

Comparative assessment of the nutritional quality of commercially available fish feeds

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The present increase in culture-based fish production has also increased the demand for formulated fish feeds. However, recent scientific studies on the actual nutrient composition of commercial fish feeds available in the Sri Lankan market could not be found. The objectives of this study were; 1) to investigate whether there is any difference in the actual nutrient composition of fish feeds with the label specifications, 2) to compare the nutrient composition of feeds, produced in large-scale and marketed under a registered brand name (LS) with that produced in small-scale and not marketed under a registered trade name (SS) and 3) to compare the protein levels in fish feeds imported from different countries. Fourteen LS and 15 SS feed samples were collected and analyzed for protein, moisture and ash content. The actual protein content (25.54 ± 2.20 vs. 28.25 ± 2.20 , $n=12$) and actual moisture content (7.30 ± 0.91 , $n=13$ vs. 9.82 ± 0.91 , $n=11$) of feeds were not different ($p > 0.05$) from their label values. However, certain commercial feeds showed ash contents which were higher than the label specifications. Further, no difference ($p > 0.05$) was observed between the protein content in SS (26.93 ± 1.53) and LS (24.92 ± 1.64) feeds. However, the moisture (10.58 ± 0.74 vs. 7.30 ± 0.79) and ash (13.92 ± 0.98 vs. 10.35 ± 1.06) contents of SS feeds were significantly higher ($p < 0.05$) compared to that of LS feeds. Moreover, there was no significant difference between the protein contents in feeds imported from different countries. In conclusion, we can rely on the label specifications of commercial fish feeds available in the market. As there is no difference between the protein content in SS and LS feeds, it is economical to use locally available feeds from SS manufacturers if the protein content is the only parameter of concern. Although the moisture content in feeds produced by SS manufacturers were higher, trials showed that these SS feeds could be stored in good condition for up to 2 to 3 weeks, without any visible fungal growths.

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