The effects of water salinity on growth and osmotic stress indices in yellowfin seabream (*Acanthopagrus latus*)

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Abstract:
A 60–day study was conducted to evaluate the effect of water salinity levels including 6, 12, 24, 35 and 48 ppt on growth and osmotic stress indices in yellowfin seabream (*Acanthopagrus latus*). According to Brocken-line regression, the optimum salinity for culture of this species is 9.1 ppt. Fish reared in 35 and 48 ppt had higher plasma protein than the other treatments ($P < 0.05$). The highest and lowest plasma glucose and lactate levels were detected in fish reared in 35 and 6 ppt salinity, respectively. The level of plasma cortisol in fish reared in 12 and 24 ppt salinity was higher than the other groups. Plasma electrolytes including sodium, chlorine, calcium, potassium and total osmolality increased with increasing water salinity. According to the results of this study, it seems that brackish water provide optimum condition for growth and welfare of yellowfin seabream.

Keywords: Water salinity, cortisol, lactate, Optimum growth, total protein