

# Characterization of Non-Conventional Fish Food Prepared From Intestine of Slaughtered Chicken Bird

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**Abstract:- For the production of non-conventional fish food gastrointestinal tract of chicken bird was used. The experimental fish tin foil barbs were actively feed on the food. Observed characteristic of the food is suitable for fish and its growth.**

**Keywords:-** Non-Conventional, Fish Food, Characterization, Chicken Bird.

## I. INTRODUCTION

Fish food normally contains macronutrients, trace elements and vitamins which is require for their good health. Approximately 80% of fishkeeping hobbyist feed their fish exclusively prepared food. There are number of substances for the production of fish food like fish meal, shrimp meal, squid meal, brine shrimp, soyabean meal and spirulina. Fish food of protein source can be prepared from chicken slaughter house waste associated with the processing of chicken bird for human consumption. Large amount of waste matters have been releasing from chickens shops which contain blood, visceral matters (Gastrointestinal tract) and feathers. The majority of the waste in the meat industry is produced during slaughtering. Slaughter house waste consists of the portion of slaughtered animals that can be sold as meat or used in meat products, such waste includes bones, tendons, skin, and the content of the gastrointestinal tract, blood and internal organs. These are varied with each type of animal (Sielaff 1996, Grosse 1984). Visceral matters especially having a gastrointestinal tract which consists of precrop esophagus, crop, postcrop esophagus, proventriculus, gizzard, pancreas, small intestine, ceca, large intestine and cloaca. The small intestine of mature chicken is more than 4.5 feet in length whereas the large intestine of mature chicken is relatively short about 4 inches in length. The small intestine is made up of the duodenum (also referred to as the duodenal loop) and the lower small intestine. The lower small intestine is composed of two parts, the jejunum and the ileum. Tapeworm or cestodes are flattened, ribbon shaped worms inhabit the intestine of chicken birds. Young birds are more severely affected than the older bird hence it is not utilized by human being. The present work is primarily about preparation of fish food from intestine of chicken which is non-conventional food. Non-conventional feed resources are feeds that are not usually common in the market and are not the traditional ingredients used for commercial fish food

production (Madu C.T. *et.al.* 2003). Use of non-conventional feed stuffs has been reported with good growth and better cost benefit values. Non-conventional food is alternative to the fish food available in the market. It is not common in the market. It does not contain any traditional ingredients. Most of the researchers are working on synthesis of non-conventional food. One of the most researchers is Madu C.T. *et.al.* 2003. Present study was carried out to study gastrointestinal tract of chicken bird, evaluation of use of gastrointestinal tract as a food for the fish (*Tin foil barb*), Characterization of fish food with reference to Origin, Colour of food, Stage, Solubility with water, Status in water, Turbidity of water, response of fish towards food, mortality of experimental fishes and status, quality and cost of prepared food.

## II. MATERIALS AND METHODS

This study was designed to study and evaluate the use of gastrointestinal tract as a food for the fishes (*Tin foil barb*). Gastrointestinal tract was collected from chicken shops from Pandharpur, brought to laboratory for further study. Small intestine was cut from gastrointestinal tract, washed it properly. This intestine was cut into small pieces, 30 gram of material boiled in 100 ml of water. Boiled material was grinded in a mixture. Resultant product was used as a food material for the fishes. Food was stored in refrigerator for a period of 5 days. (Latif, Kamil 2006). Prepared food was provided twice a day to the fishes. At morning 10.00 am and at evening 5.00 p.m. Feeding behavior and quality of aquarium water was noted. Characteristic of prepared fish food was measured on the basis of observations. (Origin, Colour of food, Stage, Solubility with water, Status in water, Turbidity of water, Response of fish towards food, Mortality of fishes, Experimental fishes, Status, Quality, Cost of preparation of food.

## III. RESULT AND DISCUSSION

Study of gastrointestinal tract reveals that the...

