

**EFFECT OF REPLACING MUSTARD OILCAKE BY LINSEED OILCAKE ON
GROWTH PERFORMANCE OF NILE TILAPIA (*Oreochromis niloticus*,
LINNAEUS, 1758)**



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DECLARATION

I hereby declare that the work presented in this thesis has been done by myself, and has not been submitted elsewhere for the award of any degree. All sources of information have been specifically acknowledged by reference to the author or institution.

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RECOMMENDATIONS

This is to recommend that the thesis entitled "**EFFECT OF REPLACING MUSTARD OILCAKE BY LINSEED OILCAKE ON GROWTH PERFORMANCE OF NILE TILAPIA (*Oreochromis niloticus*, Linnaeus, 1758)**" has been carried out by Mr. Suraj Babu Ghimire for the partial fulfilment of Master's Degree of Science in Zoology with special paper Fish and fisheries, This is his original work and has been carried out under my supervision. To the best of my knowledge, this thesis work has not been submitted for any other degree in any institution.

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LETTER OF APPROVAL

On the recommendation of supervisor Dr. Kumar Sapkota this thesis submitted by Suraj Babu Ghimire entitled "**EFFECT OF REPLACING MUSTARD OILCAKE BY LINSEED OILCAKE ON GROWTH PERFORMANCE OF NILE TILAPIA (*Oreochromis niloticus*, Linnaeus, 1758)**" is approved for the examination and submitted to the Tribhuvan University in partial fulfillment of the requirement for Master's Degree of science in Zoology with special paper Fish and fisheries.

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ABSTRACT

Fish is important source of protein to raise health status of an individual. Healthy manpower has undoubtedly major contribution for the development of nation. In Nepal, there are various form of water resources with varied topography, climatic condition and complex ecosystem which can harbor variety of fishes. Warm water aquaculture in the country can be flourished by rearing the fishes like Nile tilapia in the available water resources and using feed composed of locally available feed ingredients because the farming of tilapia is expanding in global level as aquatic chicken. Present study is aimed to explore the effect of replacing mustard oilcake by linseed oilcake in feed on the growth performance of Nile Tilapia (*Oreochromis niloticus*) in pond environment. Mustard oilcake (MOC) was replaced by linseed oil cake (LOC) at three different level 0%, 50% and 100% to prepare three different types of diets. Diets were prepared with about 18% analyzed crude protein content. Fingerling were kept in three happa with three replication for each diet in completely randomized block design (CRD). Average weight of 5.31 g were stocked in happa having size 1.5m×1.5m×1.2m. The experimental fish were fed at 3% of their body weight per day, at once in the morning for five month continuously. No significant difference ($p>0.05$) in final mean weight, final total weight, average daily weight gain(DWG), survival rate, extrapolated GFY, extrapolated NFY and apparent feed conversion ratio (AFCR) in different treatments was observed. Hence study concluded linseed oilcake can be used as the substitute in the feed of tilapia, if it is locally available.

CONTENT

	Page No.
Declaration	i
Recommendation	ii
Letter of Approval	iii
Certificate of Acceptance	iv
Acknowledgement	v
Abstract	vi
Content	vii
List of table	ix
List of figure	x
List of abbreviation	xi
1. INTRODUCTION	1-10
1.1 Status of fishery resources	2
1.2 Nile tilapia	5
1.3 Tilapia and its potentiality in Nepal	6
1.4 Common feed ingredients used in aquaculture	8
1.4.1 Ingredients of plant origin	8
1.4.2 Ingredients of animal origin	8
1.4.3 Miscellaneous feed ingredients	8
1.5 Linseed oil cake and mustard oil cake	8
1.6 Objectives	9
1.6.1 General objective	9
1.6.2 Specific objective	9
1.7 Rational of the study	9
2. LITERATURE REVIEW	11-15
3. MATERIALS AND METHODS	16-20
3.1 Study area	16
3.2 Culture condition and experimental set up	16
3.3 Collection of fingerlings	17
3.4 Feed preparation and feeding	17
3.5 Monthly growth check	18
3.6 Water quality parameters	19

3.7	Data analysis	19
3.8	Statistical analysis	20
4.	RESULTS	21-26
4.1	Growth pattern	21
4.2	Daily weight gain	22
4.3	Apparent Feed conversion ratio	23
4.4	Growth and production	24
4.5	Water quality	25
5.	DISCUSSION	27-29
6.	CONCLUSION	30
7.	REFERENCES	31-35
	APPENDIX	

List of Tables

Table	Title of table	Page
1.	Protein content of various food items.	2
2.	Status of fishery resources in Nepal	3
3.	Summary of fish production of Nepal in the year 2014/2015	4
4.	Happa in different treatment	17
5.	Crude protein content of different feed ingredients	18
6.	Ingredients used in different feeds	18
7.	Instruments used to measure water quality parameter	19
8.	Growth and production parameters in different treatment	24

LIST OF FIGURES

Figure	Title of figure	Page
1.	Experimental site	16
2.	Average monthly weight of fish in different treatment	21
3.	Average monthly daily weight gain in different treatment	22
4.	Apparent feed conversion ratio in different treatment	23
5.	Temperature and dissolved oxygen on different date	25
6.	PH and Transparency in different date	26

LIST OF ABBREVIATION

Abbreviated form	Details of abbreviation
AFCR	Apparent food conversion ratio
AGDP	Agriculture Gross domestic product
ANF	Anti- nutritional factor
ANOVA	Analysis of variance
CBS	Central Bureau of statistics
CP	Crude Protein
DO	Dissolved oxygen
DOFD	Directorate of fisheries Development
DWG	Daily weight gain
FAO	Food and agriculture organization
GFY	Gross fish yield
LOC	Linseed oil cake
MOC	Mustard oil cake
NARC	National agriculture research council
NFY	Net fish yield
PUFA	Poly-unsaturated fatty acid
SGR	Specific growth rate