

Full Length Research

Determine Factor of Chicken and Egg Marketing System in Lume District, East Shoa Zone, Oromia Regional State, Ethiopia.

Alemayehu Guteta Sufe

Ethiopian Institute of Agricultural Research, Debre Zeit Agricultural Research Center, P.O. Box 32, Bishoftu, Ethiopia.
Corresponding Author's E-mail: alemayehuguteta@gmail.com

Accepted 30 August 2020

The study aimed to assess the determine factor of chicken and egg marketing system in Lume district, East Shoa Zone, Oromia Region. Random samplings were employed to select sample kebeles and city based on chicken population and purposively selects respondents. Administration of pretested questionnaire were employed on three kebeles and 90 respondents from scavenging chicken keepers, 10 intensive farms keeping exotic chicken and 30 middle men (chicken and egg collectors for marketing system) were interviewed. The kebele respondents were categorized in to 1st, 2nd and 3rd strata having 1-10, 11-20 or 21-49 chicken, respectively. The gender distribution of chicken and egg traders shows 56.7% of them are female while the remaining 43.3% were male. Most of the traders (66.7%) sell both chicken and eggs. Chicken product price was affected by season of the year like dry season (*bega*), rainy season (*kiremt*), feather color, comb type and holidays. The highest market prices were recorded in red and white color cocks with double type of comb during Ethiopian New Year and Easter holidays. Chicken producers fear disease outbreak at rainy season to produce more chicken, so, supply and demand were decrease in rainy season. More chicken trader bought chicken from the far distance of home household for aim of least price. Six market channels were the main actors in the study area. Strong efforts have to be made to address constraints and improve the chicken and egg marketing system in sustainable ways like, increasing productivity of chicken per households solve vaccine and medicine problem and focusing on market-oriented production with holistic and multidisciplinary extension, research and trainings are important areas of action. Also, struggle have to be made in addition feeding habit of only focus on “*dorowet*” to other chicken meat feeding system which help reduce chicken meat process and cost through aware creation.

Key words: Chicken, Egg Marketing, Trader, Holiday Dry and Wet season.

Cite this article as: Alemayehu GS (2020). Determine Factor of Chicken and Egg Marketing System in Lume District, East Shoa Zone, Oromia Regional State, Ethiopia. Acad. Res. J. Agri. Sci. Res. 8(6): 526-536

INTRODUCTION

In Ethiopia, the term poultry is almost synonymous to chicken, other poultry species such as guinea fowl, geese, turkeys and ducks are not common in the country.

Poultry production offers considerable opportunities in terms of generating employment opportunities, improving family nutrition, empowering women (especially in rural areas) and ultimately ensuring household food security (FAO2019). The domestic market for poultry is

constrained by seasonal fluctuations in demand and price. Such fluctuations are mostly associated to the fasting tradition that prohibits consumption of livestock products for up to 250 days of the year to Orthodox Christians, accounting for around 43 percent of the total population (CSA, 2007). However, these seasonal variations are expected to smooth out because there are an increasing number of people of other religious backgrounds and faiths (more than 50 million today) who also consume poultry products during these fasting periods. Moreover, rising incomes, rapidly growing population and increasing urbanization of the country suggest that consumption and demand for poultry products will rise in the future.

Also, there are emerging small and large commercial farms make a great contribution, to meet the rapidly growing demand for poultry products especially in urban, peri-urban and growing regional cities (Emebet and Kidane 2016). The scavenging family poultry production systems are the principal providers for the domestic market, supplying most of the marketable poultry products. To increase chicken product and production of under scavenging chicken production system there is need to increase number of chicken minimum 21-49 per households' (Alemayehu and Negasi 2020). Poultry meat and egg consumption in Ethiopia yet extremely low, for instance, in 2013, the per capita consumption of poultry meat was about 0.66 kg and during the same year, the per capita annual poultry meat consumption of East Africa and Africa was estimated to be 1.64 and 6.73 kg, respectively, while the global average stood at 14.99 kg (FAOSTAT, 2018).

Poultry and egg markets in Ethiopia are at an early stage of development also the supply of poultry meat and eggs remained very low during the past several decades. Agricultural researches need to generate technologies to ensure food security, enhance income generation, and promote foreign exchange earnings through sustainable natural resources management (Ethiopian Academy of sciences, 2013). This condition is also true for Lume district which can be considered among poultry production belt areas of the country. A number of exotic and indigenous breeds were distributed and found in the district but little information is available on the production system and marketing. The present study was therefore carried out to access and characterize the existing village chicken and egg marketing systems in Lume district, East Shoa Zone, Oromia Region. with the following specific objectives:

- 1) To identify key players, marketing channels and marketing constraints in the village chicken marketing system of the district
- 2) To identify factors affecting chicken & egg selling decision at household level and
- 3) To suggest strategies and technological interventions

that can be used to improve rural smallholder chicken and egg marketing system of the district

MATERIALS AND METHODS

Description of study area

The study was conducted in Oromia regional state; East Shewa zone Lume district where which is one of the mandate areas of the Livestock and Irrigation Value chains for Ethiopian Smallholders (LIVES) project. The district was bordered on the South by the Koka reservoir, on the West by Ada'a Chukala, on the North West by Gimbichu, on the North by East Adama town. The capital town of the district is Modjo which is located 70 kms South-East of Addis Ababa. Due to the geographical proximity of the Lume to Addis Ababa, it has a great advantage for market access for both agricultural and industrial products.

