# MARKET TRENDS & CONSUMER BEHAVIOURS AND PREFERENCES IN THE TANZANIA POULTRY SUBSECTOR

AN ANALYTICAL REPORT WITH RECOMMENDATIONS FOR THE PUBLIC AND PRIVATE SECTORS

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Kingdom of the Netherlands

**Market Trends and Consumer Behaviours and Preferences in the Tanzania Poultry Subsector**

Study commissioned by the Embassy of the Kingdom of the Netherlands in Dar es Salaam, Tanzania.

Conducted by

**Edmond J Ringo**
Chief Executive Officer
Match Maker Associates Limited

**Professor Faustin P. Lekule**
Associate Expert -Agriculture Livestock
Match Maker Associates Limited

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Match Maker Group

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## Disclaimer

This report is a result of a poultry study that combined primary and secondary data. To the best of the knowledge of the authors, the information, aims, strategies, projections, and estimations are based on assumptions that the authors consider reasonable. Assumptions that were available are in some cases based upon statistical data and field research and could not be independently verified.

The authors, therefore, stress that opinions expressed in this report are purely their own based on observations and findings of this exercise and take sole responsibility for any errors or omissions.

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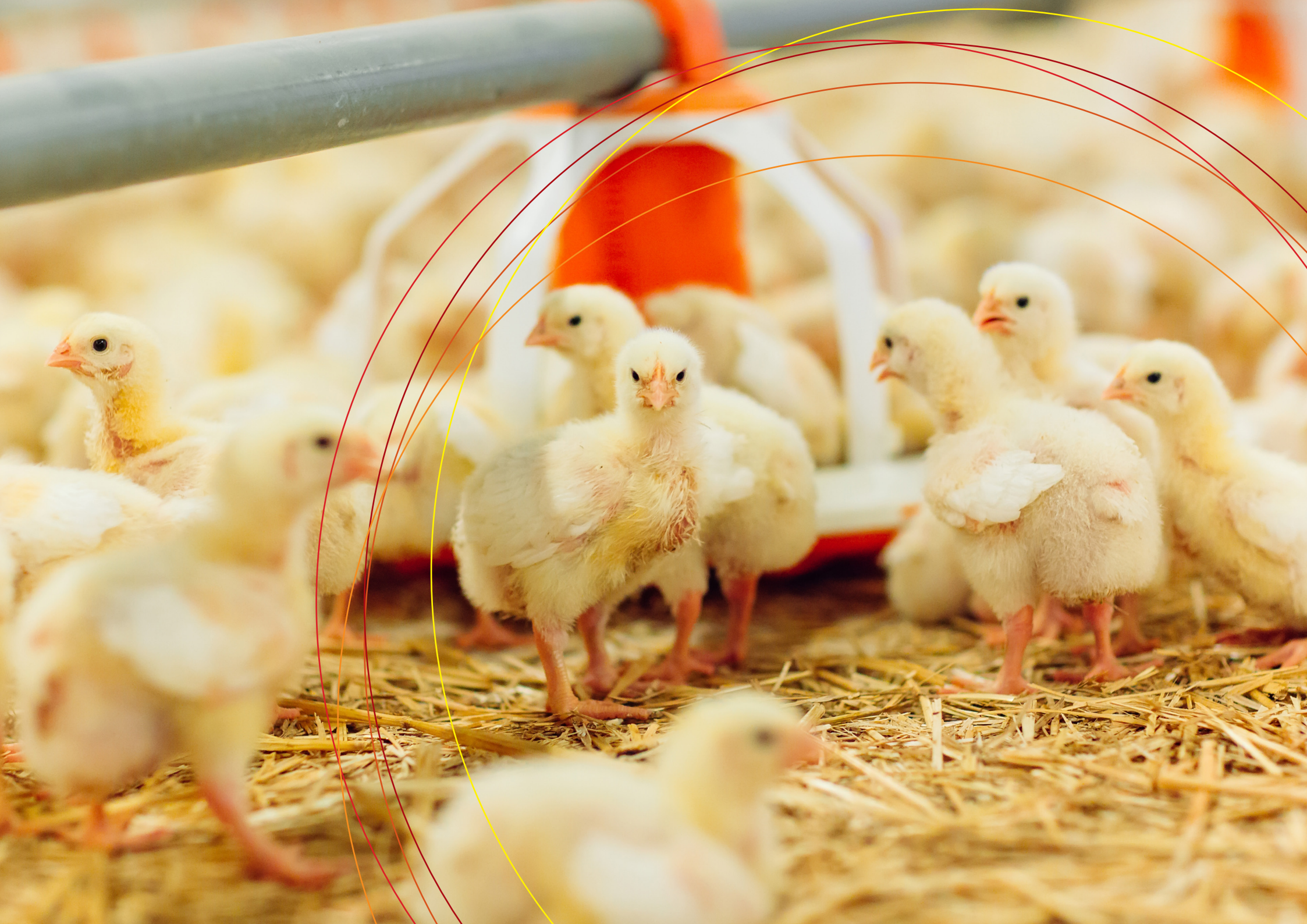


# Foreword Foreword from the Agricultural Counsellor for Kenya and Tanzania

Tanzania is endowed with abundant natural resources , which includes land , forage and livestock resources base . The poultry subsector is comprised of a large proportion of indigenous chickens, dual-purpose chickens and exotic (layers and broilers) chicken. The sector has great potential for investment considering the country boasts 38.5 million local chicken, 40.6 million layers and broilers and a growing population of dual-purpose chickens. This sector value chain offers lots of investment opportunities.

The Embassy of the Kingdom of the Netherlands commissioned Match Maker Associates to conduct this study to offer up-to date information about poultry and poultry products in line with consumer preferences and behaviour , market trends and value addition / processing in Tanzania.

The study also intends to provide recommendations on branding and promotion of consumption of poultry and poultry products to poultry stakeholders.

This study was conducted in April, 2020. Due to unforeseen circumstances, it was not possible to publish the study on time. Therefore, some of important market disruptive conditions as a result of Covid-19 have not been reflected. Generally, all the insights provided by the study are still valid and in most part are independent from the occurred market disruptions.

The Agricultural Counsellor of the Embassy of Kingdom of the Netherlands is grateful for the continued support and collaboration with the Ministry of Livestock and Fisheries Development towards developing the poultry sector . The study is one of the milestones for the implementation of MoU signed between the Governments of Tanzania and the Netherlands on 10th July, 2019 on developing a robust, vibrant, inclusive, and sustainable aquaculture and poultry value chains, and associated services in Tanzania to significantly contribute to prosperity and well-being of the society.

I am confident that this report will be useful to the businesses and all poultry stakeholders in Tanzania.

Wishing you all the success!

Ingrid Korving
Agricultural Counsellor for Kenya and Tanzania
Embassy of the Kingdom of the Netherlands
June, 2021

# Executive Summary

Poultry continues to strengthen its dominant position within the meat (beef, poultry, pork, and goat) production in Tanzania, accounting for nearly half of all the meat demand that needs to be produced over the next decade. Its short production cycle enables producers to respond quickly to market signals, whilst also allowing for rapid improvements in genetics, animal health, and feeding practices. In the coming years, growth in the demand for meat in East Africa will stem mostly from income and population growth. Beef will account for the bulk of additional consumption in the region, followed by poultry (OECD/FAO, 2016). The private sector is responding to the growth in demand in the region; however, there is a need to challenge consumers' attitude because of cultural behaviour (myths) that prohibit some members of a family - especially women and children from consumption of poultry and poultry products. Behavioural change communication campaigns carried out in a variety of settings can help dispel these myths and could lead to a rise in consumption.

The private sector - both formal and informal - drives the poultry subsector in Tanzania; however, the sector is far from formal in terms of structured trade and regulations. There are currently a number of initiatives by the government to promote poultry production through provision of incentives to the private sector. Essentially, increased demand will be triggered by increased consumption. The sector will greatly benefit from continued joint effort with the government and the private sector; government should therefore join hands with the private sector in promoting consumption of poultry meat products and eggs.

This report is the result and presentation of the study commissioned and supported by the Embassy of the Kingdom of the Netherlands aiming at understanding the market demand and consumer behaviour and preferences in the poultry subsector in Tanzania. The report is meant for all stakeholders in the poultry subsector in Tanzania, and therefore is expected to be used by the private sector to establish a thriving and competitive Tanzanian poultry subsector that is based on sustainable inclusiveness. This study's main objective is to provide up-to-date information about poultry and poultry products' consumer preferences and behaviour, market trends, value addition/processing in Tanzania and to make recommendations on branding and promotion of consumption of poultry and poultry products to all poultry value-chain actors in Tanzania.

