

Effect of dietary glucose, dextrin and starch on growth and body composition of juvenile starry flounder *Platichthys stellatus*

Sang-Min Lee<sup>a,\*</sup> and Jong Ha Lee<sup>b</sup>

<sup>a</sup>*Faculty of Marine Bioscience and Technology, Kangnung National University, Gangneung 210-702*

<sup>b</sup>*Uljin Marine Hatchery, National Fisheries Research and Development Institute, Uljin-Kun, Gyungbook 767-860, Korea*

A 10-week feeding trial was conducted to investigate the effects of dietary glucose, dextrin and starch on growth and body composition of juvenile starry flounder. Triplicate groups of fish (average weight, 9.7 g) were fed iso-nitrogenous (53% CP) and iso-caloric (3.8 kcal/g diet) diets containing 20% glucose, 20% dextrin and 5-25% alpha-potato starch with 5-14% lipid levels. Survival was not affected by dietary carbohydrate. Weight gain, feed efficiency and protein efficiency ratio of fish fed the diet containing 20% glucose were the lowest among all groups. The best weight gain was observed in fish fed the diets containing 20% dextrin. Growth and feed efficiency were not affected by dietary -potato starch level. Lipid contents of whole body and liver were not affected by dietary glucose, dextrin and starch at the same level. However, the lipid contents tended to decrease with increasing dietary starch level and those of fish fed the diets containing 5% alpha-potato starch were significantly higher than those receiving 10-25% alpha-potato starch. Liver glycogen content and hepatosomatic index tended to increase with increasing dietary starch level. These results indicate that juvenile starry flounder are able to efficiently utilize dextrin and -potato starch compare to glucose in diets and that alpha-potato starch could be incorporated up to 25% in the diet for optimum growth by juvenile starry flounder.

\*Corresponding author: [smlee@kangnung.ac.kr](mailto:smlee@kangnung.ac.kr)