Sampling Method

A rapid field survey was conducted on the selected sites prior to the actual survey work to explore number chicken, their distribution and production practices in the district. The information regarding distribution and numbers of scavenging chickens also obtained from Office of Agriculture and Rural development (OoARD) of district. Then purposive random sampling technique was employed to administer the questionnaires to collect data.

Data collected from chicken and egg trader, intensive and scavenging chicken production system, Survey for scavenging poultry production was conducted by stratifying based on number of chickens in the households. Households having 1-10 chicken were first stratum and 11-20 chicken second stratum and 21-49 chicken was third stratum. Based on scavenging chicken population size and accessibility for transport three *kebeles* (*Tulu Re'e*, *Ejere Walkite* and *Ejersa Joro*) were randomly selected for questionnaire administration and from each *Kebele* 10 households per strata were selected purposively, a total of 30 household per *Kebele* and 90 household per district was interviewed by pre-test questioner. From intensive exotic chicken production farms 10 farm available in the Lume district selected purposively and interviewed by pre-test questioner. Again, for chicken and egg traders (collectors) based on main market place three markets place (*Modjo*, *Ejere* and *Koka*) based on experience 10 trader per city and 30 total trader per district interviewed.

Data Collection

Relevant secondary data were collected from various

reports and sources including, Lume district office of agriculture & rural development. Primary data were collected intensively through personal and house to house interviews using a well-organized and pre-tested structured questionnaire. All suitable data such as; chicken and egg marketing system, the prevailing chicken and egg marketing systems were gathered from individual chicken owner farmers, trader and key informants. Besides; data on chicken and egg marketing systems of the study area were collected from interviewed village chicken owners, middlemen on weekly and holydays bases.

Statistical Analysis

The qualitative and quantitative data were analyzed using appropriate statistical analysis software (SPSS, version 20). The Duncan multiple range test and LSD were used to locate treatment means that are significantly different. More specifically descriptive statistics and General Linear Model (GLM) were used for this study. Also mean, SD and percentage are statistics summarized. The estimations are made by using SPSS software program, version 20 (SPSS for Windows, 8) and SAS for indicating significance difference.

RESULT AND DISCUSSION

Ownership and Gender Role in Chicken Production

The overall female were major responsibilities in of chicken selling (54%), where father equally selling chicken (10%) in 2nd and 3rd strata and (50%) in the intensive chicken production. Selling egg overall (68%) by mother, however, 3.3%, 3.3%, 6.7% and 10% were 1st, 2nd and 3rd strata and intensive were selling egg were done by father respectively, in the study area. The result of chicken selling and egg selling was higher than reported (43.1%, 42.9%), respectively from Western zone of Tigray, Northern Ethiopia Shishay (2014). Fisseha (2009) also state that selling chicken and egg (82.95% and 54.6%), respectively from Bure district Amhara regional state.

The result of decision making of household members indicate that the proportions of household members with respect to decision making on home consumption and selling chicken significant differ among the three strata ($p < 0.05$). However, the decision-making share of the household members for egg selling and for home consumption did not differ among the three strata ($p < 0.05$) (Table 1). The survey reveals that in the study area mother had a greater share to decide on the chicken and egg selling (51.1% and 74.4% %), chicken and egg for home consumption (51.1% and 76.6%) and drug purchased /treatment/ (44.4%), respectively whereas men decision making chicken and egg selling (11% and 18.9%), chicken and egg for home consumption (18.9% and 17.8%) respectively, indicating that father (men) might busy with other farming like cropping and managing large livestock (shoat, cattle and equine). This result were lesser than reported by both Shishay (2014) mother had at the greatest share to decide on the eggs selling (97.4%), eggs for home consumption (98.7%) and chicken selling (93.5%) and Alem *et al.*, (2014) reported that mother and in female headed household were responsible for decision making on selling eggs (80% and 70%), selling chickens (82.5% 72.5%), home consumption of egg (77.5% and 70%), consumption chickens (100% and 97.5%), purchasing of drugs (100% and 100%) in lowland and midland agro-ecology central zone Tigray.