*This study's main objective is to provide up-to-date information about poultry and poultry products' consumer preferences and behaviour, market trends, value addition/processing in Tanzania and to make recommendations on branding and promotion of consumption of poultry and poultry products to all poultry value-chain actors in Tanzania.*

This report has, based on past trends established that if Tanzania per capita consumption of poultry meat will double to 3.66 kg by 2050 and eggs per capita consumption increases from 106 to 212; then Tanzania will need to produce 553 million chickens (80% exotic) and 27.35 billion eggs per annum in 2050. In order to reach these targets, there should be a deliberate effort to promote more consumption of poultry and poultry products. This report shows that there is an immediate need of branding in Tanzania of processed, frozen poultry products and packaged chicken or eggs.

Essentially, the study puts forward recommendations to policy makers, poultry value-chain actors, Tanzanian and Dutch investors, and Impact Cluster Poultry and wider stakeholders who

are active in the development of the poultry industry in Tanzania including:

Policy Makers – the Ministry of Livestock and Fisheries should

- Take a lead in the development of the poultry strategy in Tanzania in close partnership with private sector;
- Strengthen sector associations: To build the capacity of Poultry Association of Tanzania (PAT) to be a self-sustaining organisation taking a lead in the development of the poultry subsector;
- Enact regulations: Processed poultry products pose more risk to food quality and safety. While processed poultry and poultry products from large companies are regulated because they retail through structured markets, most of the live poultry and processed poultry products from small and medium enterprises are sold in an unregulated market, hence this remains a matter to be resolved by MLF.

Private sector should

- Build capacity of poultry extension workers including para-vets and community animal health workers (CAHWs);
- Consider investing in several prospective areas for investments in Tanzania along the poultry subsector including investment in logistics and supply of poultry equipment and technologies; however, these proposed investment areas require further in-depth feasibility and business plan development;
- Take more active role in organising themselves into associations/cooperatives, create self-regulation;
- Promote production, processing with standard operation procedures (SOPs) and structured marketing;
- Develop Demonstration Farms within a cluster of SME commercial poultry producers;
- Take a lead in pilot of business models that will promote poultry value chain development building on successful models in the region and elsewhere;
- Actively participate in the development of the Poultry Strategy and the strengthening of PAT and building its capacity to help members in self-regulation;
- Take deliberate initiatives in branding poultry products, promotion campaigns through media;
- Work closely with MLF to establish a Poultry Data Centre (PDC) under the Ministry's Poultry Desk.

## About this report

This report gives a market analysis and demand estimates for different poultry products in Tanzania and gives insights on the poultry consumer preferences and behaviours. It also explores options available for branding and promotion aimed at increasing consumption of poultry products in Tanzania and puts forward specific recommendations to public and private sector players on what should be done to promote production and consumption of poultry and poultry products in Tanzania. It complements a previous study called *Poultry Subsector in Tanzania: A Quick Scan* (2018)[1] that was commissioned in 2018 by EKN in Dar es Salaam, Tanzania.

Specifically, **Chapter One** gives the background to the study and thereafter provides current status of poultry subsector in Tanzania in respect to production, processing, and value addition.

**Chapter Two** attempts to give an overview of the demand and market analysis of poultry and poultry products in Tanzania. This chapter also provided information about current and future demand and supply imbalance of poultry feed in the country. It's in this chapter that the study team managed to bring up projected statistics about envisaged future scenario on demand of poultry, poultry products, and poultry feed based on past trends. Imports

1 Available from https://www.agroberichtenbuitenland.nl/landeninformatie/Tanzania/documenten/publicaties/2018/10/17/poultry-quick-scan

and export trends of poultry is discussed in this chapter and eventually a discussion about regulatory and enabling environment is discussed highlighting recent taxes and fees incentives by the government that are aimed at promoting poultry subsector competitiveness in the country.

**Chapter Three** summarises primary research findings on poultry consumer preferences and behaviour in Tanzania and sheds more light on the need for a deliberate effort by poultry stakeholders to promote processed poultry and poultry products.

**Chapter Four** builds on the findings of chapter three and the importance of promotion and branding of poultry and poultry products is emphasised. More promotion, branding, and marketing strategies suitable for poultry subsector are discussed as well.

Finally, **Chapter Five** puts forward recommendations for all key stakeholders aiming at enhancing the competitiveness of the poultry subsector in Tanzania

# Chapter 1
# Introduction

## 1.1 Background to the study

The promotion and support of the continuous inclusive and sustainable development of the poultry subsector is an ambition of the Embassy of the Kingdom of the Netherlands (EKN). During the visit of the Vice Minister of Agriculture, Nature and Food Quality of the Netherlands to Tanzania in July 2019, a MoU on the development of the poultry subsector between Tanzania and the Netherlands was signed. Through this MoU, a consortium of Dutch companies known as "The Impact Cluster Poultry" is working together with its Tanzanian counterparts in developing the subsector to be more competitive and inclusive for the sustainable growth of the Tanzania economy. The aim is to improve efficiency and quality production to meet the demand for poultry and poultry products. For this reason, a study on market analysis and consumer behaviour regarding the consumption of the poultry and poultry products was envisaged.

This report is the result and presentation of the study. This report, therefore, is expected to be used by the private sector, Ministry of Livestock and Fisheries (MLF), Impact Cluster Poultry and poultry stakeholders to establish a thriving and competitive Tanzanian poultry subsector that is based on sustainable inclusiveness. The study's main objective is to offer up-to-date information about poultry and poultry products' consumer preferences and behaviour, market trends, value addition/processing in Tanzania and recommendations on branding and promotion of consumption of poultry and poultry products to policy makers, poultry value-chain actors, Tanzanian and Dutch investors, Impact Cluster Poultry, MLF and wider stakeholders who are active in the development of the poultry industry in Tanzania.

More than ten recent studies on the poultry subsector have been reviewed as source of secondary data for this study and are mentioned at the end of this report. Primary data was collected using a few instruments mainly Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs) through structured open-ended questionnaires. Purposive sampling was used to identify and interview respondents on consumer preferences and behaviour. EpiCollect5 mobile app software was employed to collect consumer preference and behaviour data among 954 consumers (50% women) and 83 operators of food services in six major Tanzanian towns: Arusha, Dar es Salaam, Pwani, Kilimanjaro, Dodoma, and Morogoro.

This report gives a market analysis and demand estimates for different poultry products in Tanzania and gives insights on the poultry consumer preferences and behaviours. This report also explores options available for branding and promotion aimed at increasing consumption of poultry products in Tanzania and puts forward specific recommendations to public and private sector players on what should be done to promote production and consumption of poultry and poultry products in Tanzania.

This report complements a previous study called *Poultry Subsector in Tanzania: A Quick Scan* (2018)[2] that was commissioned in 2018 by EKN in Dar es Salaam, Tanzania.

2 ibid

## 1.2 Current status of the poultry sector in Tanzania

### 1.2.1 Poultry production in Tanzania

The population of chickens in Tanzania currently stands at 83,280,000 comprising of 38,770,000 indigenous chicken and 44,510,000 exotic chickens. Annual egg production stood at 4.05 billion eggs. In the 2019/2020 financial year hatcheries in Tanzania produced 70,323,00 day-old chicks (DOC) comprising of 60,463,872 broiler, 1,999,128 layers and 7,860,000 dual-purpose chicks. There are 26 hatcheries and the parent stock farms have a capacity of 1,200,000 parent stock. In the financial year 2019/2020 Tanzania produced and recorded (formal market) 80,601.3 MT of poultry meat (MLF, 2020).

The extensive scavenging system in Tanzania has been predominant and currently accounts for over 46% of the current poultry population. The intensive production system that is practiced by dual purpose and exotic bird producers account for the rest (54%) of the flock. Over the years, small-scale commercial systems have emerged raising broilers and layers (FAO, 2019). A few large-scale farms by multi-national companies and a few Tanzanian entrepreneurs have emerged in the breeding of chickens as well as involving themselves in vertical integration of the poultry supply chain. Of the 26 hatcheries, most of them (70%) are located in Dar es Salaam and Pwani regions. Private sector investment in commercial poultry production has increased across the country in the last decade, especially in small-scale broiler and layer production (EKN 2018, FAO 2019). Investments in veterinary services, feed manufacturing and in the supply of DOC has also increased recently mainly for exotic breeds but also for the newly introduced cross-bred (dual purpose) chickens (EKN, 2018).

### 1.2.2 Processing and value addition

In Tanzania there is limited processing of poultry. A majority of consumers buy live poultry and slaughter them at home. There are emerging slaughtering services at urban poultry markets whereby initial processing is undertaken i.e. slaughtering, removing of feathers and other by-products; however, these public slaughter facilities are rare and unhygienic. FAO has listed a number of limitations besetting processing and value addition of poultry products in Tanzania that include: uncontrolled slaughter, lack of appropriate slaughter facilities, informality of the sector, limited regulations, unskilled staff, low awareness for quality processed poultry products and limited range of processed products (FAO, 2019).

