

# Review of: "The Growth Performance of Nile Tilapia (*Oreochromis Niloticus*) Fed Low-Cost Fish Feeds Formulated From Fish By-Products, Fishery By-Catch and Pig Blood-Meal"

Damaso Angel Rubio-Vargas<sup>1</sup>

<sup>1</sup> Universidade Federal do Paraná

Potential competing interests: No potential competing interests to declare.

To the Chief Editor,

We appreciate your invitation to evaluate the original research published in the Journal of Qeios, "The Growth Performance of Nile Tilapia (*Oreochromis Niloticus*) Fed Low-Cost Fish Feeds Formulated From Fish By-Products, Fishery By-Catch, and Pig Blood-Meal."

## Authors

Overall, I consider the manuscript acceptable for publication, with some observations that I recommend be taken into account for this article and future studies.

## Study area.

Mean temperature and precipitation data are presented for both the food preparation site and the experimental site. Is the influence of these data on the results discussed in the discussion section? I did not perceive such analysis. It is also stated that the experiment was carried out in a greenhouse to maintain constant temperatures, but the value of these temperatures is not mentioned. In such an environment, there is no influence of the aforementioned precipitation, so I consider that this data should not be reflected in the article.

## Biomarkers

Only morphometric parameters related to growth were analyzed in the fish of the study. As a suggestion, to complement and integrate the results, they could have analyzed biomarkers related to nutritional content in individuals (protein content, lipids, etc.) as well as health. It would thus be possible to integrate morphometric and growth parameters with the quality of convertibility of animal feed into biomolecules in these individuals and their state of health.

## Discussion

In general, the literature should be updated. It should have at least fifty percent of studies five years old or less (2019 - 2024). I recommend that in internal references, a comma be placed after the authors and before the year of publication of

the article. I see this as necessary to standardize these references with those in the literature in general.

First paragraph: Two sentences; "Several studies..."; "The findings of this research are in agreement with other studies...". Which studies? Only one of them is mentioned (Venugopal et al., 2008).

Third paragraph: "Many studies have revealed satisfactory feed utilization responses and growth by replacing fishmeal with viscera in the diets of *O. niloticus* (Hernandez et al. 2014; Mammauag and Ragaza 2016). However, the fish in this experiment were not feeding well because of sometimes lower than average temperatures, and this resulted in lower average mean weight gain." Which study— the one in the present manuscript, Hernandez et al., 2014, or Mammauag and Ragaza, 2016—addresses this issue? The authors stated in the experimental design that the whole experiment was developed in a controlled environment, in this case temperature. So, was this temperature controlled to be lower than average values?