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DEPARTMENT OF BIOLOGY

INVESTIGATION OF THE PRODUCTION AND USE OF ALTERNATIVE FEEDS BY FISH FARMERS IN FISH FARMING IN NAGONGERA SUB-COUNTY IN TORORO DISTRICT-UGANDA

BY

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A RESEARCH REPORT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE BACHELORS DEGREE OF SCIENCE AND EDUCATION IN THE FACULTY OF SCIENCE AND EDUCATION OF BUSITEMA UNIVERSITY

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DECLARATION

I OKUKU MOSES ONDIEGE declare that this research report is my original work and has not been submitted for any degree award to any other university before.

SIGNATURE..... DATE..26/may/2023.....

APPROVAL

This is to certify that this research titled investigation of the production and use of alternative feeds by fish farmers in fish farming in nagongera sub-county, tororo district-uganda has been submitted with our approval as the students University supervisors

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ABSTRACT

This research project documented the production and use of alternative fish feeds by fish farmers in the parishes of (Pokongo, Kadewere, Okuta, Katajula) in Nagongera Sub-County in Tororo district located in Eastern Uganda. The increasing costs of commercial feeds have made it inevitable for fish farmers in Nagongera Sub-County to resort to the alternative fish feeds to feed the cultured fish species . the list of fish farmers in Tororo district was obtained from the District Fishery Officer`s office and Nagongera Sub-County selected because it had the highest number of active fish farmers (7) and the 8th obtained through a pilot study and from the survey conducted using open ended questionnaires, all the fish farmers used alternative feeds as the fish feed. Alternative feeds were produced using locally available materials and the most used materials as alternative feeds were maize bran (87.5%), blood as blood meal (50%), Yam leaves (12.5%), white ants (12.5%), swirl (12.5%) and small fish (12.5%). The farmers did not follow the appropriate and standardized feed processing protocol during alternative feed production and mainly relied on local methods like estimation of amount of the ingredients used in the processing of the feeds and improper formulation as evidenced by improper balancing of the nutrients, the selection of raw materials and quality of the ingredients was not considered and mainly relied on contaminated maze bran containing stones, sand and this ingredients were not examined for quality check and also for nutrient analysis and absence of pelleting machines in all the sampled areas in Nagongera Sub-county and during application casting without considering the amount given and nutritional requirements of the farmed species. Hence the need to train the fish farmers in Nagongera Sub-County about the production and use of nutritionally balanced and cost effective alternative feeds so as to increase fish production through aquaculture in the Country.

Keywords:

Aquaculture, Alternative fish feeds, Nagongera, Locally available materials, Small- scale fish farmer

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CHAPTER ONE: INTRODUCTION

1.1 Background

Fish farming commonly known as aquaculture is an economic and innovative technique aimed at enhancing food security. Studies (Food Agricultural Organization 2011; Jamu &Brummet 2004) show that aquaculture reached global prominence at the time when governments were working hard to ensure food security for their citizens. Mwaijande and Lugendo (2015) describe fish farming as an approach for economic transformation and poverty alleviation. It focuses on the various hindrances faced by fish farmers, processors and other related people in the aquaculture field.

Generally capture fisheries and aquaculture have been under operation in Uganda for the past thirty years and have had a positive impact on the livelihood of local people and development of the national economy but has faced a number of challenges ranging from the poor infrastructure to limited freely accessible training facilities for fish farmers leading to the stagnation of the production levels. A high percentage of aquaculture losses have been due to the use of the poorly formulated feeds both made locally and in local industries by inexperienced people or due to the scarcity of the building materials and inadequate funds to purchase high quality machines for proper mixing and drying and pelleting of the feeds and due to the absence of the knowledge adequate knowledge about the nutritional requirements of the intensively cultured fish species and the improper management of these feeds.

Aquaculture in Uganda reached its climax in the late 19660s, when some11, 000 ponds were reported to be in operation but soon faced a tremendous decline in the 1980s due to political un rests in the country. However there has been a rapid rise in the development of the intensive aquaculture system in Uganda and recently conducted survey shows that a total of over 14000 intensive fish farmers and a total of over 30000 ponds and around 2135 cages in lake Victoria (Kubiriza, 2017 and Mbowa, et al, 2017). The natural conditions in Uganda characterized by mean annual rainfall of 1000-1606mm and mean temperature of 41-31 (UBOS, 2015). The government favourable policies for example national fisheries policy 2004 and the fish rules 2004 and the appropriate soil for pond construction. Fish feed accounts for over 60% of the total costs in the intensive aquaculture system.

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