Medium-scale farms raise between 5,000 and 50,000 birds, while large-scale farms raise between 50,000 and 100,000 birds. These farms may undertake further processing and bring to the market a variety of branded processed poultry products and packaged eggs. Currently there are approximately 10 private medium- and large-scale poultry slaughter facilities in Tanzania owned by commercial poultry farms including Kuku Poa, Interchick, Frostan, Kijenge, Kiliagro, Mitobolo, Mkuza, Kingchick, Endanahai, and Omondi. Most of these are vertically integrated into poultry production farms.

There is a growing supermarket culture in most of the urban areas of Tanzania due to a growing middle-class that demands processed poultry products. This is the driving force for increased demand for processed chicken and packaged eggs. There is also an emerging trend of small to medium sized enterprise (SME) poultry farmers slaughtering their poultry on their farms in unhygienic conditions and selling their freshly slaughtered poultry to butcheries; the meat specialists who have refrigeration facilities and are widely distributed in the urban centres. Consequently, large farms are competing head-to-head with fragmented SME poultry farmers who have invested less in the processing infrastructure and retail unbranded and unregulated poultry and poultry products through local meat butcheries at competitive prices. Deliberate and adequate enforcement of regulations by the Tanzania Meat Board (TMB) and local authorities will give an opportunity to promote investment in slaughter facilities.

Mid-sized processing facilities that are disengaged from large processors supply chains are rare, possibly because the scale is an important factor, as is a regular supply of live healthy chickens. There are a number of simple, hygienic slaughtering solutions available on the market which may work in this sector, and companies such as Transgenic Agri have promoted the use of these systems in recent years. If such processors were established around mid-sized cities near rural and peri-urban production zones, they could potentially link to a network of smaller retail

outlets that serve those markets (DFID, 2019). There are some initiatives to build public poultry abattoirs e.g. in Dodoma; however, not yet operational. Essentially, more integrated investments in poultry processing technologies are required in Tanzania especially for SME poultry farmers such as mobile abattoirs

A simple slaughter line consists of two bleeding cones, a scalding pot, a plucker, a chilling tank, two evisceration tables, a hanging table, and a packing table (**Figure 1,** right). The total cost is estimated at USD $15,000-20,000

### 1.2.3 Participation of women and youth in the poultry subsector

The poultry subsector is a youth- and women-friendly enterprise. The poultry industry creates opportunities throughout the value chain, not only in poultry production, processing, and marketing but also in grain production (the largest opportunity for small-scale farmers) and provision of critical inputs especially feed. Creation of jobs by larger companies and various small to medium enterprises (SME) provide opportunities for employment of youth and women. Other employment and self-employment opportunities are in aggregators/traders, agrovet dealers, vet services, brooding units, mobile abattoirs, local retail outlets and other. While many promotion initiatives to date in Tanzania have focused on small-scale poultry production, providing support along the entire supply chain could increase these opportunities throughout the industry.

In Tanzania, women and youth are the majority of poultry smallholder producers because there isn't a serious barrier on access to land (land pressure) when considering investment in a small or medium size poultry farm: Returns on land and returns on labour are higher than most other agricultural enterprises. The production cycle in poultry farming is short, so cash flow is favourable for smallholder farmers (especially women and youth) making finance potentially more accessible through micro-finance and own savings. The production cycle for poultry is small and it's flexible for beginners to start at small scale. Poultry production is also more friendly to women because it is suitable enterprise that allows them to stay at home and combine poultry production and family chores including taking care of children.

*A Simple Slaughter Line*

(1) Bleeding Cone (2)

(5) Evisceration Tables (2)

(2) Scalding Pot

(6) Hanging Table

(3) Plucker

(7) Packing Table

(4) Chilling Tank

**Figure 1:** a simple slaughter line

Nevertheless, as you move upstream, the role of women decreases and that of youth, especially men, increases because enterprises such as aggregation, distribution, processing, and trading requires movement and many hours away from home. Most food service chefs and street chicken barbecue "kuku choma" vendors are men and the majority are young men.

Tanzania central government through the MLF supports and promotes women and youth engaged in poultry production. For instance, in 2019/2020 financial year, the MLF in collaboration with a large farm called AKM Glitters have facilitated availability of 81,160 day-old chicks (DOCs) to 151 women groups in Dar es Salaam, Dodoma, Pwani and Rukwa regions. Moreover, MLF distributed 8,500 DOCs to 27 groups of smallholder poultry producers in 950 households in Bagamoyo (4,500) and Sumbawanga (4,000) districts. Furthermore, a network of 400 women poultry producers in Mkuranga district were given 5,700 DOCs (MLF,2020). At local government level District Councils have been funding youth and women groups active in poultry production through their District Agricultural Development Plans (DADPs). These are pockets and fragmented initiatives that could have more impact if they could be well-structured and adopt tested poultry subsector business development business models.

66% of the population in Tanzania is under the age of 25[3], so the country has a vibrant youth population. Youth who are active in agriculture are new in the market and have only limited networks and contacts with buyers, which restricts their access to market information. However, modern market information services now exist and the development of ICTs facilitates marketing and trading. Youth tend to be adept at learning to use new technologies and many already use ICT tools for social networking. They therefore have a comparative advantage in accessing market information through ICT and can overcome the barrier of asymmetric purchasing power. While it could be a bit early for adopting block-chain technology in Tanzania, using mobile applications (Mobile Apps) is an innovative entry to draw benefits that technology could bring to the poultry industry.

AGRI-WALLET[4] is conducting a pilot project in Tanzania in partnership with Hendrix-Genetics, Silverlands Ltd., and World Poultry Foundation (WPF) where the model facilitates financing of 14 brooding units (8 women, 6 men) to buy day-old chicks, feeds, and vaccines from Silverlands Ltd. The brooders then sell 28-day-old chickens to smallholder farmers. Financing mechanisms in this "airtight" value chain is fully digital block-chain enabled. Use of other mobile apps such as Abusol, I Grow Chicken, which are applied elsewhere in East Africa for data collection on poultry farming make it possible to capture, store and manage "real time" data of the performance of a poultry business. By using the "I Grow Chicken" solution for instance, it is possible to:

- Work stand-alone, on phone, or on-line/off-line
- Work on any browser
- Stores data in the cloud: available 24/7 anywhere in the world, with 99.9% availability
- Scalable: smallest farmer 250 birds; largest 5 million birds

There are, therefore, attractive innovations using ICT for youth to engage in and scale up poultry farming.

3 https://restlessdevelopment.org/file/youth-report-201213-englishlowresonline-pdf
4 https://agri-wallet.com

## Key Messages from Chapter 1

Population of chickens in Tanzania currently stands at 83,280,000 (38,770,000 indigenous chicken and 44,510,000 exotic chickens).

Egg production in Tanzania is 4.05 billion eggs.

Tanzania hatcheries have produced 70,323,00 day-old chicks (DOC) in 2019/2020 financial year of which (60,463,872 broiler, 1,999,128 layers and 7,860,000 dual-purpose chicks).

There are 26 hatcheries and the parent stock farms have a capacity of 1,200,000 parent stock

In the last financial year Tanzania produced about 80,600 MT of poultry meat.

Majority of poultry producers are informal in Tanzania and are not regulated by government; however, formal (large) investors in poultry subsector are regulated

In Tanzania there is limited processing of poultry and consequently, majority of consumers buy live poultry and slaughter them at home

There is also an emerging trend of SME poultry farmers slaughtering their poultry on their farms in unhygienic conditions and selling their freshly slaughtered poultry to butcheries; the meat specialists who have refrigeration facilities and are widely distributed in the urban centres.

A handful of about 10 medium and large poultry farms are vertically integrated including processing and marketing variety of branded processed poultry products and packed eggs.

There are a number of simple, hygienic slaughtering solutions available on the market which may work in this sector; however, there are some initiatives to build public poultry abattoirs but not yet operational.

Women and youth could play an important role in the development of the poultry sector.

Increased use of ICT could lead to better opportunities especially for youth.

# Chapter 2
# Demand & Market Analysis

## 2.1 Poultry demand: meat and eggs

In Tanzania, it has been projected that the demand and consumption of poultry meat and products will grow steadily in line with population growth and the rise of the middle-class. Chicken demand is driven by population growth and increasing per capita consumption of eggs and poultry meat, which translates directly into demand for feed (AKM Glitters, 2016). It is also expected that in the long run, chicken meat will bridge the red meat (beef) deficit.

