

**CONSTRAINTS TO FISH FARMING IN NANGABO SUB-COUNTY WAKISO  
DISTRICT**



**BY**

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## DECLARATION

I kasiriivu jorvan, hereby declare that this is my authentic work and it has not been submitted or presented in any form to any University or any institute of higher learning for any award.

Sign: [Signature] date: 29/09/2015

## APPROVAL

This research was carried out under my supervision and it is now ready for presentation to the academic board of Busitema University.

Sign: PP [Signature] Date: 30<sup>th</sup> / 09 / 2015

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## **DEDICATION**

I dedicate this work to the Almighty God for his faithfulness and mercies given to me during the time of study and writing of this report. Friends, Auma Leah, sub county agricultural officer, and my parents for their financial and moral support that they afforded to me. Their support has yielded success to the completion of this report. May the Almighty God bless you!

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

KARDC –Kajjansi aquaculture research and development centre.

MAAIF- Ministry of Agriculture Animal Industry and Fisheries

FAO - Food and Agriculture organization

NAADS- National Agricultural Advisory Services

SSPS- statistical package for social scientists

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## ABSTRACT

The study was conducted to determine the constraints to fish farming in Nangabo sub-county Wakiso district, central Uganda focusing on the economic, institutional and social constraints. Random sampling techniques was used to select Five parishes out of nine parishes namely; Nangabo, Gayaza, Bulamu, Masooli, Wampeewo. Primary data were obtained from 60 fish Farmers households purposively and were interviewed with semi-structured questionnaire. The questionnaire data was analyzed using SPSS 16.0 version and Microsoft Excel worksheet.

The result reveals that majority (58.3%) are in the active age of 36 – 50 years, secondary education (46.7%) while 50.0% are in the bracket of 1 – 5years business experience. The results also reveals that (85.0%) of farmers had no credit assess,(45.0%) use family labour as labour source, (98.3%) market their products at farm, (85.0%) had no assess extension services, (51.7%) experience theft and (13%) poisoning of fish.

The study concluded that increased interest rates, equipment unavailability in marketing of the fish and its products, expensive labour costs those available, lack of access to extension services and theft of fish were their major constraints faced by fish farmers.

However, the study recommends that, loans with subsidized interest should be provided to farmers to favor agro based enterprises and Fish farmers should form cooperative groups in order to gain easy access to credit, the local authorities need to support farmers by providing extension workers at each sub county to be able to provide adequate technical advice to farmer

# CHAPTER ONE: INTRODUCTION

## 1.1. Background

Ogada m. j (2013), Agriculture remains important for the economies of most developing countries for food security, poverty alleviation, and sustainable development and its crucial to developing other sectors of the economy as well. Green facts (2004) showed that aquaculture is the fastest growing animal based food production sector particularly in the developing countries mainly China and other Asian countries with average growth rate of 11% (FAO, 2000). Aquaculture is considered an option for rural development because it can provide the basic needs of the rural poor (Jolly and Clonts 1993), an opportunity to help solve problems of underdevelopment, poverty, and protein malnutrition of the poor (Bailey and Skladany 1991; Edwards 2000). According to Pillay (1990), it offers part- and full-time employment, which help in sustaining peasants and fishermen in rural areas while reducing the drift of populations to urban centers.

Fish is a vital source of food for people as it's man's most important single source of high-quality protein, providing ~16% of the animal protein consumed by the world's population, (FAO, 1997). Fish feeds up to 17 million people [69% of total population] within Uganda annually, providing critical nutrient as well as food protein. Over 36 million people are employed directly through fishing and aquaculture (FAO, 2000), and as many as 200 million people derive direct and indirect income from fish (Garcia and Newton, 1997). According to K. Aganyira (2005) Aquaculture is important for recreation (sport fishing).also fish export is a major contributor to foreign exchange earnings, often ranking far higher than other agricultural commodities (FAO, 2005).

K. Aganyira (2005) Aquaculture is a relatively new and underdeveloped farming practice compared to agriculture and animal husbandry, even in many parts of Asia . In Africa, the governments of the continent under the aegis of the African Union, have identified the great potential of aquaculture and are determined to encourage private sector investment (NEPAD, 2005).

## REFERENCES

- Agbede, S.A., O.B. Adedeji, O.K. Adeyemo, G.O. Esuruoso and Yusuf, Haroun, 2003. Small Scale Fish Production in Veterinary Practice. *Nig. Vet. Journal.*, 24(3): 160-171.
- Agbede, S.A., O.K. Adeyemo, O.B. Adedeji, A.O. Olaniyan and G.O. Esuruoso, 2003. Teaching of Fish and Wildlife Medicine to D. V. M Students: The Scope, Opportunities and Applications in Practice. *Nig. Vet. Journal*, 24(3): 172-178.
- Ajieh, P.C., 2010. Adoption of Fishery Technologies by Fish Farmers in Akoko-Edo Local Government Area Edo State, Nigeria. *Research Journal of Fisheries and Hydrobiology*, 5(2): 137-143.
- Adedeji O.B. and Owoigbe G.A. Ogunoiki, 2005. M. Factor Affecting Catfish Production and its Public Health Implication in South Western Nigeria. In Vol. II Proceedings of the XI The International Congress on Animal Hygiene 4-8 September 2005 Warsaw, Poland.
- Bailey C and Skladany M (1991) Aquaculture development in tropical Asia – A re-evaluation. *Natural Resources Forum* .Feb: 66-73.
- Bailey, C et al (1996). *Aquaculture Development .Social Dimensions of an Emerging Industry.* West view Press, A division of Harper Collins Publishers.
- Crammer; G.L., C.W. Jensen and D.D. Southgate, 2001. *Agricultural Economics and Agribusiness (Eight Edition)* John Wiley and Sons, Inc., New York, U.S.A.
- Deininge, K. and Okidi, J, (1999): Determinants of Agricultural Productivity and Non-farm Enterprise startups: The case of Uganda, A paper presented at a conference on assessing outcomes in the context of the comprehensive Development Frame work held in October 1999 at Kampala, Uganda.
- Edwards, P., 1998. A systems approach for the promotion of integrated aquaculture. *Aquacult. Econ. Manage.*2: 1-12.
- Edwards, P. (2001.) Aquaculture for poverty alleviation and food security. *Aquaculture Asia* 7 (2):53-56. Egypt.[[www.fao.org/fishery/countrysector/naso\\_egypt](http://www.fao.org/fishery/countrysector/naso_egypt)]
- Esenu N.B. (2005). Gender relation in livestock production and ownership implications for household food security; in the teso farming systems. thesis submitted to school of post graduate studies in partial fulfillment of award of master of sciences in agricultural economics of makerere university,

