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Poultry Products Processing and Marketing System in Bangladesh

M.A. Islam

Department of General Animal Science and Animal Nutrition,
Dinajpur Government Veterinary College, Basherhat, Dinajpur, Bangladesh

Abstract: This study has been discussed about the existing Poultry products processing and marketing system, its problems and its potential solutions in Bangladesh. Traditionally chickens are sold alive till today, because of lacking trust on slaughtering method (Halal or not), fear of disease or dead birds slaughtered, lack of processing and preserving technology and skill man power. Egg grading and packing has not yet been developed. Marketing system of it is in traditional. As a result producers are not getting remunerative price that is why middleman are being gainer. Therefore modern Poultry processing plant, preserving technology and proper marketing channels are suggested to establish.

Key words: Chicken, meat, egg, processing, preservation, marketing, system and channel

Introduction

The emerging poultry Industry are gradually increasing in Bangladesh. But, about 86% poultry meat and 78% eggs are produced from the indigenous chicken and ducks reared in backyard (Hossain, 1999). About 70,000 small and big poultry farms have been established mainly close to the city areas where broilers or layers are introduced. Total number of chicken are 86 million and meat production are 41000-60000 tons, where broiler meat are 26000 tons and the rest come from scavenging chickens (Hassall, 1995). Traditionally chickens are sold alive. During last few years, a few commercial farms with increased broiler production have introduced dressed and frozen chicken and gradually getting market, especially in hotels, restaurant and among a few educated customers. Recently, consumer's attraction towards fast food influenced the dressed chicken marketing. It is unfortunate that there is no technology to produce hygienic poultry products, by-products and further processed. Chicken meat, colour, flavour, texture, appearance and nutrients for oxidation or hydrolysis or other chemical reactions may be lost due to storage/preserve (Uddin, 2001). Prechilling period of dressed carcass with skin is to be at least 8 h before freezing for retaining better carcass quality (Pandey *et al.*, 1989). Freezing temperature is also a matter in these regards. Some research work noted that prechilled carcass with skin may be stored for 18-20 days at $-2\pm 0.5^{\circ}\text{C}$ as frozen temperature (Bulgakova, 1975; Uddin, 2001), 6 months at -18°C and 1 year at -30°C in the liquid N-frozen without affecting on flavours, aroma, tenderness, juiciness, pH, moisture binding capacity and consistency (Guslyannikov and Koreshkov, 1976). But in Bangladesh none of work on above parameters of preservation and

also on TCC, TVC and on bones darkening.

Most of the consumers buy chicken alive and get them slaughter, de-feather and eviscerate either at the corner of the market or at house. For dressed broilers there is lack of trust in slaughtering method; whether it is done by halal method, fear of disease broiler slaughtering and fear of dead broiler slaughtering.

Dressed chicken is easy and convenient to the consumers, relief bothering of processing and save time. Therefore, demand for dressed chicken is increasing all over the World with the change of life style, food habit and lack of availability of manpower. In the developed country, chickens are slaughtered, processed and package at processing plant only. The consumer purchased frozen packed chicken either whole chicken or cut up parts. Though demand of dressed chicken is increasing, but quality control is not at all developed in Bangladesh.

The problems of live marketing are; hazardous for environment, spread disease, increase cost of production for transportation, death for handling and storing. For the lack of processing facilities and proper marketing of poultry and poultry products, farmers are not getting remunerative price. So, we need to establish a suitable poultry product processing and preserving technology and marketing system for domestic market and export with a reasonable price.

Existing processing method of meat and egg in Bangladesh Broiler: A systematic technology of collection, processing, storage and distribution of broilers to the markets and finally to the consumers ensure regular supply of live and dressed birds and stabilize market price. Some small and big broiler farm partially processing broiler

from their own stock and they are distributing directly to the restaurant or hotel or consumers. A part after packing and freezing send to their selling point in the big cities. The major part of the broilers are however, sold alive direct to the consumers, restaurant and hotel. Some commercial poultry farm like Biman poultry complex, Aftab Bhahumukhi poultry farm, United food complex, Paragon poultry farm have started a partial processing of boiler in their own processing plant. Biman poultry farm has sold their processing broiler for catering to the airline and Aftab has initiated semi processing plant and establish a marketing channel for selling processed broilers of the contract farms. They have also initiated effort to popularize cut up parts among the elite customers of cities.