Poultry meat: Population growth, rising urbanisation and growth in poultry meat production imply an increasing demand. Rabobank[5] projected that Tanzania poultry meat demand stood at 100,000 MT in 2017 and that this will continue to grow in the coming years. Based on this analysis the study team attempted to estimate projected demand in the foreseeable future, taking into consideration global population growth estimates. If Tanzanian annual per capita consumption of poultry meat will double to 3.66 kg by 2050 and eggs per capita consumption from 106 eggs to 212 eggs as estimated during this study; then the country needs to produce 553 million chickens (80% exotic) and 27.35 billion eggs by 2050 as projected by authors in **Table 1** (page 8). The consumption of eggs in Tanzania stands at 106 eggs/capita/annum, much below the recommended consumption by FAO of 300 eggs/capita/annum. Total egg production increased from 3.58 billion to 4.05 billion from 2018/2019 to 2019/2020, an increase of 13.3 percent (MLF, 2020). However, due to the poultry industry being highly unregulated, there is absence of reliable data from public and private sector sources because the local market is unstructured.

*An Increasing Demand…*

Population Growth:
Sub-Saharan Africa compounded annual growth rate: 2.2%
1 billion people now to 2.2 billion people in 2050

+

Larger Middle Class
Rising incomes with a shift from vegetable to animal protein demand

+

Preference
Poultry and eggs as best positioned proteins:
Price, Taste, Availability

RaboBank, 2017[5]

The only reliable data available is for the formal imports and exports as these data are captured through the taxation system of the Tanzania Revenue Authority (TRA). But even the TRA data is incomplete because it doesn't consider the significant informal cross-border trade (ICBT) along many porous borders. While the demand of dual-purpose chickens for meat and eggs is increasing in Tanzania, there is also an increase in demand of the same by neighbouring countries as well as far away countries in the form of day-old chicks (DOC). The demand of fertilized eggs from the same breeds will likely increase in the future as the capacity of the breeding farms engaged in Kuroiler and Sasso breeds expand their production.

Informal cross-border trade has remained a dilemma for the Tanzanian government, as is the case with many African countries. It is a pervasive phenomenon around Tanzania's national

5 http://poultryafrica2017.com/wp-content/uploads/2017/10/Time-for-Africa_Nan-Dirk-Mulder-Poultry-Africa-2017_Handout.pdf

borders and its underpinning causes include tariffs, non-tariff barriers, complex customs and trade procedures, and lack of access to finance and information among other factors. Although it accounts for a significant amount of trade in the country, ICBT also remains a moving target, whose data has continually defied capture in national, regional, and continental trade data

It is from this background that capturing fluctuation of supply and demand of poultry products during a calendar year is quite difficult. Market price fluctuation could be an indication of the mismatch between supply and demand, and in the context of the poultry industry in Tanzania the prices of poultry products fluctuate significantly in a given year.

For instance, on 11 May 2018 the Tanzanian English-language Daily News reported price hikes of layer DOCs from TZS 2,500 (€1) to TZS 2,800 (€1.12) and broiler from TZS 1,200 (€0,48) to TZS 1,400 (€0,56) and then to TZS2,000 (€0,80) within only four months, January to May. Again, between September 2018 and January 2019 the price of broilers in Dar es Salaam fell slightly because there was oversupply from a new large poultry farm (Chinese company) that started to supply the market with large volumes at low prices.

**Table 1:** Projection of demand of poultry meat, eggs, and poultry feed 2020 – 2050 Tanzania

| ASSUMPTIONS | 2017 | 2020 | 2050 |
|---|---|---|---|
| Sub-Saharan Africa Human Population | | 1 billion | 2.2 billion |
| Human Population Tanzania | 54.6 million | 56.3 million | 129 million |
| Chicken Meat Production: per capita consumption 1.83kg | 100,000 MT | 103,000 MT | 236,000 MT |
| *Assuming per capita consumption increase to 3.66kg by 2050* | | | 472,140 MT |
| Eggs: 106 egg/capita/annum<br>*Assuming 212 eggs/capita by 2050* | 3.58 billion | 4.05 billion | 27.35 billion |
| Number of Chickens Nationwide<br>Indigenous (I) and Exotic (E)<br>*Assuming 80% exotic, 20% indigenous in 2050* | I: 38.2m<br>E: 36.6m | I: 38.77m<br>E: 44.51m | I: 111m<br>E: 442m |
| Animal Feed Demand | | 1,500,000 MT | 18,114,754 MT |

*Source: Authors' own analysis and estimation based on population growth and per capita consumption of poultry meat and eggs (FAOSTAT, RaboBank, PAT).*

**Figure 2** (facing page, top) shows the general poultry meat volume and price trends in a typical year as provided by two big players in the market. These two players' typical maximum sales volume of dressed broiler reached 260MT in December whereas in low season the sales dropped by over 50% (below 130MT). During low season the price shoots to TZS 12,000/kg (€4.80) and at high season the price dropped below TZS 7,000/kg (€2.8).

## 2.2 Poultry feed: demand and supply

Feed is an area in which commercial poultry producers of all sizes face challenges, largely due to the high cost of carbohydrate and protein inputs. Poor regulation and competition also make identification and quality control challenging. Proteins are the cost drivers of animal feed, sometimes contributing as much as 70% of the cost of production. There are two primary types of protein: animal-based protein (blood/bone meal, fish meal) and vegetable-based proteins primarily soya, but also cotton and sunflower seed cake (both by-products from oil extraction).

Production of poultry feeds for both layers and broilers for 2016 was estimated to be 195,000 MT and 455,000 MT respectively totalling 650,000 Metric Tons. In 2017, layer feed was 150,000 MT and 380,000 MT for broilers totalling 630,000 MT per year. This production rate has remained more or less the same because in 2019 the production of poultry feed was estimated to be 2,046.8 per day (about 614,040 MT per year of 300 working days). This production is only 40% of projected annual demand of about 1.5 million MT (PAT, 2020). If national demand for poultry will increase as projected in section 2.1, consequently, the demand for feed is expected to grow.

The supply of animal feeds is greatly influenced by three factors: availability and price of maize, of soya and of DOCs.

**Maize**: During 2017/18, Tanzania produced 6,680,758 MT of maize while the local demand was 5,407,499 MT resulting in a

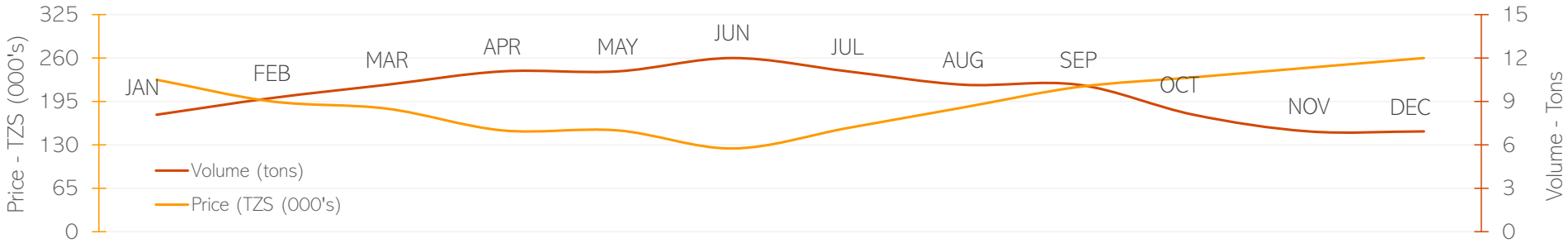



**Figure 2:** Typical poultry meat demand fluctuation in a calendar year

surplus of 1,273,259 MT (MALF, 2018). That spells a healthy situation for poultry feed production. Most of the surplus maize in Tanzania is exported to Kenya for both human consumption and raw material for animal feed. Tanzania also exports maize bran and oilseed cake to Kenya. In the long run, sustained grain production coupled with sufficient and efficient warehousing/ storage in Tanzania are key to a stable poultry feed production and supply.

In Tanzania the main energy source for poultry feed is maize contributing 50 per cent of the feed. The most serious challenge is the fluctuation of price of maize, which is the staple food. In the absence of alternative sources of energy, the only far reaching solution would be aggregation of sufficient maize during harvesting season. This requires both financial muscle and storage facilities (warehouses/silos). Price volatility may be due to erratic harvests, government interference through import/export bans and unpredictable behaviour of the National Food Reserves Agency (NFRA) are the key obstacles to a stable animal feed industry with predictable feed prices.

**Soybean**: Soybean meal has been gradually replacing fishmeal (sardines) in livestock feeds especially poultry feed; however, soya production in Tanzania has never exceeded 10,000 MT while the potential demand is over 150,000 MT; consequently, the feed mills in Tanzania are operating under capacity due to lack of raw materials.

