

Research article

FLUCTUATIONS OF CHICKEN AND EGG PRICES DUE TO AVIAN INFLUENZA EPIDEMICS IN BANGLADESH

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Abstract

Study suggested that from the year 2007-2011 in Bangladesh several avian influenza was happened. Among the years most of incidents of killing chickens were recorded 10136899 in numbers; whereas in 2007 this was 111961; in 2010 this only 3298 and lastly in the year 2011 total chickens culled 28232 in number. Most of the avian flu attacked in the northern regions of Bangladesh; then some were in Dhaka, Sylhet and Chittagong. During the month January and February was the crucial time for disease incidents then gradually decreasing in the month of March and April. Including all culled chickens were 10280390, in second duck (3846 culled), third status pigeon (2388), pigeon and quail (23), crow (15+), pet bird (21), goose (13) and finally eggs were destroyed in total 1650422 in number (source: several newspaper of Bangladesh from 2007-2011). Eight markets were visited for observing the price fluctuations due to avian flu outbreak. In case of indigenous chicken the price were from 126.25±22.83-182.92±21.26 Tk/kg. The average price of Broiler chicken was recorded from 106.25±19.16-126.67±19.51; then for ISA Brown 112.08±10.10 to 132.5±9.90; *Sonali* from 118.33±9.86 to 159.17±18.12 Tk/kg; and for duck this price varied from 125.00±4.08-130.00±4.08. On the other hand, the price of egg per piece was more or less same in indigenous (6.33±0.24). The average price of ISA Brown chicken's egg was found from 6.17±0.31 to 5.5±0.34 Tk/pc. The white colour egg of ISA White breed this price was recorded from 5.72±0.31 to 5.47±0.31; then in *Sonali* this was 5.67±0.48 to 5.54±0.32 and duck's egg were same price with taka 5.58±0.49 per piece. Result suggested that during the time of avian flu normally the price of chicken and egg was high due to unavailability of chickens in the market for culling birds and eggs. **Copyright © ASETR, all rights reserved.**

Key words: Meat, egg, prices, bird flu/avian influenza, epidemics, Bangladesh

Introduction

Poulties are classified as order galliformes for chickens and anseriformes for the duck and goose groups. In galliformes there domestic fowl, turkey fowl, quail, guinea fowl, and pheasant. Anseriformes includes the domestic duck, goose, swan etc (Kabir, 2013). Urban agriculture is practiced in population almost all metropolitan areas in both developing and developed countries of the world (Akpabio, 2007). The United Nation Development Programme, defines that urban agriculture as an industry that utilizes intensive production

methods (UNDP, 1996). Livestock and poultry production industry such as milk and egg is the most important sub-sector after the grain production and there are about 675 million urban and rural people depend on this (Livestock in Development, 1999). Poultry meat can be replaced by red meat (Steinfeld, 2003). Eggs are good for reproductive health as well as lactating mother. The egg is useful in bakery industry and in medical research (Ralph, 1988). Report from Delgado et al 1999 suggested that next 20 years for the population we need double poultry production. Research institute should collaborate with various companies that produce day-old chicks and poultry feed in order to fulfill higher public demand (Akpabio, 2007). The price of chicken and eggs in the time of avian influenza season shows normally high because the farmer closed their farms. Moreover, at that time the rate of feed cost was high. So, the farmers were not getting interest to continue their poultry farm. Besides, most of the people got alternative meat like fish from protein supplements. The objective of this study is mainly to increase consciousness on avian influenza disease and understanding the chicken and egg price of the birds.

Materials and Methods

Observed breeds

For chicken the breeds were indigenous, broiler, ISA brown, *sonali* and duck and for egg price the available breeds were indigenous, ISA brown and white, *sonali* and duck (Table 1).

Visited poultry market

For the study on meat and egg prices in a year from 2007-2011 in the open market this research was completed. Local markets were of Dinajpur, Saidpur and Rajshahi of Bangladesh. Direct observation within the different markets and their management system of poultry were observed and through questionnaires (Table 1 and 2).