Table 1. Decision making households members in chicken product utilization

Household characteristics	1 st stratum (1-10)	2 nd stratum (11-20)	3 rd stratum (21-49)	Total (%)	X ² -test	P -value
Egg for home consumption					15.656(ns)	0.335
Women	22(73.3)	23(76.6)	24(80)	69(76.6)		
Men	7(23.3)	6(20)	3(10)	16(17.8)		
Men & women	1(3.3)	1(3.3)	3(10)	5(5.6)		
Chicken for home consumption					25.145(*)	0.014
Women	15(50)	6(20)	15(50)	16(51.1)		
Men	10(33.3)	18(60)	12(40)	17(18.9)		
Men & women	5(16.7)	6(20)	3(10)	25(27.8)		

***($p < 0.05$) or significant at $p (0.05)$, ns ($p > 0.05$) or insignificant at $p(0.05)$ and n=number of households interviewed**

Table 2. Labor division of households in chicken marketing in the strata and Intensive farm

Household characteristics	1 st stratum (1-10)	2 nd stratum (11-20)	3 rd stratum (21-49)	Intensive >50	Total (%)	X ² -test	P -value
Selling chicken						139.531(*)	0.000
Women	21(70)	6(53.3)	17(56.7)	-	54(54)		
Women and men	5(16.7)	6(20)	3(10)	1(10)	15(15)		
Men	-	3(10)	3(10)	5(50)	11(11)		
Women & children female	3(10)	2(6.7)	1(3.3)	-	6(6)		
Children male and female	-	1(3.3)	1(3.3)	2(20)	4(4)		
Children female	-	2(6.7)	-	-	2(2)		
Children male	-	-	4(13.3)	-	4(4)		
Hired person	-	-	-	2(20)	2(2)		
Not sale	1(3.3)	-	1(3.3)	-	2(2)		
Selling egg						211.600(*)	0.000
Women	24(80)	23(76.7)	21(70)	-	68(68)		
Men	1(3.3)	1(3.3)	2(6.7)	1(10)	5(5)		
Men & women	1(3.3)	-	1(3.3)	5(50)	7(7)		
Women & children female	2(6.7)	3(10)	2(6.7)	-	7(7)		
Children male & female	-	-	-	2(20)	2(2)		
Children female	1(3.3)	3(10)	-	-	4(4)		
Children male	-	-	4(13.3)	-	4(4)		
Hired person	-	-	-	2(20)	2(2)		
Not sale	1(3.3)	-	-	-	1(1)		

*(p<0.05) or significant at p (0.05), ns (p.>0.05) or insignificant at p(0.05)and n=number of households interviewed

Demography chicken and egg trader

Informal marketing of live birds and eggs involving open markets are common throughout the study area. Overall, (56.7%) of the total respondents were female remaining (43.3%) of the respondents were male, (60%) of the respondents were married, (16.7%) divorced, (16.7%) single and (6.7%) were widowed. The education status of disclosed that (10%) of were illiterates (46.7%) were primary education (1-8 grades) and (43.3%) were secondary education (9-12 grade).

Most of the respondents (66.7%) were of sell both chicken and eggs (26.7%, 6.7%) were selling alone chicken and eggs respectively and (3.3%) of the chicken and egg seller have experience for the last greater than 10 years, (6.7%) were have experience less than 6 months in both chicken and eggs, however (96.7%) both chicken and eggs seller were not get extension service. Most respondents (70%) roles in the chicken product seller as their main activity (regularly) and the remaining (30%) were role in the chicken product seller were occasional. The main of activity were assembler and retailer (buy from farmers and sale to consumers and retailers) (73.3%), buy from farmer and sale to farmer for breeding were (13.3%) and assembler (buy from farmers and sale to retailers (hotels) were (13.3%) (Table 3).

Table .3. Chicken and egg marketing characteristic

Variable	Lume district market study area	
	Frequency	Percent
Trader characteristics		
Female	17	56.7
Male	13	43.3
Marital Status		
Married	18	60
Divorced	5	16.7
Widowed	2	6.7
Single	5	16.7
Education status		
Illiterate	3	10
Primary education	14	46.7
Secondary education	13	43.3
Type of chicken product trade		
Chicken	8	26.7
Eggs	2	6.7
Both chicken and eggs	20	66.7
Experience/for how long trade chicken product		
<6 Months	2	6.7
6-12 months	4	13.3
1-2 years	11	36.7
3-4 years	6	20
5-6 years	2	6.7
7-10 years	4	13.3
>10 years	1	3.3
Frequent activity		
Regularity (as main activity)	21	70
Sometimes (occasionally)	9	30
Extension service		
Yes	1	3.3
No	29	96.7
To whom do you sale your chicken product		
Assemblers and retailer (Buy from farmers and sale to consumers and retailers)	22	73.3
Assembler (buy from farmers & sale to retailers (hotels)	4	13.3
Buy from farmer and sale to farmer for breeding	4	13.3