There are currently 105 feed mills in Tanzania with installed capacity of about 2.0 million MT per annum (MLF, 2020); however, the exact number keeps fluctuating because some are opening while others are closing. In addition, some are relatively small and operate clandestinely or informally. Some large feed mills import soya beans and soybean meal mainly from India,

## *Factors that contribute to volume and price trends*

*Market Related Factors:*

1. **Religious festivals**
   Consumption of poultry increases significantly during religious festivals especially Christmas, Eid el Fitri, Eid el Hajj, Easter and Diwali. Christmas end of year festivals is a factor in an increase in production for the month of December. A low season between the months of February and June is partially attributed to religious seasons such as Lent and Ramadan.
2. **Wet (rainy) season**
   This is an annual contributing factor in volumes dynamics with wet seasons being detrimental to production (March – June).
3. **Overproduction in other regions**
   Instances where poultry products produced in excess from regions are dumped in Dar es Salaam or other larger markers at low prices, sharply increasing supply and thus decreasing price.
4. **New entrants**
   Any major new players/entrants to the market have similar effect as factor number three above.

*Production Related Factors:*

5. **Shortage of DOC**
   Change in government regulations or emergencies/calamities such as the current coronavirus pandemic disrupt logistics flow for acquiring DOCs.
6. **Feed**
   Years with good harvest of maize make the cost of production to be lower and more farmers may be able to produce more (due to affordable feed which contributes about 80% of production cost).

Zambia and Malawi. The top 10 feed mills in Tanzania are illustrated in **Table 2** (below) and it shows a collective installed capacity of 1,870 MT/day but utilised capacity is only 1,079 MT/day (58%). Therefore, by improving supply of soybean meal to the currently operating feed mills, production can be increased to meet the current feed demand.

The projected increased demand for poultry meat and eggs by 2050 indicates that there will be a ten-fold increase in demand for poultry feed. Such increase in demand of poultry feed implies significant investment and contract farming for maize and possibly soya bean production will be key factors to promote large-scale grain production for livestock feed. Aggregation of maize and other grains for poultry feed during the harvesting season should be an area for both Tanzania Animal Feed Manufactures Association (TAFMA) and Poultry Association of Tanzania (PAT) to work on.

On the issue of quality control and regulation, there are 4 institutions that should jointly work together to develop a mechanism for ensuring compliance: MLF, Tanzania Bureau of Standards (TBS), PAT and TAFMA.

Day-Old Chicks: Currently the country produces over 44 million DOCs annually and projections show this number will increase ten fold by 2050 to over 440 million as shown in **Table 1** (page 8).

**Table 2:** Top 10 poultry feed manufacturers in Tanzania – 2020

| | ANIMAL FEEDS PROCESSOR | LOCATION | INSTALLED CAPACITY (MT/day) | ACTUAL CAPACITY UTILIZATION (MT/day) |
|---|---|---|---|---|
| 1 | Silverlands Tanzania Limited | Iringa | 320 | 200 |
| 2 | Hill Animal Feeds | Dar es Salaam/ Pwani | 200 | 150 |
| 3 | Falcon Animal Feeds | Dar es Salaam | 170 | 120 |
| 4 | Harsho Milling Company | Kilimanjaro | 250 | 160 |
| 5 | Backbone Tanzania | Dar es Salaam/ Pwani | 120 | 100 |
| 6 | Tanbreed Poultry Co./ Interchick | Dar es Salaam | 80 | 50 |
| 7 | AKM Glitters Ltd | Dar es Salaam/ Pwani | 120 | 90 |
| 8 | Marenga Millers | Moshi, Kilimanjaro | 150 | 80 |
| 9 | Biotech Laboratories | Dar es Salaam | 100 | 59 |
| 10 | Kijenge Animal Feeds | Arusha | 360 | 70 |

*Source: Study team, January 2020*

## 2.3 Poultry supply: marketing and distribution channels

Aggregation and marketing of poultry meat (indigenous, Kuroiler/Sasso and Broiler) and eggs is quite complex and there is absence of a clear supply chain simply because the majority of small and medium scale (SME) poultry producers are fragmented and are disorganized. Access to various types of market differs by producer type, with large commercial producers dominating the formal integrated cold chains having direct supply contracts with supermarket chains and high-end food services with refrigeration facilities. Most of indigenous poultry are supplied as live chickens through informal channels (38 mil) and almost half of exotic poultry (22 mil) are also supplied live or slaughtered through informal channels. This implies about 60 mil poultry (72%) are aggregated and supplied through informal channels. It is estimated that about 22 mil (28% of the poultry population in Tanzania) mostly exotic poultry are processed and supplied through formal cold chain channels annually including supermarkets, high end food services and institutional buyers. The vertically integrated medium and large poultry farms have established structured trade with retailers supplying more refined products especially cuts and sausages. SME producers are competing for the much larger informal (both live, fresh, and frozen) market.

**Indigenous chicken (Live):** Aggregation and marketing are done on two levels. On the first level, some entrepreneurial farmers themselves and village traders do the aggregation and bulking of indigenous chicken. Village traders have special relationships and understanding with urban-based traders. Urban traders in most cases give cash advances to their agents (village/local intermediaries and traders), who are based in the villages/local areas. The village/local intermediaries and traders roam the village/local areas, moving from farm to farm to collect chicken. Once a critical mass is attained, they inform their urban

*Continued on page 12*

## *Poultry Feeding Regimes in Tanzania*

*Backyard indigenous* poultry keepers use little or no consumption of commercial feeds. Indigenous chickens scavenge for their sustenance and are supplemented by household food scraps and by-products from maize grinding. Feeding indigenous chickens commercial feed is uneconomical due to the birds' poor food conversion abilities. The special niche for the birds from this system is urban bars and hotels where they are very popular making them more expensive than broilers. Commercialisation of the indigenous chicken has been tried with limited success.

*Medium commercial*: At this level of sophistication poor-quality feed can be noticed immediately by layer farmers because laying rates drop in days, but broiler farmers have a harder time to identify quality unless they are closely monitoring food conversion ratio (FCR) that is hard to implement week by week.

*Large commercial*: Able to reduce the cost of feed as much as possible - given systemic national constraints - with vertical integration or close cooperation with high quality feed providers. Suffer from price and availability of animal and vegetable protein inputs for their feed mills, hence unable to meet import parity in most cases without tariff protection. The large commercial producers may be producing DOC alone or combined with feed production and/ raising chickens (broilers) to slaughter and supplying supermarkets (on contract). Vertical integration has been adopted by the majority as a means of mitigation against some failures by the other value chain players. Currently substantial amounts of feed are imported mainly in the form of premixes and concentrates.

