. The aim of the culture trial was to test and develop economic feeding strategies for the cage culture of cobia using locally available feed resources.

Five dietary feeding regimes were evaluated: trash fish (TF), experimental dry pellet Aquamar (AQ), prepared semi moist pellet (trash fish: diet Aquamar, 60:40 mixture w/w - code SM), and two local commercial extruded feeds (CA and CB). Performance (initial and final weight, survival and feed conversion ratio (FCR)) results are presented in Table 1. As expected, fish fed with TF showed the highest final weight (671.51 ± 31.85 g), and there was no significant difference comparing with semi moist diet (602.64 ± 37.09 g). For the dry pellets diets, AQ diet showed best performance (final weight 568.56 ± 52.23 g; FCR 1.43 ± 0.09), comparing with both commercial diets CA (final weight 417.31 ± 60.77 g; FCR 1.58 ± 0.13) and CB (final weight 442.97 ± 55.30 ; FCR 1.73 ± 0.20). Digestibility results are under analysis.

The partial results of this trial provide clear evidence that local available sources, as trash fish, could be a good feeding option for small producers. The low price of trash fish in some periods of the year could justify its utilization. As with the development of feeds for the salmon industry, it is believed that wet forage feed fish-based feeding regimes will be gradually replaced with dry compound pelleted and/or extruded feed-based feeding regimes, with transfer from wet/moist feeds to dry feeds being most rapid for those species where cost-effective hatchery feeding technologies have already been developed for seed production, and the species can be conditioned to the use of dry feeds at an early age. Also, longer-term trials should be conducted to more fully assess the relative nutritive value of experimental and commercial diets for cobia.

Table 1 Initial and final mean weights, survival, and feed conversion ratio (FCR) of cobia *Rachycentron canadum* fed trash fish (TR), semi moist diet (SM), experimental diet (AQ), and two commercial feeds (CA and CB), for 10-weeks performance trial*

Dietary treatment	Initial weight (g)	Final weight (g)	Survival (%)	FCR
TF	122.67 ± 3.06^a	671.51 ± 31.85^a	100.0 ^a	3.50 ± 0.11^a
SM	131.78 ± 3.85^a	602.64 ± 37.09^{ab}	100.0 ^a	2.11 ± 0.13^b
AQ	127.11 ± 1.68^a	568.56 ± 52.23^b	100.0 ^a	1.43 ± 0.09^c
CA	128.94 ± 7.87^a	417.31 ± 60.77^c	100.0 ^a	1.58 ± 0.13^{cd}
CB	128.19 ± 11.00^a	442.97 ± 55.30^c	98.0 ^a	1.73 ± 0.20^d

*Data represent mean \pm S.D of three replicates; Survival% = (final number of fish / initial number of fish \times 100; FCR: feed conversion ratio = total dry feed intake (g)/wet weight gain (g); numbers within the same column with different superscripts are significantly different ($P < 0.05$, $n=3$).