Determine factor of chicken and egg marketing systems

The result of the current study revealed that the price of chicken products varied between months of the year and were determined by a number of driving factors. The result of the study disclosed that the average of chicken product price was affected by season of the year, holidays, color and comb type of chicken. For instance, in ordinary (weekly market), dry season (*Bega*), rainy season (*kiremt*), Ethiopian new year (Sept. 12), Sept 30 (*Meskel*), X-Mass (*Gena*), Easter (*fasika*) and Muslim holiday of matured male, were (135.4±17.41, 136±13.5, 110.2±25.5, 167±37.4, 153.4±33.9, 156.0±35.6, 171.3±38.9 and 150.8±30.7) Ethiopian birr respectively, (Table 4). Consumer prices generally rise during holidays such as Easter, New Year and Christmas. (FAO, 2019). Again, red (*Key*) color double comb chicken price were expensive in Ethiopian new year (Sept. 12) and Easter (*fasika*) than X-Mass (*Gena*), Sept 30 (*Meskel*), Muslim holiday and ordinary (weekly market), 184.7±41.0, 193.3±41.8, 164.1±38.4, 167.9± 35.9, 144.5±31.9 and 147.5±30.0 Ethiopian birr respectively. Red (*Key*) color double comb chicken price were expensive in X-Mass (*Gena*), 167.9± 35.9 Sept 30 (*Meskel*) 164.1±38.4 Ethiopian birr than Muslim holiday 144.5±31.9 and ordinary (weekly market) and 147.5±30.0 Ethiopian birr. (Table 5).

The price of chicken and chicken by product no difference observed during Muslim holiday and ordinary (weekly market), this might be because of absence of people's Muslim religion flowers in the study area. The matured male

chicken price was high price observed during Ethiopia new year (sept.12) and Easter (*Fasika*) this might be because of high numbers of orthodox religion followers' peoples in the study area. The result was similar with Fisseha (2009) reported that same of these determinant factors affecting prices of chicken products in the study district included: demand and supply of chicken products, agro-ecology (highland, mid-altitude and lowland), product type (sex, age, breed, comb type), season of the year (dry and rainy), market type (urban versus local markets), market day types (holyday versus ordinary market days), fasting seasons (e.g. Easter fasting season) and the dramatic increase in price of large and small ruminants (sheep, goats and cattle).

Relating to season, lower prices of chicken products were recorded in rainy seasons as compared to that of dry season. This was highly correlated with the demand and supply of chicken products in different seasons. Due to the negative impact of diseases and predators, the high supply of chicken products during the beginning of the rainy season for case incidence of disease, lack feed, climate change, chicken destroying crop, to cover house expense but demand was low that lead low price of the chicken product. Farmer to farmer exchange egg good breed or cock for improves their chicken production and productivity.

Table 4. Mean prices of chicken and eggs in ordinary market days and on holidays

Market	Price in birr of birds (by age and sex) and eggs				
	Mature male	Mature Female	Growers pullet	Growers Cockerels	Eggs
	(mean± SD)	(mean± SD)	(mean± SD)	(mean ±SD)	(mean ± SD)
Ordinary (market weekly)	135.4±17.41 ^{ab}	82.7±14.7 ^a	61.8±7.0 ^{ab}	79.5±12.6 ^{ab}	2.50±0.37
Dry season (<i>Bega</i>)	136.5±136.5 ^{ab}	73.2±10.1 ^{ab}	56.5±8.4 ^{ab}	73.9±14.9 ^{ab}	2.70±0.28
Rainy season (<i>Kiremt</i>)	110.2±25.5 ^b	54.8± 11.6 ^b	46.9±14.1 ^b	57.8±16.0 ^b	2.50±0.46
Market days of holidays/festivals					
Eth. new year (Sept. 12)	167.3±37.4 ^a	91.5±15.4 ^a	67.3±14.6 ^a	88.6±21.7 ^a	3.09±0.24
<i>Meskel</i> (Sep. 30)	153.4±33.9 ^{ab}	87.3±13.9 ^a	64.7±12.7 ^{ab}	84.5±16.1 ^{ab}	3.57±2.93
X-mass (" <i>Gena</i> ")	156.0±35.6 ^{ab}	85.8±11.2 ^a	64.3±10.5 ^{ab}	83.0±16.3 ^{ab}	3.41±2.10
Easter (" <i>Fasika</i> ")	171.3±38.9 ^a	93.6±15.4 ^a	70.2±11.6 ^{ab}	92.1±20.1 ^a	3.89±3.53
Muslim holydays	150.8±30.7 ^{ab}	85.0±13.8 ^a	63.0±10.6 ^{ab}	80.4±16.4 ^{ab}	2.85±0.29
Overall mean	147.2±36.0	81.8±17.5	61.8±12.9	80.0±19.2	3.04±1.80

a,b, Least square means with different superscripts within a column are significantly different (P < 0.05).
26 Eth. Birr was equivalent to 1 US dollar

Table 5. Market prices of matured male in ordinary and holidays.

