***Postgraduate Institute of Agriculture***

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Instructions for preparation of the manuscript

# Format for typesetting

* + **Page setup:** A4 size (210 × 297 mm) typed single side only.
  + **Margins:** All sides with margins of 25 mm.
  + **Line spacing:** 1 (12 points) throughout the text.
  + **Page and line numbering:** All pages should be sequentially numbered using Arabic numerals on bottom center starting from title page. All line numbers should be removed.
  + **Font:** Times New Roman 10 for names and affiliations, except in the title, and footnotes. Use font size 8 for footnotes and page numbering, and size 12 for title.
  + **Language/spelling:** UK English only. Use UK English in language setting (Tools – Language setting)
  + **Software:** Authors may use MS Word® 2007 for Windows or a newer version.

# Title

* + Title should be in bold letters left-aligned on the page with font size 14, each word of the title starting with a capital letter except the articles, conjunctions, prepositions and species names *viz.* of, and, the, from, on, *etc.* No space should be left above the title, and leave two- line spaces below the title.

# Name/s and affiliation/s of author/s

* + Lower case letters except the first letter of each word, font size 9, left-aligned on the page.
  + Leave 2-line spaces between names and the affiliations. Affiliations of all the author should be mentioned below the title (please see the specimen). Leave two line spaces below the affiliation.
  + Place “and” just before the last author’s name.
  + E-mail address of the corresponding author should also be placed in the footnote. The Corresponding author should be identified by an asterisk after the name on the list of authors.

# Abstract and key words

* + Should be strictly limited to 250 words.
  + Up to a maximum of five (05) key words arranged in alphabetical order should be identified and included immediately after the abstract. Must not repeat words in title.
  + No references, no abbreviations, tables or figures should be included in the abstract.

**Effects of Supplementation of Insoluble Dietary Fiber Obtained from Cinnamon Spent Bark Waste on the Performance of Nile Tilapia (*Oreochromis niloticus*) Fingerlings**

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Dietary fiber supplementation has proven benefits on fish health and growth. Cinnamon spent bark waste is the residue of the cinnamon bark after the oil distillation. It is a rich source of insoluble dietary fiber (78.86%) with very low contents of soluble dietary fiber (0.84%). This study aimed to investigate the potential of using water- extracted insoluble fiber from cinnamon spent bark waste as a functional ingredient in the diets of *Oreochromis niloticus* fingerlings. Four experimental diets were prepared by replacing a commercial feed with extracted dietary fiber at 0 (control), 0.5%, 1%, and 1.5% levels. Fingerlings of *Oreochromis niloticus* were assigned to the four experimental diets and the feeding trial was conducted for 12 weeks. The results showed that the weight gain, specific growth rate, feed conversion ratio, Fulton’s condition factor, and survival rate were not significantly different among the experimental groups. Fiber supplementation at 1.5% significantly increased (p<0.05) the total aerobic bacteria population in feces. The coliform counts in feces at 0.5% and 1% fiber supplementation were significantly lower (p<0.05) than the control. There was a significant increase (p<0.05) in red blood cells count at 0.5% fiber supplementation. Moreover, insoluble dietary fiber supplementation significantly (p<0.05) increased the white blood cells count in blood. Results suggested that insoluble fiber supplementation affected gut microbial populations and blood parameters of *O. niloticus* fingerlings.However, further investigations on gut microbiology and hematology will be needed to ensure the use of insoluble dietary fiber from cinnamon spent bark waste as a functional ingredient in the diets of *O. niloticus* fingerlings.

**Keywords:** Cellulose, Condition factor, Growth rate, Insoluble dietary fiber

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