- The length of small intestine = 160 c.m.
- The length of large intestine = 9 c.m.
- The length of the caeca = 20 c.m.
- Weight of small intestine = 90.13 gm.
- Weight of experimental small intestine = 30 gm.

Tinfoil barb (*Barbonymus schwanenfeldii*) is an aquarium fish but it also utilized as food item. It is benthopelagic and potamodorous species of fish. It lives in large rivers as well as in streams, ditches and manmade canals. It is widely used in aquarium tank also. Tinfoil barbs are schooling species and therefore for experiment 05 fishes were kept in an aquarium. Prepared food is solid in nature. It is not soluble in water. Most of the fish food floats on the water but this food never floats on the surface of water. It immediately goes to the bottom of aquarium. Whenever food provided it was immediately pick up by the fishes (Tin foil barb). These fishes were voraciously feed on the prepared food. This food never pollutes the water. Tin foil barb spend most of their time between the bottom and mid-level of the aquarium. As they are omnivorous especially feed on insects, worms, crustaceans and small fishes, but in experimental period food made from intestine was only provided twice a day. The response toward food was positive and very fast. Tinfoil barbs are very peaceful creatures. Tin foil barbs are adapted to a wide variety of food. Some of them feed exclusively on plants; others feed on animals while large number of species is omnivorous deriving their requirement from both animals and plants. Besides the above groups, Das and Moitra (1955, 1963) have further divided fishes into three subgroups according to their zone of feeding. These are surfacing, mid and bottom feeders. Prepared food settle down into the bottom hence tinfoil barb pick up maximum food material during feeding or from the middle portion of aquarium. Resultant fish food of experiment was dry. It is essential to understand its characteristics properly. There is no effective method of production w.r.t. commercializing the product. Production of fish food from intestine of chicken will become efficient technique to waste management of chicken slaughter house. It is a cost effective and safe for the fishes. Boiled chicken intestine are edible for carnivorous fishes (*Tinfoil barb*).

#### IV. CONCLUSION

It is possible to prepare fish food using gastrointestinal tract of chicken bird. The fish tin foil barbs are actively feed on the food. This food is come under the category of non-conventional food which is very easy to prepare and characterize.

#### REFERENCES

- [1]. **Das. S.M. and Moitra S.K.:** 1956 *Proc. Nat. Acad. Sci., India, 25 B 1-6.*
- [2]. **Das. S.M. and Moitra S.K.:** 1956 b. *Ibid.* 26 B: 213-233
- [3]. **Das. S.M. and Moitra S.K.:** 1956 C. *Proc. Ind. Sci. Cong.* Pt- III, 307.
- [4]. **Das. S.M. and Moitra S.K.:** 1963: *Ichthyologica*, 2: 107-115.
- [5]. **Latif, kamil,:** 2006 Evaluation of Chicken Intestine Waste as a Feed Ingredient for Red Tilapia (*Oreochromis Sp.) Juveniles.* Masters thesis, University Putra Malaysia.
- [6]. **Madu C.T. Sogbesan O.A. Ibiyo LMO.:** 2003 Some nonconventional fish feed resources in Nigeria In: Eyo AA, editor. *Proceeding of the joint fisheries of society of Nigeria held at National Institute for Freshwater Fisheries Research, New Bussa, P. 73-82.*
- [7]. **Sielaff H.:** 1996 *Fleischtechnologie.* Hamburg: BehrsVerlag.

Table 1 Characterization of prepared fish food: This characterization is made on observations.

Sr. No.	Character	Prepared fish food
1.	Origin	Animal originated
2.	Colour of food	White
3.	Stage	Solid with moisture
4.	Solubility with water	Insoluble
5.	Status in water	Never float on surface of water but goes to bottom
6.	Turbidity of water	No Turbidity
7.	Response of fish towards food	Very active
8.	Mortality of fishes	Zero
9.	Experimental fishes	<i>Tin foil barb</i>
10.	Status	Unconventional food
11.	Quality	Remain fresh for 7 days