Plumage color	Comb type	Ordinary Weekly (mean ± SD)	Ethiopia New Year Sept. 12 (mean ± SD)	<i>Meskel</i> Sept,30 (mean ±SD)	X-Mass ' <i>Gena</i> ' (mean± SD)	Easter ' <i>Fasika</i> ' (mean ± SD)	Muslim holiday (mean ± SD)
Red (' <i>Keṛ</i> ')	Double	147.5±30.0 ^c	184.7±41.0 ^a	167.9± 35.9 ^b	164.1±38.4 ^b	193.3±41.8 ^a	144.5±31.9 ^c
	Single	132.1±29.0 ^c	164.3±36.7 ^a	151.3±34.0 ^b	146.6±37.3 ^b	173.7±39.6 ^a	127.9±31.4 ^c
White (' <i>Nech</i> ')	Double	144.1±30.4 ^c	173.9±40.0 ^a	179.6±36.1 ^a	163.1±40.7 ^b	181.8±36.8 ^a	142.0±33.2 ^c
	Single	127.6±27.8 ^c	157.7±40.4 ^a	163.2±38.0 ^a	144.2±38.2 ^b	162.5±37.7 ^a	125.9±32.2 ^c
Grayish mix (<i>Gabsima</i>)	Double	132.0±29.1 ^c	160.8±36.6 ^{ab}	152.7±34.5 ^b	152.5±37.4 ^b	166.2±34.8 ^a	133.1±30.0 ^c
	Single	117.4±27.4 ^c	139.7±36.6 ^{ab}	136.9±34.5 ^b	134.9±35.7 ^b	149.0±36.4 ^a	119.0±30.8 ^c
White& black (<i>Wosera</i>)	Double	136.3±31.2 ^c	164.3±44.0 ^{ab}	157.4±39.9 ^{ab}	154.0±41.6 ^b	166.6±38.6 ^a	137.0±30.5 ^c
	Single	123.9±29.3 ^c	144.2±41.5 ^{ab}	141.9±37.4 ^{ab}	136.6±38.0 ^b	149.7±38.6 ^a	123.9±31.5 ^c

a,b, Least square means with different superscripts within a column are significantly different (P < 0.05).
26 Eth. Birr was equivalent to 1 US dollar.

Morphological plumage colour and comb type chicken marketing

Most chicken owner farmers considered absence of spur on the shank (26.7%), body weight (23.3%), comb type (16.7%), plumage color (10%), sex of chicken (20%) and no selection (3.3%), as main determinant factors in selection of birds for production, consumption and marketing purposes of the study area. During the survey, the absence of spur on the shank was the height price record than chicken has spur on shank because availability spur indicates the chicken was aged. Also, various sex of the chicken, types of plumage colors and comb types were recorded in markets of the study area. Red & white were most preferred and dominant colors and covered more than half of the chicken population of the study area. Also type holiday and ordinary market were influence the price of chicken, Easter were high chicken price recorded than other may it is at study area high numbers of orthodox religion followers but Muslim festival and ordinary market were comparable of chicken price that may the Muslim religion followers not more observed. The selection of plumage colors was attributed to; attractiveness by the public (presence of high demand) and high sale price in marketing. Regarding comb type single comb and double comb no difference at market study area. Plumage colors and comb types were recorded in different villages & urban markets of the study district. Red, white, Grayish mix & white and black were most preferred and better price from high price to fewer prices respectively of the study area. According to Shishay 2014 both respondents 'interview ranking indices and ranking by focused group discussion confirmed that plumage color (1st), body weight (2nd), comb type (3rd), shank color (4th), smoothness of legs (shank) (5th), sex (6th), spur presence (7th), length of legs (8th), head shape (9th) and market site (10th) were the major factors that cause variation in the price of live chickens.

Comparable report from Fisseha (2009) reported that the price of birds related to color & comb type, the average market price of red and white color local cocks was estimated in different market days. The result revealed that red and white colored matured cocks having a double type of comb fetched the higher market price as compared to cocks with single type of comb. The highest market prices were recorded in red and white color cocks with double type of comb during Ethiopian New Year and Easter holidays. It was attributed to the high demand of those types of cocks by consumers and producer. More trader bought chicken from the far distance of home household for aim of least price that < 1km, 1-5km, 6-8km, 9-10km and >10km of 6.7%, 26.7%, 40% 6.7% and 20%, respectively and trader sold chicken from the distance of home household where high population and relatively high price <1km, 1-5km, 6-8km and >10km where 40%, 30%, 20% and 10%, respectively (Table 6).