A part of the poultry by products like; viscera, blood, feather, shank etc are used as fish feed, while majority of by products are simply wasted and pollute the environment. Poultry dropping is the important source of fertilizer to fertile the land. Source of Uric acid in poultry droppings is converted into urea.

The following problems are arisen with processed poultry products:

A few commercial farms are processing broiler but improper sanitary measurement in processing plant to maintain microbial load which influence spoilage and considerable odors of meat due to following reasons:

- a) Lack of scientific knowledge about processing and skilled manpower
- b) lack of modern instrument and equipments
- c) non plan processing plant to maintain the hygienic measurement
- d) manual processing, deteriorate the quality of meat (Slaughtering de-feathering, evisceration etc)
- e) lack of refrigeration facilities
- f) none of technology on preservation (Pre-chilled, with or without skin, how long and temperature etc.) (Fig. 1).

Egg: Egg is the perishable poultry product. The systematic method egg processing and grading has not been developed. Eggs are sold without packing and grading. Table eggs are used in the restaurant, hotel and various types of industry. Eggshell may be used as a source of calcium (Ca) in the diet of poultry. Egg grading and packing is essential: a) to prevent egg breakage problem due to transportation and reduce spoilage of egg b) to facilitate egg storing c) to remove heterogeneity of eggs for maximum benefit, which appraise consumer choice and capability to purchase (Fig. 2).

Marketing of poultry meat and egg: Marketing system remains still in traditional and heterogeneous condition. As a result, producers are not getting remunerative price and the consumers are paying more price per unit

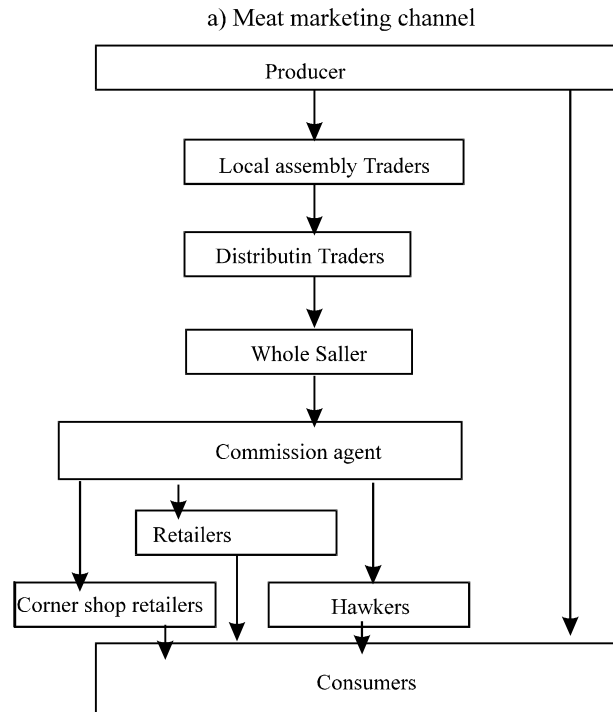


Fig 1: Marketing channel of live poultry Source: Hossain, 1999

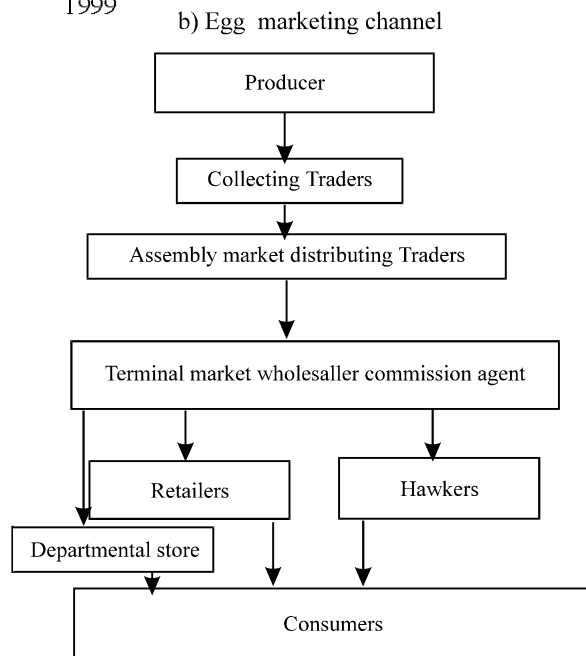


Fig. 2: Marketing channel of egg Source: Hossan, 1999

products. Reasons for non -remunerative price to small producers are:

- a) Producers are unable to establish a marketing system without having Government policy,
- b) they are too far from consumers,
- c) they are not able to find out, what

consumer want or need, d) they are too small as regards out put, e) they do not have vehicle to bring their products to consumers, f) most of the consumers are not habituated to eat broiler meat, g) live chicken marketing is popular in Bangladesh, because of trust on dressed birds for slaughtering method (Halal or not), diseased or dead bird. Therefore, appropriate marketing channel is needed for favour of producer or consumer.

Pricing of broiler and egg: It varies with the supply and demand for poultry and poultry products. Since there is no marketing channel in Bangladesh, seller and buyer bargain in fixing price. Due to perishability of eggs, increasing mortality of broiler and availability of production, seller does not go to bargain with buyer. The processed birds are normally sold at hotel or departmental store. Most of the consumers prefer small size live bird (around 1 kg) even per unit price is higher than bigger size birds. Indigenous chicken are sold on the basis of size, age, appearance, sex, colour. The price of indigenous chicken is almost double to broiler (Barua *et al.*, 1998; Aini, 1990).

Eggs are sold on the basis of types, species and colour (exotic and indigenous chicken, duck etc). The price of brown shell egg is about 10% higher than that of white egg and indigenous egg price is about 6% higher than farm egg price (Hossain, 1999). The average consumption of meat was 0.80, 1.41 and 20.00 kg year⁻¹ and egg was 30, 39 and 32.5 year⁻¹ in Bangladesh, India and USA respectively (Huque, 2001). The price of live broiler and egg are presented in the Table 1 and Fig. 3 and 4.

Marketing problems are faced by the Farmers: Most of the consumers are interested to purchase live birds instead of processed birds due to lack of trust, whether the birds were slaughtered as Halal method, dead or diseased birds (Das and Raha, 1998).

Consumer preference: Most of the ultimate consumers prefer *desi* chicken because of their taste, firmness, pigmentation and leanness.

Supply of *desi* chicken: When the chickens are found in large number, buying decision is negatively influenced.

Storage facilities: Farmers have no storage facilities and storing instruction (How and how long should be stored)

Transportation: Small producers are affected adversely in selling of poultry products through loosing weight and breakage of eggs. The consumers are buying with a expense of higher price.

The unscrupulous middleman is taking the advantages (Hossain, 1999)

Cut up broiler: Since consumer has no concept on white and dark meat, there is no premium price on breast meat.

Price variation: Price varies in different seasons. Eggs are sold at higher price in winter than in summer. The opposite trend is true in case of broiler marketing (Table 1).

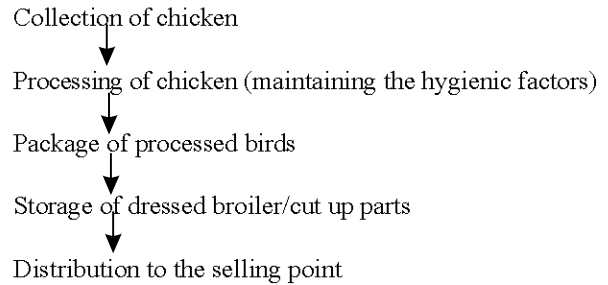


Table 1: Monthly market price of broiler and eggs in 2000

Month	Broiler		Egg	
	Whole sale price (Tk kg ⁻¹ live bird)	Retail price (Tk kg ⁻¹ live bird)	Whole sale price (Tk 100 egg ⁻¹)	Retail price (Tk 100 ⁻¹ egg)
January	60-68	75	280-300	350-400
February	60-68	75	275-290	350-400
March	52-55	60	280-300	350-400
April	55-62	70	290-320	330-400
May	65-70	80	285-310	360-440
June	65-68	85	285-300	300-330
July	60-65	85	280-300	300-350
August	60-65	75	280-300	300-350
September	55-60	72	285-300	300-350
October	55-60	72	280-300	300-350
November	55-62	75	280-300	300-350
December	60-70	75	200-220	250-275