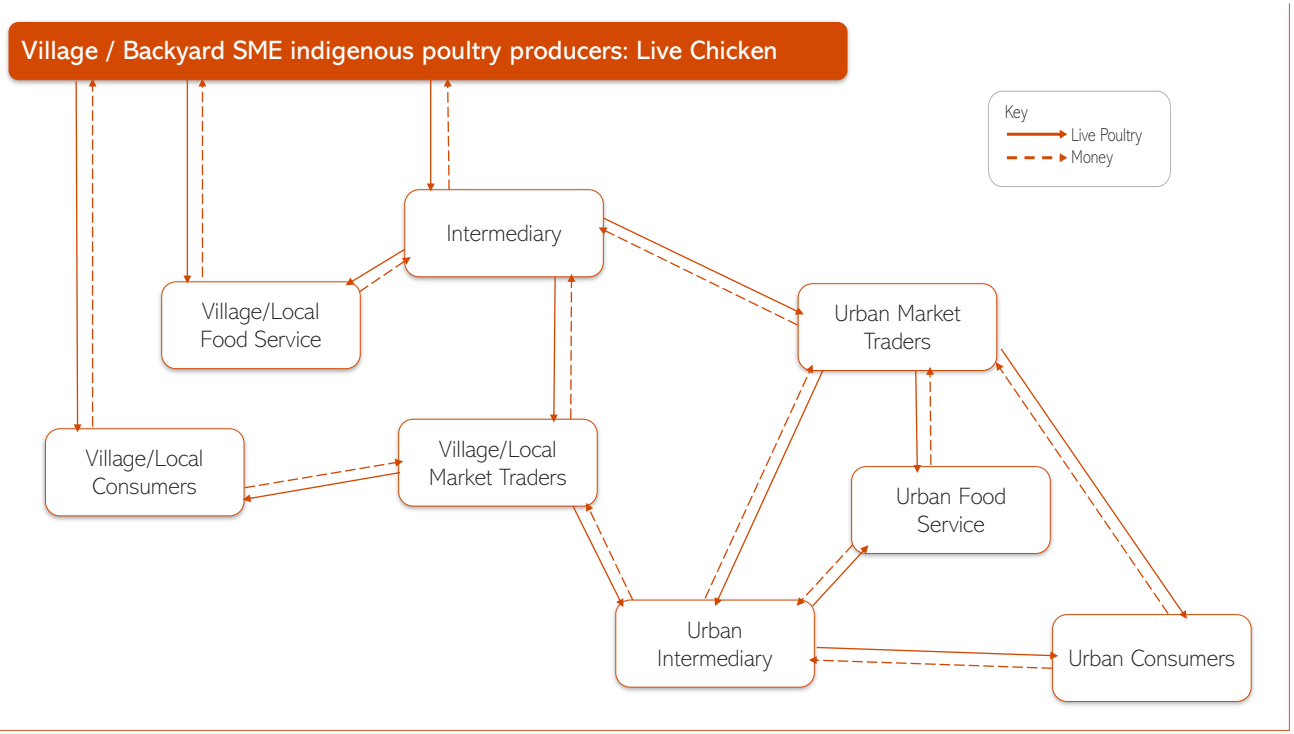



**Figure 3:** Marketing and distribution channels - live indigenous chicken

counterparts (urban intermediaries and urban market traders), who then travel to the village and collect the consignment of chicken or the village/local intermediaries and traders could use bicycle or motorbike to take the stock to urban centre as shown in **Figure 3** (above). Occasionally, the village traders also buy chicken by themselves and they sell to the urban traders.

In the second level, urban intermediaries and urban market traders visit specific livestock, primary and secondary markets (hereby collectively referred to as village/local markets), which take place on specific days of the week. In such markets, the urban trader sits in a strategic place in the market and buys chicken, one at a time, from farmers until a critical number is attained, or until the allocated money is exhausted. It should be noted that the village trader also bulks for the urban trader at such markets as well. The volume increases incrementally and most of the volume end up in urban market traders who reach final consumers namely urban food services (such as pubs, street food vendors, hotels, and restaurants) and domestic urban consumers. Village and urban traders play distinct roles in marketing of indigenous chickens in Tanzania, although there is some overlap at the rural level between producers and traders as some producers undertake marketing function as well (EKN, 2018).

**Live and processed broilers, Kuroiler/Sasso (Live + Meat):** While the live market caters reasonably well to backyard and small-scale farmers selling a small number of indigenous birds, developing marketing and distribution channels for small to medium (SME) commercial farmers with hybrid and commercial breeds is much more challenging. Most SME producers are not able to access the formal cold chains due to the lack of reliable slaughter and off-take agreements. Instead, they primarily supply

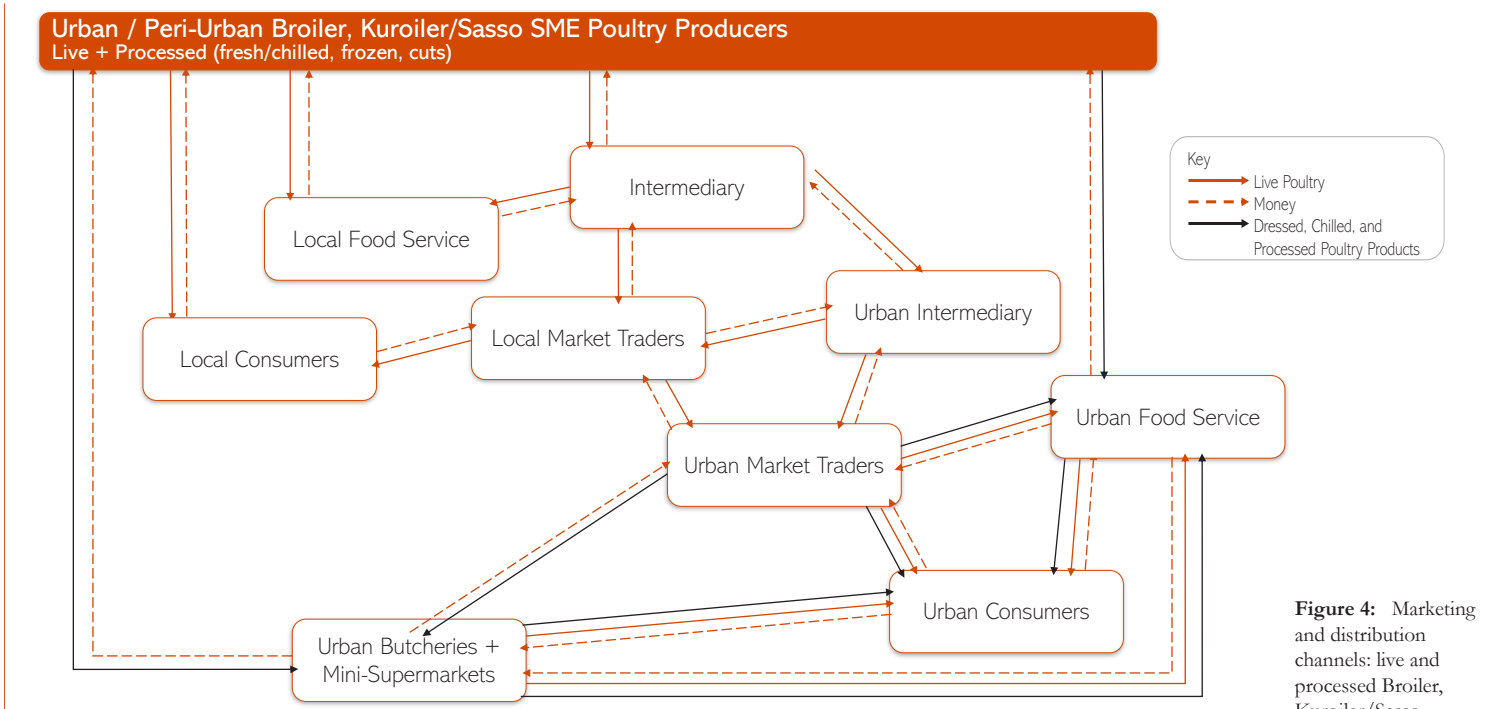



**Figure 4:** Marketing and distribution channels: live and processed Broiler, Kuroiler/Sasso

live-bird markets and fresh and chilled/frozen poultry meat to less formal food and retail outlets as shown in **Figure 4** (above). The live markets sell broilers, indigenous chickens, dual-purpose hybrids (Kuroiler and Sasso) and cull layers (those that have completed laying period) together, and offer customers the ability to inspect the bird they wish to purchase, touch it, and compare it with other birds. Sales are negotiated based on the preference of the customer (colour, sex, perceived healthiness), but birds are not sold by weight. In most places, a separate SME is on hand to slaughter the bird for the customer for a fee (DFID, 2019).

**Emerging customer preference for frozen chicken:**
Increasingly, urban consumers are looking for the simplicity of a frozen chicken, and SME producers (especially those in urban and peri-urban areas) are struggling to enter this large producers' dominated market channel through slaughtering their birds at home or basic slaughter slabs and/or local abattoirs in urban areas.

The majority sell freshly slaughtered chickens to intermediaries or directly to kiosks, mini and supermarkets and meat butcheries in their vicinity; but some of them have modest refrigeration facilities and they store and sell frozen chicken in bulk. Larger abattoirs typically do not offer slaughtering and dressing services to SME poultry producers. As market preferences shift, a viable model for chicken processing outside the major large processors needs to be identified and developed. This is a major processing, marketing, and distribution bottleneck in the value chain at present limiting SME producers' entry into formal cold chains. The growth in supermarkets and quick service restaurants (QSR) in Tanzania, like in other developing countries, has increased greatly in the past decade as a result of urbanisation and a growing middle class seeking quicker, more convenient food sources.