Table 6. Distance of market from respondents in study area

Variable	Lume district market study area	
	Frequency	Percent (%)
What are the causes of variation of price of chicken		
Absence of spur	8	26.7
Body weight	7	23.3
Plumage color	3	10
Sex of the chicken	6	20
Comb type	5	16.7
No variation	1	3.3
What are the causes for egg price variation		
Egg get from local chicken	5	16.7
Eggs from exotic chicken	1	3.3
Shell color	1	3.3
Size of the egg	14	46.7
No preference	9	30
What is the distance of the market where you buy chicken (distance)		
<1km	2	6.7
1-5km	8	26.7
6-8km	12	40
9-10km	2	6.7
>10km	6	20
What is the distance of the market where you sale chicken (distance)		
<1km	12	40

Table 6. Continues

1-5km	9	30
6-8km	6	20
>10km	3	10
What is the distance of the market where you buy egg (distance)		
<1km	3	10
1-5km	7	23.3
6-8km	13	43.3
9-10km	1	3.3
>10km	6	20
What is the distance of the market where you sale egg (distance)		
<1km	11	36.7
1-5km	10	33.3
6-8km	6	20
9-10km	3	10

Chicken and Egg Marketing Channel Systems

The marketing of eggs in the study area follows a similar route (channel) to that of the chicken marketing system. The result of the current study revealed that there was no any formal chicken and egg marketing operation in the study district. Village chicken producers, consumers, middle men (chicken & egg collectors) and local restaurants/hotels were some of the main actors involved in the system. Marketing of chicken and eggs in the study district was practiced in various places including farm gates, village/primary markets and main markets (urban market). The current study showed that 100% of interviewed village chicken owner farmers involved in marketing of live chicken since sale of chicken as source of income is the major reason for them to keep village chicken. The sale of live birds takes placed in various places including: urban market (*Modjo* town), local markets (*Koka* market, *Ejere* market) and around the villages (farm gates).

Local market was the dominant place to sale chicken for most village chicken producers/breeders (70%) of the study area. The rest of chicken marketing and exchange was takes placed farm gates around the village and urban market. Regarding the marketing channel of village chicken, most chicken owners (65%) sold their chickens directly to consumers & middle men (chicken collectors), who are involved in chicken marketing. Because of the study area near to the capital city of the country (Addis Abeba) and the market channel touches it. The rest of the birds were usually sold to other urban and rural chicken producers/consumers and retailers (hotels and restaurants) describe in figure 1.

Generally, from 20 chicken and egg market channel identified, seven were the main actors market channel in the study area. unlike Nebiyu et al 2018 five exotic chicken eggs market channels were identified, marketing channel three was found to be the most dominant egg market outlet in the small scale intensive urban poultry production. The major groups of village chicken sold more frequently were; surplus males, old and non-productive hens and sometimes sick chicken. Chicken prices were not similar and fluctuated during the year, generally low in the rainy season and high in the dry season. Similar to prices, supply and demand increase during dry season, decrease during wet season, it indicates that chicken producer fear wet season disease outbreak. Unavailable of well-designed market channel of chicken and chicken by product were harm the prices. The poultry value chain actor and linkages remained yet not to be strong at both national and regional level. Ashibah and Lema 2018.

