experimental local feed, the costs associated with manufacturing one kilogram of feed, the total production cost per kilogram of fish and the profit per kilogram of fish. The following formulas were used:

Pmf= Final biomass (g) / Final number of fish.

PGP= 100 x (Final average weight (g) - Initial average weight (g)) / Initial average weight

IC = Quantity of feed ingested(g) / Weight gain(g)

PI= Ration distributed x Crude protein / Final number of fish.

CEP= Weight gain(g) / Protein intake(g)

TCS (in %/d) = [Ln (Mf) - Ln (Mi) / t(d)] x 100

TS (in %) = (Number of final individuals / Number of initial individuals) x 100.

Cost per kilogram of feed from usual by-products =∑ (unit price of raw materials x proportions used)

Cost of manufacturing one kilogram of feed =∑ (cost of substrates+ milling price) x 100 / Rd with Rd the ration distributed

Total cost of a kilogram of feed= cost of a kilogram of feed from the usual sub-products + costs associated with manufacturing a kilogram of feed.

Total production cost per kilogram of fish= Total production cost per kilogram of feed x IC

Profit= Selling price per kilogram of fish - total production cost per kilogram of fish

2.7 Statistical analysis

Statistical analysis was carried out according to standard one-criterion analysis of variance (ANOVA) methods using Statistica version 6 software with a significance level of 5%. The Fisher LSD test was used for paired comparisons of means.

3 Results and Discussion

3.1 Farm water quality

Throughout the trial period, mean temperature values of around 28.4±0.6°C and 29.3±0.4°C were recorded at the T0 and T1 regime ponds, respectively. These measured temperatures are within the range (26 °C~30 °C) recommended by (Ipungu et al., 2019) for good growth of *Clarias gariepinus.* With regard to dissolved oxygen, the values recorded during the experiment were 4.22±0.9 mg·L^{-1} for regime T1 and 5.80±0.29 mg.L for regime T0. These recorded values are higher than the 3 mg/L reported by Ipungu et al. (2019) and are favourable for the growth of *C. gariepinus*. For pH, values of 5.38±0.42 and 5.68±0.31 respectively for T1 and T0 farm waters. The pH values indicate a slight acidity in the rearing water. However, they are likely to allow good growth of *C. gariepinus* (Ipungu et al., 2019). The values recorded for conductivity were 62.7±2.19 for the T0 regime and 72.6±1.26 µs/cm for the T1 regime, in contrast to TDS, where the values recorded were 42.9±1.11 and 49.2±1.37 ppm for the T0 and T1 regimes respectively.

3.2 Zootechnical and economic parameters

The zootechnical and economic performances obtained with the feeds tested after 90 days are presented in Table 3. Growth parameters such as Pmf, TCS, PGP reveal that there is no significant difference (p>0.05) in performance obtained between the local feed T1 and the imported feed (control - T0) with the exception of TCS. These results corroborate the work of Djissou et al. (2016) who used maggots and earthworms as a total replacement for fish meal to feed *C. gariepinus* fingerlings with similar growth performance (Table 3).