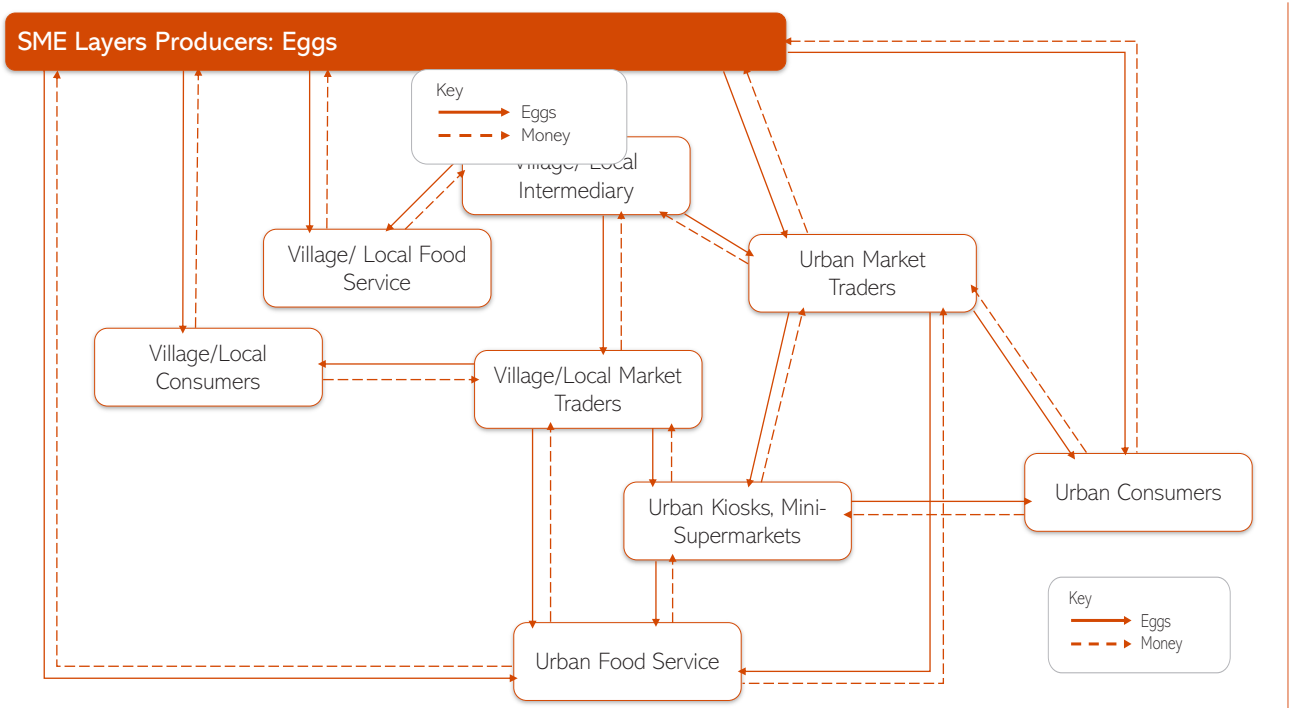



**Figure 5:** Marketing and distribution channels - eggs

However, it remains a small share of the total poultry market (28%) and is primarily dominated by large commercial vertically integrated farms. SME producers refrained from entering supply contracts with large buyers (supermarket and food services) and therefore prefer informal markets due to limited ability to supply consistently throughout the year and credit policy of large buyers. For instance, catering service providers for large mining companies usually pay 90 days after delivery. Supermarkets pay after 30-60days. This payment method is not tailored to SME producers' business model because they require payments to restock. Although large supermarkets and QSRs procure mainly processed broilers from large farms; there is a gradual procurement of processed indigenous and hybrid chickens from SME producers that fetch prices higher than those for broilers responding to consumer preferences. The market for indigenous and hybrid chickens comprises the affluent middle class which prefers indigenous birds for health and taste reasons, but it is a relatively small segment. Supermarkets and restaurants work with traders who attempt to maintain a steady supply; fragmented indigenous chicken producers would complicate this arrangement.

**Eggs:** The marketing and distribution channels for eggs in Tanzania are as fragmented and chaotic as those of live poultry and processed poultry meat from SME producers as visualised in **Figure 5** (above). Due to their considerable long shelf life and modest storage costs, eggs in Tanzania could change hands a few times before reaching the final consumer. Eggs are bulky and fragile and thus local intermediaries and traders are specialised in bulking and transporting eggs from farms to urban intermediaries, traders, and retailers.

*Continued on page 16*

## *Cost price and margins for poultry meat:*

• It costs about TZS 5,000 (€2.00) and TZS 7,000 (€2.80) to produce 1 bird of Broiler and Kuroiler/Sasso respectively.

• Kuroiler and Sasso (Figure 6, top right) is high margin low volume product because most retailers do not buy them in bulk. Broiler is low margin high volume product (Figure 7, middle right) when compared with Kuroiler and Sasso. Profit margin for the farmer ranges from TZS 370 – 870 (5 – 12%) per bird (€0,15-0,35). Production cost driver remain to be feed i.e. TZS 3,000 – 4,000 (25% – 33.3%) per bird (€1,20 – 1,60). FCR for Kuroiler and Sasso is much higher than broiler because they are fed for 8 – 12 weeks whereas Broiler takes between 4.5 to 6 weeks to mature. Retailing Kuroiler/Sasso gives retailer higher gross profit margins up to 33% in the best-case scenarios whereas in Broiler the gross profit doesn't exceed 20% if the retailer access lucrative markets.

## *Cost price and margins for eggs:*

• It costs about TZS 187 to produce 1 egg (Figure 8, below right).

• The profit margin for farmers ranges from TZS 29 – 46 (11 – 17%) per egg (€0,01-0,02) when selling to egg traders depending on market forces and bargaining power.

• Although eggs can change hands few times before reaching consumer; margins are very low (low value high volume product) i.e. The maximum margin available for aggregators and traders is TZS 51/egg (€0,02/egg)

• Retail price in major cities in Tanzania doesn't fluctuate much as it ranges between TZS7,500 – 8,000/tray (€3,00-3,20/tray) i.e. TZS 250 – 267/egg (€0,10-0,11/egg). *See visualization in Figure 5, page 14.*

## *Marketing dynamics of indigenous chicken:*

• It is difficult to quantify cost price of producing indigenous chicken because of extensive scavenging production system.

• Village intermediaries and traders who buy live indigenous chicken directly from farmers could make significant high margins depending on how desperate the farmer is.

• Retailing of live indigenous chicken gives urban retailer gross profit margins up to 33% (similar to Kuroiler/Sasso – Figure 6, top right) when accessing lucrative markets.

• Although live indigenous chicken can change hands a few times before reaching consumer; the maximum margin available for urban aggregators and traders is TZS 4,000/bird (€1.60/bird).

