

## **Response of Asian seabass, *Lates calcarifer* juvenile fed with different seaweed-based diets**

### **Abstract**

The purpose of this study was to evaluate the effects of three seaweeds *Kappaphycus alvarezii* (KA), *Euचेuma denticulatum* (ED) and *Sargassum polycystum* (SP) meal as dietary ingredients in the diets of Asian seabass juvenile on growth performance, feed utilization efficiency and body composition of Asian seabass, *Lates calcarifer* juveniles. A total of four experimental diets were formulated with 5% inclusion of KA, ED and SP. A diet without inclusion of any seaweed was used as a control diet. Experimental diets were fed to triplicate group of 20 Asian seabass juveniles with initial body weight of  $9.73 \text{ g} \pm 0.60 \text{ g}$  in an 8-week feeding trial. Growth performance and feed conversion ratio were not significantly affected by the seaweed inclusion in the fish diet; however, the total feed intake was significantly improved ( $P < 0.05$ ) in fish fed with SP-Diet. Fish carcass composition varied among treatments, with fish fed with control diet demonstrated significantly higher protein and lipid contents. Whereas, fish fed with SP-Diet exhibited significantly higher ash content compared to other dietary treatments. KA-Diet proved that it was the most stable feed among all dietary treatments. On the other hand, the stability of SP-Diet was comparable to the Control-Diet. This indicates that the tested seaweed is able to replace commercial feed binder in the diet formulation. Considering the good performance of *K. alvarezii*, *E. denticulatum* and *S. polycystum* in the present study and the local availability of the seaweed, they can be considered as potential ingredients in the diets for Asian seabass juveniles.