



[Afr. J. Agric. Res.](#)

[Vol. 2 No. 7](#)

Viewing options:

- [Abstract](#)
- [Full text](#)
- [Reprint \(PDF\)](#) (126k)

Search Pubmed for articles by:

[Gabriel UU](#)
[Onunkwo DN](#)

Other links:

[PubMed Citation](#)
[Related articles in PubMed](#)

African Journal of Agricultural Research Vol. 2(7), pp. 279-286, July, 2007
ISSN 1991- 637X© 2007 Academic Journals

Review

The role of dietary phytase in formulation of least cost and less polluting fish feed for sustainable aquaculture development in Nigeria

U. U. Gabriel^{1*}, O. A. Akinrotimi², P. E. Anyanwu², D. O. Bekibele² and D. N. Onunkwo²

¹Department of Fisheries and Aquatic Environment, Rivers State University of Science and Technology, P. M. B. 5080, Port Harcourt, Nigeria.

²African Regional Aquaculture Centre/Nigerian Institute for Oceanography and marine Research, P. M. B. 5122, Port Harcourt, Nigeria.

*Corresponding author. Email: ugwemg@yahoo.com

Accepted 21 June 2007

Abstract

The production of fish meal in Nigeria from the wild sources has for some period now been dwindling and when available are very expensive, because most of the fish meal used in fish feed formulation are imported. Hence viable alternatives have to be found for the sustainability of the aquaculture industry in the country. Plant based protein sources, which are relatively cheap, readily available and easily accessible hold the solution to this, but with limitations in utilization, due to the presence of phytic acid, an anti-nutritional agent present in virtually all plant ingredients. Phytic acid reduces bioavailability and digestibility of nutrients like proteins, phosphorus and other minerals, there by promoting accumulation of dissolved solids which ultimately leads to pollution. Hence, the need to create awareness of the efficiency of phytase treated diets, for the survival of the industry in the nearest future is imperative for the overall success of aquaculture venture. The role of dietary phytase in the formulation of fish feed using plant based protein sources which is cost effective, and reduces the incidence of aquatic pollution by making the nutrients and minerals in the feed more available to fish are thoroughly discussed in this paper.

Key words: Fish feed, phytase, cost effective, diet, sustainable aquaculture.

Powered by


Search

jn WWW jn AJAR

[Email Alerts](#) | [Terms of Use](#) | [Privacy Policy](#) | [Advertise on AJAR](#) | [Help](#)

Copyright © 2007 by Academic Journals