- FAO, 2000, 2009. National Aquaculture Sector Overview. Ghana. In Fisheries and Aquaculture. Fisheries and Aquaculture Department. [Online] Available at: [www.fao.org/fi/website/FIRetrieveAction.do?...Ghana](http://www.fao.org/fi/website/FIRetrieveAction.do?...Ghana) (Accessed: 29/01/2015).
- FAO (1997) Review of the State of World Aquaculture. FAO Fisheries Circular No. 886, Rev. 1. Rome, Italy. [PubMed]
- FAO (2000) The State of World Fisheries and Aquaculture 2000. FAO, Rome, Italy.
- FAO. 2005. National Aquaculture Sector Overview. Uganda. Text by Mwanja, W.W. In: FAO Fisheries and Aquaculture Department (Online), Rome, Updated 19 July 2005. (Cited 30 April 2009)
- FAO. (2001). World Review of Fisheries and Aquaculture. FAO, Rome, Italy.
- FAO. (2011). World Review of Fisheries and Aquaculture. FAO, Rome, Italy.
- Greenfacts (2004) world fisheries production [www.greenfacts.org/fisheries/04-utilization.tem](http://www.greenfacts.org/fisheries/04-utilization.tem), retrieved on January 2012
- Harrison et al (1994). Fish Farming in Africa. What is the Catch? Summary Report of ODA-Supported Research Project. "Aquaculture in Sub-Saharan Africa". London DFID. at [http://www.keysheets.org/green\\_4\\_aquaculture\\_2.html](http://www.keysheets.org/green_4_aquaculture_2.html) 16.02.2015
- Jolly CM, Clonts HA (1993) Economics of aquaculture. New York. Food Products Press.
- K. Aganyira (2005) Aquaculture: A Tool for Sustainable Development in Uganda. A Case study of Kigoowa Catholic Women's Development Association in Kampala District. pg 2.
- Kigeya, Josua Kamyia, (1995). Problems and prospects of fish culture among small-scale farmers in Uganda: An analysis of technical, social and educational dimensions, Ph.D. diss., Madison, WI: University of Wisconsin - Madison.
- MAAIF. (2012). statistical abstract <http://www.agriculture.go.ug>
- Matanmi B M, Adesiji G B and Adegoke M A 2008. An analysis of activities of bee hunters and beekeepers in Oyo state Nigeria. African Journal of Livestock Extension 6:7-11

- NARO and MAAIF (2000). Aquaculture in Uganda. Baseline Survey (1999/2000) Kaggansi Aquaculture Research and Development Center.
- Nilson H and Wetengere (1994). Adoption and Viability Criteria for Semi-intensive Fish Farming. Alcom Field Document No. 28. [Online] Available at: [www.fao.org/docrep/005/ad001e/AD001E00.HTM](http://www.fao.org/docrep/005/ad001e/AD001E00.HTM)(Accessed: 20/02/2015)
- Nangabo Sub-county-three-year development plan 2004-2007, (2003).Nangabo Sub-county, Wakiso District, Uganda. Unpublished.
- Ogada m.j( 2013): essays on farm technology adoption, technical efficiency and productivity in smallholder food crop agriculture in Kenya, pg 1
- Pillay T V R- 1990 Aquaculture Principles and Practices. 575 pp. Fishing News Books, Oxford, ISBN 0-85238-168-9
- Pillay, T.V.R., 1990. Basic of Aquaculture, and History of Aquaculture and its Present State. In: Aquaculture Principles and Practice. Fishing News Books. pp. 4, 5, 7, 9, 39-43.
- P. Jagger & J. Pender (2001).Markets, Marketing and Production Issues for Aquaculture in East Africa: The Case of Uganda, International Food Policy Research Institute, Washington, D.C.
- Sserunkuuma, D., J. Pender, and E. Nkonya,( 2000), Land management in Uganda: Characterization of problems and hypotheses about causes and strategies for improvement, in prep.
- Slaoama murinkovic & nebojsa,(2010). Analysis of production and competitiveness on small bee keeping farms in selected districts of Serbia. Bee keeping situational analysis Ethiopia .
- Tadele tolosa,(2008). Challenges and opportunities of honey production on gomma district of jimma zone, south west Ethiopia. Journals of agriculture and animals sciences. Ethiopia.
- Ugwuba C.O.A. and C.O. Chukwuji, 2010. The Economics of Catfish Production in Anambra State, Nigeria:A Profit Function Approach. Journal of Agriculture and Social Sciences, 6(4): 105-109.
- Wikipedia, 2009. Fish farming. In: Wikipedia, the free encyclopedia. [Online] Available at: [http://en.wikipedia.org/org/wiki/fish\\_farming](http://en.wikipedia.org/org/wiki/fish_farming) (Accessed: 2/03/2015).