

Fish silage as replacement of fishmeal in tilapia feeds (*Oreochromis spp*)

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Fishmeal is the most expensive feed ingredient used in aqua feed. The objective of this study was to determine the effect of replacing fishmeal with tilapia silage incorporated with rice bran in the formulated diets of red tilapia (*Oreochromis mosambicus* X *Oreochromis niloticus* × *Oreochromis aureus*). A feeding trial was conducted with red tilapia fingerlings ($2g \pm 0.35$) to evaluate the growth, feed conversion, and protein utilisation when fed with increasing levels of tilapia silage (0 g /Kg, 250 g /Kg, 500 g/ Kg and 750 g /Kg). Twenty fish were stocked in twelve, 1000 L fiberglass tanks, at 5% of body weight. At the end of the 12 week feeding trial, there were no significant ($P > 0.05$) difference in the final mean weight ($31.64g \pm 2.92$, $36.35g \pm 2.11$, 28.05 ± 2.01 and 23.38 ± 1.72), weight gain ($29.53g \pm 3.12$, $24.24g \pm 2.1$, $25.8 g \pm 2.06$ and $21.62g \pm 1.91$), specific growth rate (3.22 ± 0.22 , 3.36 ± 0.08 , 3.04 ± 0.11 and 2.87 ± 0.25), feed conversion ratio (1.18 ± 0.09 , 1.07 ± 0.11 , 1.31 ± 0.12 and 1.35 ± 0.12) and protein efficiency ratio (2.78 ± 0.23 , 3.06 ± 0.32 , 2.37 ± 0.22 and 2.39 ± 0.24) among all treatments. There was no significant ($P > 0.05$) difference in organoleptic qualities of fish fed by the different diets. Results from the present study indicate that fishmeal content of red tilapia diet can be replaced with tilapia silage without adverse effect on the growth, feed conversion and carcass quality.

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