

Comparison of nutrient levels of fish meal prepared from scavenger fish species (Genus: *Pterygoplichthys*) with locally produced commercial fish meal

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Scavenger fish, popularly known as tank cleaner (TC), generally called sailfin or sucker mouth catfish has been a very serious threat to inland water bodies and its fishery during the last decade. A mixed population of *Pterygoplichthys pardalis* and *P. disjunctivus* are reported in water bodies of Sri Lanka. Recently, more attention has been paid to utilize this noxious species for edible product development and as fish feeds. Present research intended to analyze nutritional value of prepared scavenger fish meal (TCFM) and compared it with a locally produced fish meal (Agri-star[®]) (LFM). Scavenger fish, which is enough to run the Agri-star fish meal plant at Peliyagoda, were collected from fishermen of Kalawewa. After ice packaging, 300 kg of TC were transported to Peliyagoda fish meal plant and fish meal was prepared. Proximate composition, some essential minerals, amino acid and fatty acid profiles were analyzed and compared with the commercial fish meal. The protein content of TCFM was more or less similar to that of LFM. Ash content of TCFM is significantly ($P < 0.05$; *LSD*) lower than that of LFM. Total lipid content of TCFM is significantly ($P < 0.05$; *LSD*) higher than that of LFM. The values of oleic acid and docosahexaenoic acid (DHA) of TCFM and LFM was 15.05, 12.88 % and; 1.14, 5.32 % respectively. In comparison of ten essential amino acids of fish, TCFM and LFM contain methionine, 11.37, 0.36 $\mu\text{g/g}$; tryptophan, 0.78, 0.75 $\mu\text{g/g}$; isoleucine, 6.56, 0.32 $\mu\text{g/g}$; and leucine, 38.56, 0.98 $\mu\text{g/g}$ respectively. Threonine and phenylalanine were only recorded in TCFM as 0.18 and 12.82 $\mu\text{g/g}$ respectively. Nevertheless, arginine, 0.16 $\mu\text{g/g}$; lysine, 9.26 $\mu\text{g/g}$; and valine, 3.64 $\mu\text{g/g}$ were reported only in LFM. High levels of methionine, isoleucine, leucine, phenylalanine, proline, aspartic acid, glutamic acid, glutamine, and tyrosine were reported in TCFM. The study revealed that scavenger fish meal could be utilized to reduce the pressure of local fish meals as a partial protein replacement and essential fatty acid supplement. But the cost of production of both fish meals is similar. Limiting effect of lysine can be minimized by adding L-lysine to the diet with scavenger fish meal.

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