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Title of Thesis	USING SOME NON-CONVENTIONAL FEEDSTUFFS IN FISH FEEDING		
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Branch	Animal nutrition	**Approval**	9/10/2003

ABSTRACT

This study was designed to determine the effect of partially replaced fish meal protein at levels 0, 25, and 50% by using non-conventional protein sources (poultry by-product meal) in the first experiment. In the second experiment, potato by-product and macaroni by-product were used at levels of 0, 25 and 50% to replace yellow corn in Nile tilapia diets. In each feeding trial a total number of 1200 Nile tilapia fish (30 gm body weight), randomly distributed in four groups per treatment (3 riplicates in each), there were fed diets at 3% of total biomass of body weight (4 times) 6 days per week. The diets contained 30% CP and 4300 kcal/kg. The feeding trials were extanded for 140 days.

The results indicated that using 50% of poultry by-product meal to replace fish meal protein in the first experiment and 50% of potato by-product to replace yellow corn energy in the second experiment had the best values obtained for body weight gain, feed conversion ratio, utilization of nutritients and digestibility of nutrients. The lowest cost of one kg body weight of fish was also obtained. The experimental diets were not affected on fish flesh palatability or total counts of bacteria.

Key words: Nile tilapia, poultry by-product, potato by-prodocut, digestability coefficients.

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LIST OF ABBREVIATION

ADC	Apparent digestibility coefficient
ADG	Average daily gain
B.L.	Body length
B.W	Body weight
BWG	Body weight gain
^{o}C	Temperature centigrade
CF	Crude fiber
CM	Centimeter
DM	Dry meter
DO	Dissolved oxygen
EE	Ether extract
EER	Energy efficiency ratio
EPV	Energy productive value
EXP.	Experiment
FCR	Feed conversion ratio
FER	Feed efficiency ratio
FIG.	Figure
FPV	Fat productive value
GE	Gross energy
Gm	Gram
HBPW	Hatchery by – product waste
Hr	Hour
K	Condition factor
K Cal	Kilocaloriy
Kg	Kilo gram
L	Liter
Le	Length
MB	Macaroni by-product
Mg	Milligram
NFE	Nitrogen free extract
PB	Potato by-product
PBPW	Poultry by-product waste
PER	Protein efficiency ratio
PPV	Protein productive value
RBWG	Relative body weight gain
SGR	Specific growth rate
TBA	Triobarbituric acid
TMA	Trimethylamine
TVBN	Total volatile bases nitrogen
WHC	Water holding capacity
WT.	Body weight