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Dietary inclusion effect of additives on performance of rockfish (Sebastes Schlegeli)

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Dietary inclusion effect of various sources of additives on growth, body composition and challenge test of juvenile rockfish (Sebastes schlegeli) was determined. One thousand six hundred and eighty fish juvenile were distributed into 24, 200 L flow-through tanks (seventy fish per tank). Eight experimental diets were prepared; the control diet (Con) with no additive, ginger (GG), cheongkukjang (CJ), blueberry (BB), persimmon (PM), tomato (TT), broccoli (BC) and yacon (YC). One percent of each additive was included in each experimental diet at the expense of wheat flour except for the Con diet. Fish were fed with one of the experimental diets at satiation level twice a day for 7 days a week during 7 weeks. At the end of the 7-week feeding trial, fish was used for the Streptococcus parauberis challenge and water was not exchanged throughout the challenge test. Weight gain and specific growth rate (SGR) of fish fed the YC diet was significantly greater than those of fish fed all other diets, followed by the GG, BB and Con diets. Feed conversion ratio (FCR) and protein efficiency ratio (PER) of fish fed the TT and YC diets were higherthan those of fish fed the all other diets. FCR and PER of fish fed the Con and GG diets were higher than those of fish fed the CJ, BB, PM and BC diets. Accumulative mortality of rock fish fed the Con diet was higher than that of fish fed all other diets at 36 h after S. parauberis infection throughout the 10 day observation. All dietary additives were effective to lower mortality of rockfish at occurrence of S. parauberis. At 10 day, the lowest cumulative mortality was observed in fish fed the GG diet. In conclusion, YC was effective (growth promoter) to improve weight gain and SGR of rockfish. In addition, YC and TT was the most effective to obtain improved FCR and PER of fish. However, dietary inclusion of GG, BB and YC were effective (immunostimulant) to lower mortality of rockfish at occurrence of S. parauberis.

Biography

Ki Wook Lee is in PhD course in Department of Convergence Study on the Ocean Science and Technology, Korea Maritime and Ocean University, Busan, Korea. His major is aquafeeds nutrition and engineering.

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