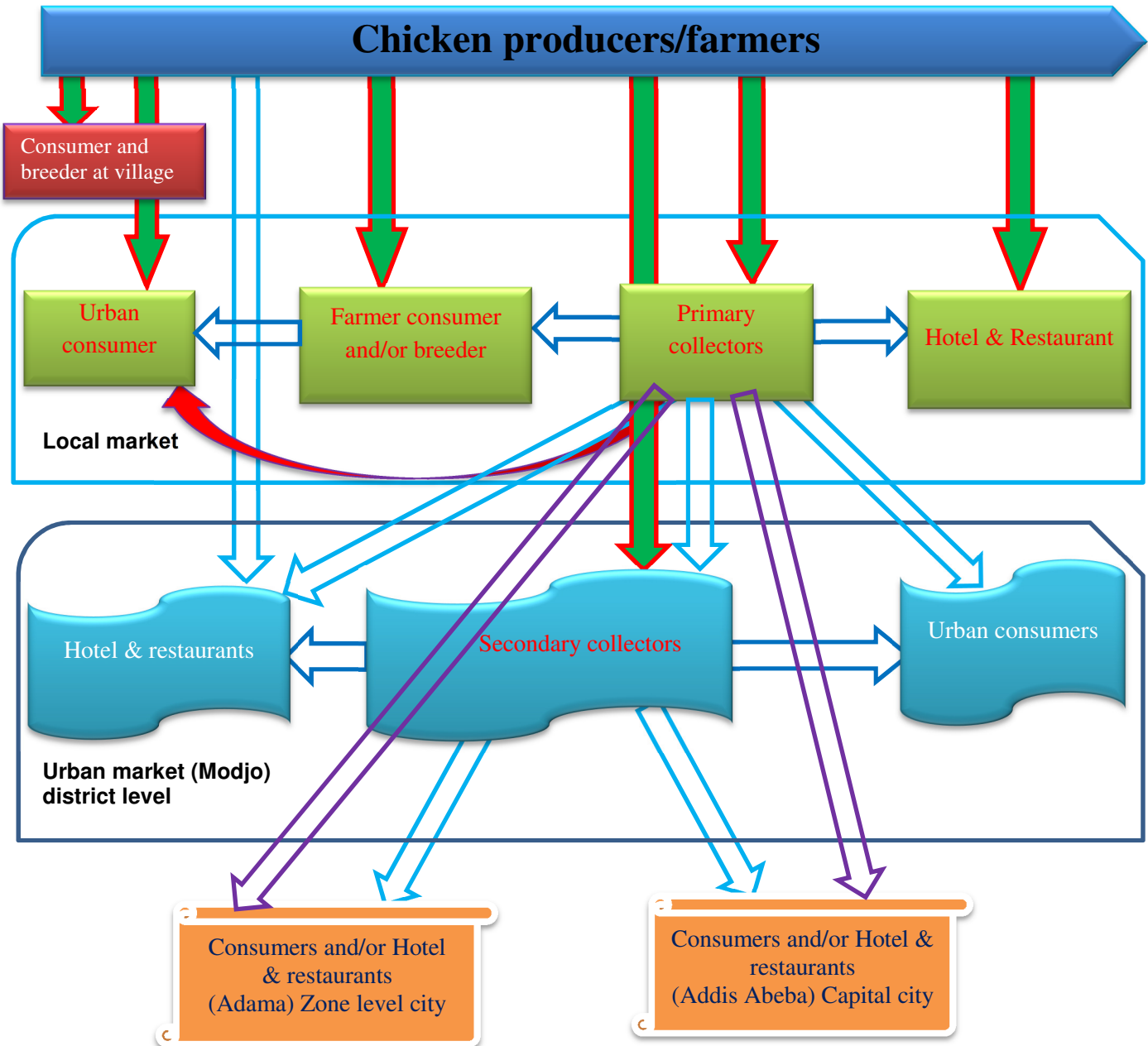


Figure 1. Marketing channel of chicken and eggs in Lume district, East shoa Oromia region.

CONCLUSION

Father in 1st, 2nd and 3rd strata and intensive chicken production participate egg selling were, 0%, 10%, 10% and 50% chicken selling were 3.3%, 3.3%, 6.7% and 10%, respectively, in the study area, indicate that as number of chicken per household increase, income from chicken increase, also participation father increase when income chicken production increase, these were initiated to participated more. But when number of chicken increase in per household decision making for egg home consumption father decrease, indicates that, fathers transfer/share the responsibility for mother. Most respondents (70%) roles in the chicken product seller as their main activity (regularly) and the remaining (30%) were role in the chicken product seller were occasional.

There is no any formal chicken and chicken product marketing system in the Lume district. Producers, consumers, middle men, retailers (local restaurants) and secondary markets are actors of the prevailing chicken and egg marketing channels. The price of chicken during Easter and Ethiopia New Year were high price of cock, layers/hen and cockerel were observed. Since in Ethiopian New Year white and red color more expensive while Easter no color preference, all color (white, red, grayish mixture (*gamsuma*) white and black (*wosera*)) equally expensive, indicate Orthodox religion followers were more populated in the area. Muslim holiday and ordinary market were no difference observed that indicate the no Muslim population in the study area.

RECOMMENDATIONS

➤ Response to the seasonality of chicken prices, planning of village chicken production with careful consideration of high demand seasons could be very important. Delivery of appropriate formal marketing, updated market information to chicken producers and chicken and egg traders. Change awareness of chicken producer through training how to produce chicken in wet season and solve chicken disease outbreak. Also, avian improved breed, vaccine and medicine at kebele level for producer were the key to increase the chicken production.