Source: Huque, 2001, Another study on marketing of commercially produced eggs indicated the problems faced by the producers and the traders are shown in table 2 and 3

Table 2: Problems faced by the layer farms in marketing of egg

Problems	No. of Respondents	Percent
Higher demand for eggs of native birds	20	90.91
Fluctuating demand	15	68.18
Breakage of egg in transit	22	100.00
High transportation cost	19	86.36
Hortal, Strikes and Natural calamities	22	100.00
High cost of storage	12	54.55

Table 3: Marketing problems faced by the egg traders

Problems	Aratder-cum			
	-whole saller	Retailer	Supplier	All
Lack of operating capital	10(58.82)	16(66.67)	4(57.14)	30(62.50)
Spoilage	9(52.94)	17(70.83)	-	16(33.33)
No storage facilities	12(70.59)	14(58.33)	-	26(54.17)
Lack of adequate and suitable transportation system	17(100.00)	19(71.43)	7(100.00)	43(89.53)
Breakage of eggs in transit	17(100.00)	24(100.00)	7(100.00)	48(100.00)
Inadequate market space	8(47.06)	16(66.67)	-	24(50.00)

Source: Raha, 2001, For favour of producers and consumers, the following steps should be included in processing of broiler

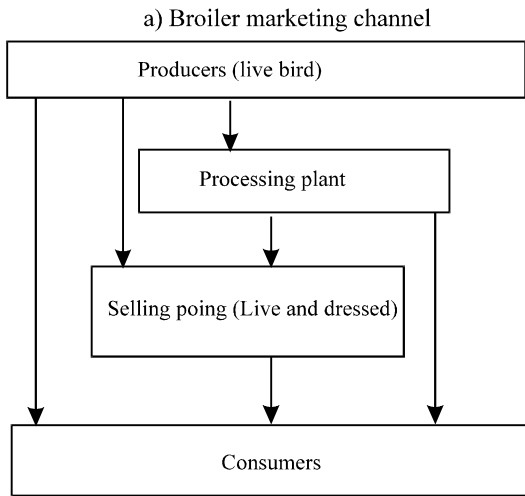


Fig. 3: Marketing channel of Broiler

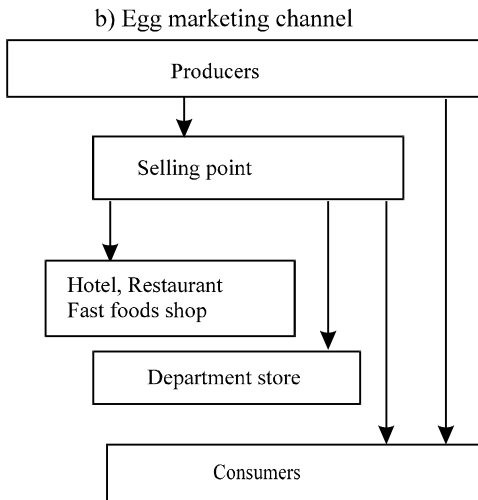


Fig 4. Marketing channel of egg

In case of egg, grading and packing should be performed to have the maximum benefit.

Attributable marketing channel in Bangladesh: As suggestion the following marketing channels may be attributed, so that producers and consumers will be benefited in respect of price and quality poultry products. Fixed price system should establish throughout the country, to remove bargaining. Under this system consumers may get poultry products from the different selling point without any botheration and with a reasonable price.

To make profitable business of poultry farming, processing, preservation and marketing channel should be established. Grading and packing of eggs should be materialized to categorize the price as well as quality

products. Therefore producer will get the remunerative price then they will be encouraged to rear poultry. On the other hand consumers will get the quality products with a reasonable price. Government should give attention to improve and establish the Marketing system.

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