EFFECTS OF DIETARY REPLACEMENT OF FISHMEAL BY MEAT MEAL MADE OUT OF REJECTED CHICKEN AT SLAUGHTER HOUSE ON THE GROWTH PERFORMANCE OF

KOI (Cyprinus carpio)

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ABSTRACT

Because of declining global availability and increasing demand, fishmeal is a major contributor to the rising cost of fish feeds and fish production. Higher feed cost, is due to the high price for the animal protein ingredients used viz fishmeal, to prepare the fish feeds. Therefore, there is a great economic and environmentally sustainable incentive to find less expensive protein sources to replace fishmeal in feeds for aquaculture. Therefore a study was undertaken to investigate the suitability of using rejected chicken form slaughter house as a replacement protein source for expensive fishmeal in the diet of Cyprinus carpio haematopterus. Chicken meat was collected from "Crysbro" meat processing unit, Gampola and meat meal was prepared. The meat meal contained 70% protein, 19% lipid, 1% ash on dry weight basis. Four different diets (T_1 = commercial koi carp pellet, T_2 = imported fishmeal diets, T_3 = meat meal diets and T₄= local fishmeal diets) were used to feed the fish as treatments. The experiment was done at the Nutrition Laboratory of the Department of Anima'l science, Faculty of Agriculture, Eastern University, Sri Lanka for six weeks. One hundred and twenty fry of Cyprinus carpio haematopterus (0.796 g/fry) were stocked in 12 glass tanks (experimental unit) at a density of 10 fry/tank. Each experimental unit was replicated three times. The experimental was conducted under Completely Randomized Design (CRD). Water quality parameters were within the acceptable range during the experimental period. The best growth was obtained on the diets with imported fishmeal, meat meal, and on the commercial diet $(T_2>T_3>T_1)$. The T₂ recorded the highest final body weight (3.34 ± 0.39 g) and the least (2.55 ± 0.35 g) was in T₄ (local fishmeal). The weight gain was 2.54 \pm 0.34 g (p<0.05) higher on T₂ than on T_4 (1.74±0.36 g). There were no significant differences of survival rate,

TABLE OF CONTENTS

Page N	0
ABSTRACT	.I
ACKNOWLEDGEMENT	Π
TABLE OF CONTENTS	V
LIST OF TABLE	Π
LIST OF FIGURE	X
CHAPTER 01	1
INTRODUCTION	1
1.1 General introduction	1
1.2 Objectives	4
CHAPTER 2	5
LITERATURE REVIEW	5
2.1 Koi Carp	5
2.2 Morphological of koi carp	5
2.3 Koi Fish Facts	6
2.3.1 Origin of koi	6
2.3.2 Type of koi	6
2.3.3 Temperament	6
2.3.4 Size	7
2.3.5 Living Conditions	7

2.3.6 Life Expectancy	7
2.4 Feeding	7
2.5 Nutritional Requirements of Koi	8
2.6 Prepared (artificial) Diet	0
2.7 Nutrition compound of the artificial diet	1
2.7.1 Amino Acids	1
2.7.2 Lipids (Fats)	1
2.7.3 Carbohydrates 12	2
2.7.4 Vitamins	2
2.7.5 Minerals 12	2
2.8 Energy 1:	3
2.9 Protein supplement of fish1	4
2.10 Benefits and disadvantages of alternative protein sources 1	7
2.11. Meat and Bone Meal and Meat Meal 1	9
2.12 Poultry Fat 2	1
2.13 Fishmeal	1
2.13.1 Processing of fish to prepare fishmeal	2
2.13.2 Chemical composition of fishmeal	:3
2.14 Physical properties required for fish feed 2	24
2.14.1 Ideal properties 2	!4
2.15 Possible processing methods to achieve required physical properties	25

2.15.1 Pelleting
2.15.2 Extrusion
CHAPTER 3
MATERIALS AND METHODS
3.1 Experimental Animal
3.2 Experiment setup
3.3 Experimental Diet
3.3.1 Treatments
3.3.2 Preparation of chicken meat meal
3.3.3 Feed preparation
3.4 Feeding
3.5 Other Maintenance
3.6 Data Collection
3.7 Growth parameters of fish
3.7.1 Percentage weight gain
3.7.2 Percentage length gain
3.7.3 Specific growth rate (SGR)
3.7.4 Condition factor
3.8 Percentage survival of fish
3.9. Feed conversion ratio (FCR)
3.10. Economic analysis

3.11 Water quality parameters
3.12 Data analysis
CHAPTER 4
RESULTS AND DISCUSSION
4.1 Water quality parameters
4.2 Proximate compositions of the experimental diets
4.3 Body weight
4.3.1 Initial (at 28 days of growth) body weight
4.3.2 Final body weight (at 70 days of growth)
4.4 Weight gain (WG)
4.5 Specific growth rate (SGR)
4.6 Feed Conversion Ratio (FCR)
4.7 Survival Rate
4.8 Standard length (at 28 days and 70 days)
4.9 Length gain (LG)
4.10 Condition factor
4.11 Feed cost
CHAPTER 5
CONCLUSION
REFFRENCES