

Valorization of By-Products through Feed Formulation for Tilapia sp: Zootechnical Performance Study

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Abstract : In recent years valorization of biowaste has attracted a lot of attention worldwide owing to its high nutritional value and low price. In this work, biowaste of animal (sardines) and plant (tomato) biowaste was used to formulate a new feed for red tilapia that showed to be competitive in its price, and zootechnical performance in comparison to commercially available tilapia feeds. Mathematical modelling was used to formulate optimal feed composition with favorable chemical composition and the lowest price. Formulated feed had high protein content (40.76%) and an energy value of 279.6 Kcal/100 g. Optimised feed was manufactured and compared to commercially available reference feed with respect to feeding intake, feed efficiency, the specific growth rate of fingerlings of Tilapia sp, and, most important, zootechnical parameters. With a fish survival rate of 100% calculated feed conversion index for the formulated feed was 2.7.

Keywords : conversion index, fish waste, formulated feed, tomato waste

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