REFERENCES

- Alemu Yami and Tadele Dessie. 1997. The Status of Poultry Research and Development in Ethiopia, Research Bulletin No.4. Poultry Commodity Research Program Debre Zeit Agricultural Research Center, Alemaya University of Agriculture, Ethiopia.62 p.
- Alem. T., G.T. Yaynashet and A.H. Aklilu. 2014. Socio-economic characteristics of poultry production in lowland and midland agro-ecological zones of central Tigray, Ethiopia.
- Alemayehu Guteta and Negasi Ameha. 2020.Characterization of scavenging and intensive chicken production system in Lume District, East Showa Zone, Oromia Regional State, Ethiopia, International Journal of Livestock Production, Vol. 11(1), pp. 8-20, January-March 2020.
- Atsbaha Hailemariam Lemma Zemedu 2018. Analysis of Current Status of Poultry Value Chain in Ethiopia: Implication for Information Generation and Exchange: A Review Industrial Engineering Letters 2225-0581
- CSA. 2017. Report on livestock and livestock characteristics, Agricultural Sample Survey 2016/17 (2009 E.C.). Statistical Bulletin No.585, Vol. II. Addis Ababa.
- CSA (Central Statistics Authority). 2015. Agricultural sample survey 2014-2015. Report on livestock and livestock characteristics, Vol. II. Statistical Bulletin No. 446. Addis Ababa, Ethiopia.
- Emebet, M. and Kidane G. Mesekel, 2016. Importance of Traditional, Small Scale and Commercial Poultry 49. N Production in Ethiopia: A Review of British Journal of Poultry Sciences, 5(1): 01-08. 50.
- Ethiopian Academy of Science. 2013. Report on Mapping the Health Reserach Landscape in Ethiopia. Addis Ababa, Ethiopia: Ethiopian Academy of Science.
- FAO. 2019. Poultry Sector Ethiopia. FAO Animal Production and Health Livestock Country Reviews. No. 11. Rome.
- FAOSTAT. 2018. FAO online statistical database. Rome. <http://www.fao.org/faostat/en/>
- FAO (Food and Agricultural Organization of the United State Nations). 2007. Poultry sector country review, Animal Production and Health Division, Emergency center for trans-boundary animal diseases socio economics, production and biodiversity unit, Food and Agriculture Organization of the United, Nations, Rome., Italy. Available at <ftp://ftp.fao.org/docrep/fao/011/ai320e/ai320e00.pdf>.
- FAO (Food and Agriculture Organization of the United State Nations). 2012. Animal Production and Health Guidelines, No. 11, Rome.
- Fesseha Moges. 2009. Studies on production and marketing system of local chicken ecotypes in Bure Woreda, North-West Amhara, M.Sc Thesis. Hawassa University, Hawassa.
- Hassen, K., Dassa, O.H. & Achenef, M.2012 Study on status and constraints of village poultry production in Metema district, North-Western Ethiopia, *American-Eurasian journal of scientific research*, 7(6):246-251
- IFPRI. 2000. www.cgiar.org/IFPRI.
- LIVES (Livestock and Irrigation Value chains for Ethiopian Smallholders). 2013.Zonal diagnosis and intervention plan for East Shoa, Oromia, Ethiopia.
- Mengesha, M., Tamir, B. & Tadelles, D. (2008). Village

- Chicken Characteristics and Their Seasonal Production Situation in Jamma District, South Wollo, Ethiopia. *Livestock Research for Rural Development*, 20(7) <http://www.lrrd.org/lrrd20/7/meng20109.htm> (Accessed November 11, 2014).
- Meseret Molla, Solomon Demeke and Taddelle Dasie. 2011. Marketing system, socio economic role and intra household dynamic of indigenous chicken in Gomma Woreda, Jimma zone, Ethiopian livestock research for rural development. Volume 23, Article 131. Retrieved from <http://lrrd.org/lrrd23/6/mese23131.htm>.
- Misba Alawi and Melesse Aberra. 2011. Evaluating the growth performance of local kei chickens and their F1-crosses with Rhode Island Red and Fayoumi breeds in watershed areas of Guraghe administrative zone, Southern Ethiopia. MSc. Thesis. Hawassa University, Ethiopia.
- Nebiyu Yemane, Berhan Tamir and Ashenafi Mengistu 2018. Marketing of Exotic Chicken Products and Constraints under Small Scale Intensive Urban Poultry Production in Addis Ababa. college of Agriculture, Arba Minch University, *World Journal of Agricultural Sciences* 14 (1): 17-24, 2018.
- Permin A. and Pedersen G. 2000. Problems related to poultry production at village level. Possibilities. Proc. of smallholder poultry projects in Eastern and Southern Africa, 22-25 May 2000, Morogoro, Tanzania.
- Shishay Markos. 2014. Phenotypic characterization of local chicken ecotypes in Western zone of Tigray, Northern Ethiopia, MSc Thesis, Jimma university, Ethiopia
- SPSS. (Statistical Packages for Social Sciences).2002. SPSS 12 for Windows. SPSS Inc. Chicago, Illinois.
- Taddelle Dessie, C. Kijora and K.J. Peters. 2003. Indigenous chicken ecotypes in Ethiopia, Growth and feed utilization potential. *International Journal of Poultry Science* 2: pp 144-152.
- The Economist. 2011.FAO Statistics data global-livestock-count. Retrieved from web site <http://www.economist.com/blogs/daily-chart/2011/07/global-livestock-counts>