Chicken and egg prices

During incidents of avian flu the chicken and egg were the highest in price than the normal time due to unavailability of birds. The farmer tried to make up these losses by using their small number of flocks. The highest price of Indigenous chicken was 182.92 ± 21.26 in Rajshahi Laxmipur market, Bangladesh and the lowest in Dinajpur Railbazar of broiler 106.25 ± 19.16 and for egg the highest price of indigenous 6.33 ± 0.24 in Dinajpur and Saidpur and the lowest 5.47 ± 0.31 of ISA White in Rajshahi Salbagan and Vinodpur market (Table 1 and 2). Observed market was in huge chickens with eggs. Though the indigenous chickens were available in Saidpur market for its adjacent village areas. Eggs of indigenous breed were few and it is not accepted by everybody for its small in size and less nutrition. The taste of indigenous breeds eggs are prehistoric that's why the starting time farm grown broiler chicken were not allowed by all. For the time being broiler is accepted by everybody due to its huge meat. The broiler takes excellent mixed food so that its flesh possesses huge nutrition for all. Moreover, its flesh is softer which is easily digested by child and old aged people. The ISA brown chickens were not available in most markets but its eggs were available. Red colour of its egg looks fresh and nice that fulfilled public demand. ISA White is another breed of chicken which was not available and its egg was second in number after ISA Brown. Only one crossed breed *Sonali* (RIR male x Fayoumi female) recently available in all market for meat. This variety is popular for its indigenous taste and appearance. Broiler breed lays fewer eggs in a year so that its eggs were not suitable for table egg. Most of the eggs of this breed are hatching egg; only jumbo eggs (two yolked) were for table egg in Thakurgaon market, Bangladesh.

Statistical analyses

Data were analyzed of mean and standard deviation by the use of excel programme.

Results

Avian influenza epidemics in Bangladesh

Laying breeds are much more responsible for spreading the AI virus by eggs and adult chicken whereas broilers are only for its flesh and it has less immunity. Infected birds shed AI virus in their saliva, nasal secretions, and faeces. Live bird market or wet market are important source of virus transmission. Northern regions of Bangladesh severely attacks with avian flu. In the month of January and February most of the incidents were

found but March and April this was decreasing. Affected birds were tested in several pathological labs in our country and finally from BLRI, Savar, Dhaka for confirmation of H5 antibody of the flu virus. By forming a team with personnel the affected birds were killed. Living birds were buried minimum three feet deep from the ground. During the time of culling birds some doubtful birds like pigeon, crow and cage birds were killed with the chicken. With these birds its eggs were also destroyed by the team. Poultry farms of rural and urban areas were closed. General peoples were getting alternatives on it mainly fish. The culling procedure was happened gradually- chicken > egg > duck > pigeon > quail > pet bird > crow > goose (Diagram 1).

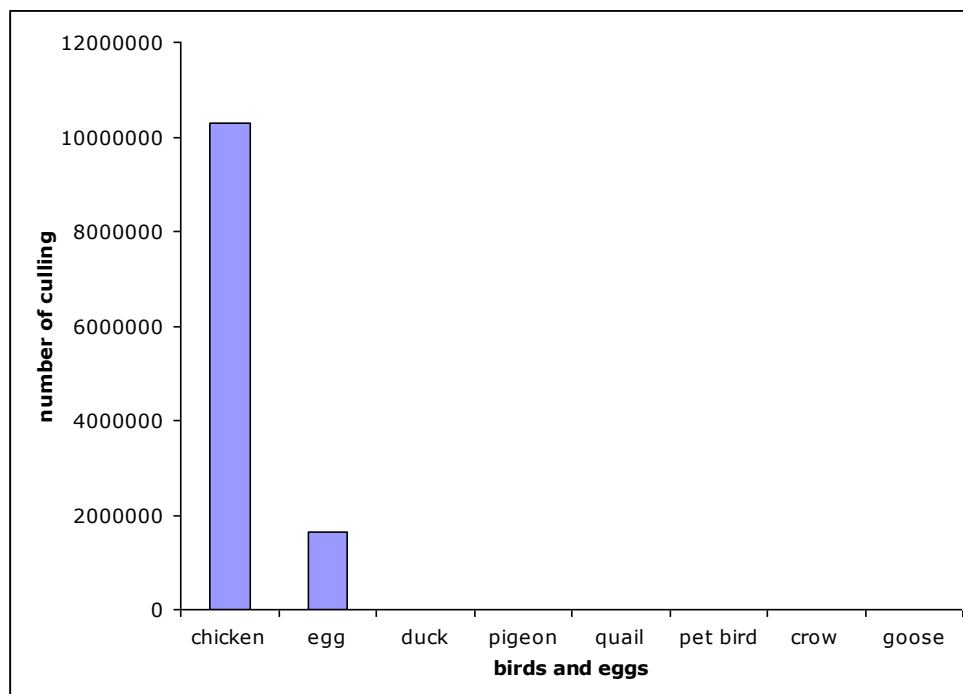


Diagram 1

Chicken and egg consumption

Department of Livestock Services had counted 326 occurrence of bird flu in the poultry sector since its outbreak. So far, 16, 96,072 birds have been culled and 12, 60,112 eggs have been destroyed from the affected farms. Poultry farm was affected with bird flu and culled birds were 2389 and eggs 3560 pieces. The consumption rate was shown negligible effect during this field study. Due to avian flu and peoples were took alternatives protein from others. For the protection on AI- musk, goggle, apron or other appliances showed less to the people. Hygienic condition was worst in most markets.

Table 1: Name of chicken breeds and their meat market prices (Tk/Kg) at different market

Markets	Indigenous	Broiler	ISA Brown	<i>Sonali</i>	Duck
DR	163.33±21.15	106.25±19.16	112.08±10.10	118.33±9.86	125±4.08
SR	171.67±22.48	116.25±19.16	122.08±10.10	149.17±18.12	-
RC	181.67±22.48	123.75±18.04	132.08±10.10	159.17±18.12	125±4.08
RL	182.92±21.26	124.17±17.42	132.5±9.90	159.17±18.12	130±4.08
RSB	176.67±22.48	118.75±18.04	127.08±10.10	154.17±18.12	125±4.08
RS	176.67±22.48	118.75±18.04	-	154.17±18.12	125±4.08
RV	126.25±22.83	126.67±19.51	-	154.17±18.12	-

As of July 2009 to June 2010; DR=Dinajpur Railgate, SR=Saidpur Railgate, RC=Rajshahi Court, RL=Rajshahi Laxmipur, RS=Rajshahi Shaheb Bazar, RS=Rajshahi Salbagan, RV=Rajshahi Vinodpur

Table 2: Name of chicken breeds and their egg market prices (Tk/pc) at different market

Markets	Indigenous	ISA Brown	ISA White	<i>Sonali</i>	Duck
DR	6.33±0.24	5.5±0.34	-	5.58±0.49	5.58±0.49
SR	6.33±0.24	5.5±0.34	5.5±0.34	5.67±0.48	5.58±0.49
RC	-	6.17±0.31	5.67±0.31	5.54±0.32	-
RL	-	5.67±0.31	5.47±0.31	-	-
RS	-	5.67±0.31	5.47±0.31	-	-
RV	-	5.92±0.31	5.72±0.31	-	-

As of July 2009 to June 2010; DR=Dinajpur Railgate, SR=Saidpur Railgate, RC=Rajshahi Court, RL=Rajshahi Laxmipur, RS=Rajshahi Shaheb Bazar, RV=Rajshahi Vinodpur

Discussion

Adebayo and Adeola (2005) reported that the poultry sub-sector has fallen short of its aim of self-sufficiency in animal protein production. Obayelu (2007) reported that during the flu attack people fall in psychological breakdown due to huge loses especially egg and broiler meat. Major constraints affecting poultry egg production was determined by interview with the farmers. The export market controlled by middlemen who also fix prevailing egg price hence make more profit than the large scale poultry egg producers of the country. High feed cost is a great problem for poultry rearing and egg is a item for our regular basis (Akpabio, 2007). In Thailand many birds and many chicken breeds were killed due to influenza disease (Fiscal Policy Office, 2004). Thailand is the 10th in position out of 15th poultry production countries (Roenicke, 1999). Due to avian influenza meat shows significance except the other food. People show consumption of chicken which are not affected due to flu attack and supply of chicken in hotel and people cook food at home. Chicken consumption has fallen 29% in Thailand during this time. The result is showed negative impact due to avian flu on population (Krainpornsak, 2004).

Conclusion

Eat full boiled eggs and eradication of slaughter is usual in chickens are important. If a bird died in any place, burn/grave in the earth very cautiously without any delay. In Bangladesh basically the northern regions were affected with avian flu. Chicken and egg prices were high during this time for unavailability of the chickens. Prices were high in divisional area and lower in village market. Fluctuations of the chickens' price were not significant. From the year 2007-11 the observation was completed and the month of January and February was dangerous for excess cold. Peoples need to use more protection to this flu season and extra care in their farm. Moreover, the hygienic condition is the main criteria to protect any farm. Panic attacks were focused in most of our newspaper so peoples were showed psychological breakdown. We should increase our public awareness.

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