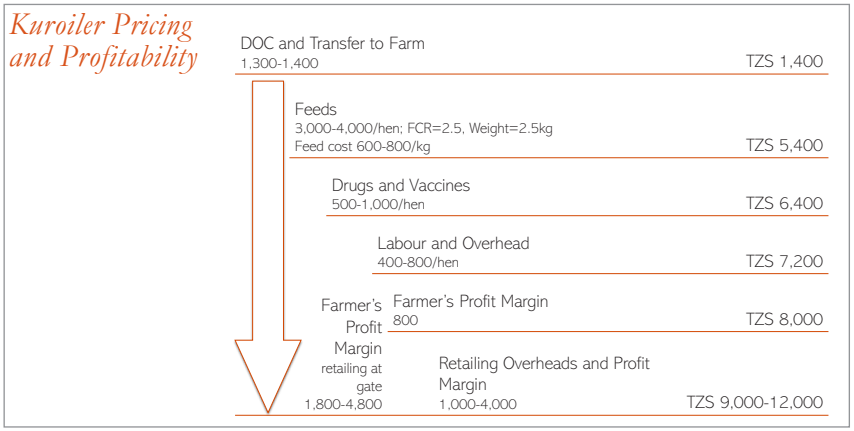



**Figure 6:** Pricing and profitability analysis Kuroiler 500 – 1,000 batch (8-12 weeks)

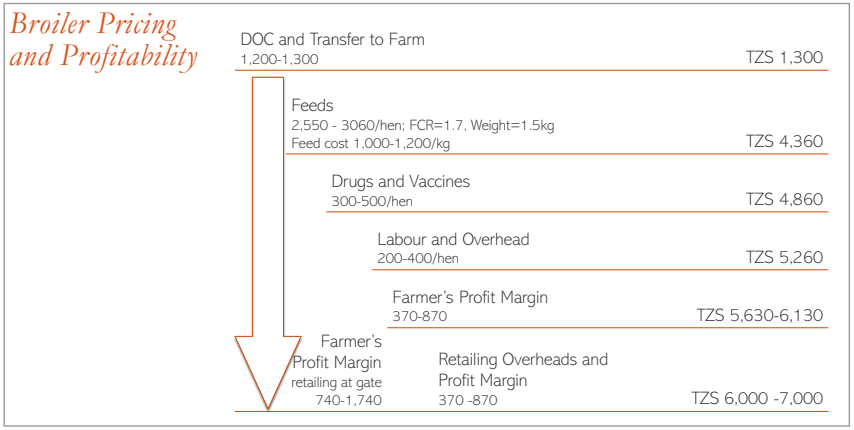



**Figure 7:** Pricing and profitability analysis: Broiler 500 – 1,000 batch (4.5 – 6 weeks)

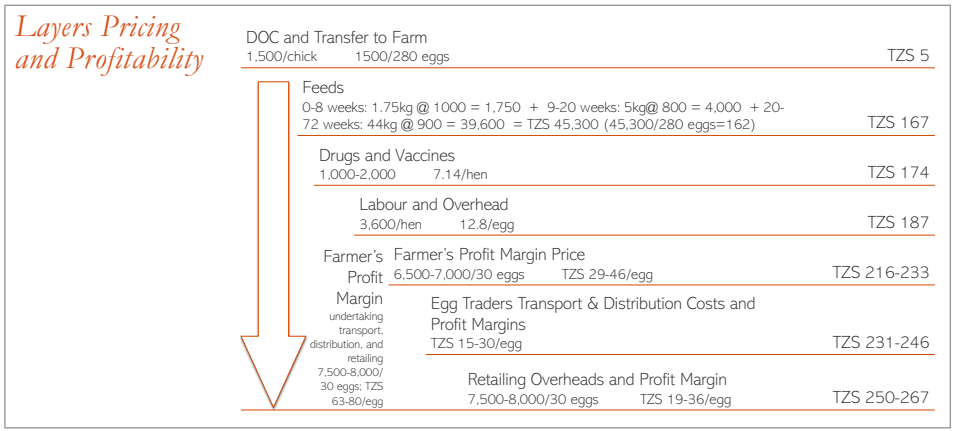



**Figure 8:** Pricing and profitability analysis Layers 500 – 1,000 batch (72 weeks, 280 eggs/bird)

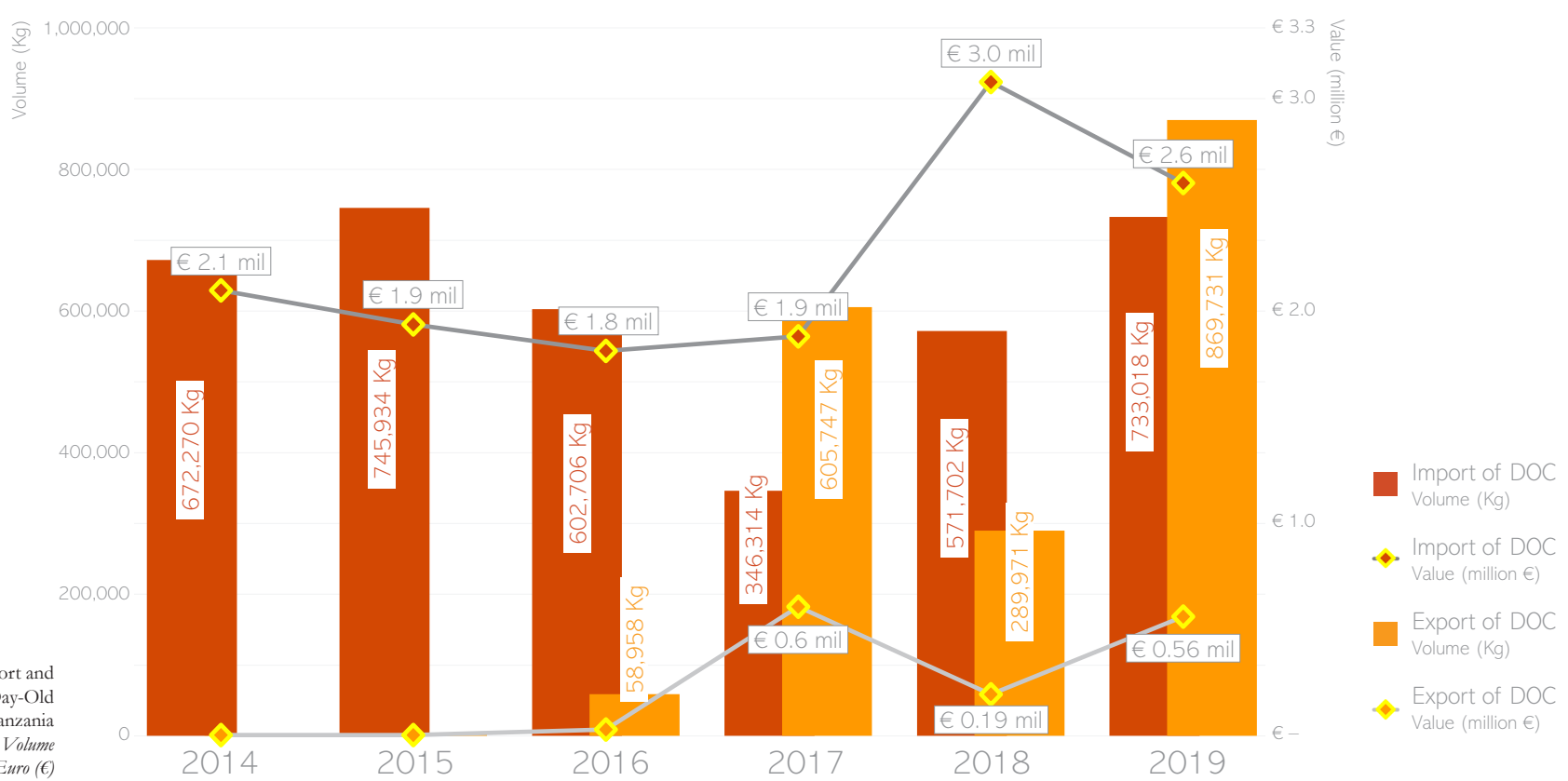



**Figure 9:** Import and Export of Day-Old Chicks from Tanzania (2014-2019) *Volume (Kg) and Value (Euro (€)*

The logistical challenges and limitations: Most Tanzania-based commercial farmers do not have cold-chain infrastructure from farm to market including export gate and thus most of them compromise significantly on quality and are thus unable to access more sophisticated and export markets. Mainly large companies have own or access to third-party logistics' (3PL) cold-chain infrastructure due to the high investment cost required. At present, multinational firms in the transport sector offer the bulk of third-party logistics (3PL) services in Tanzania. This is an organization's use of a third-party business to outsource elements of its distribution services. 3PL is still a new concept in Tanzania, which has not been fully embraced by the national and Foreign Direct Investment 3PL firms.

Access to various types of market in Tanzania differs by producer type; for large commercial producers that dominate the formal refrigerated/frozen markets; the 3PL is very important whereas, SME producers continue to compete for the much larger informal/live market. While the live market caters reasonably well to backyard and small-scale farmers selling a small number of indigenous and hybrid birds, developing a strong market opportunity for SME commercial farmers with robust 3PL is much more challenging

## 2.4 Imports & export trends

### 2.4.1 Import and export trends and emerging opportunities for import substitution

Since the outbreak of Avian Influenza (AI) in the mid-2000s, importation of poultry and its products into Tanzania has been banned. However, fertilized eggs and day-old chicks for parent stock have continued to be imported (FAO, 2019).

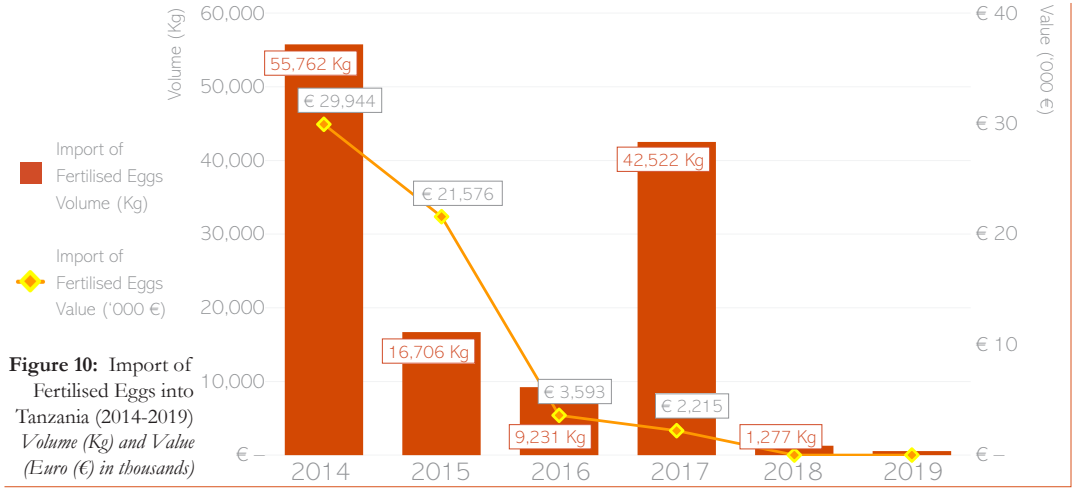



**Figure 10:** Import of Fertilised Eggs into Tanzania (2014-2019) *Volume (Kg) and Value (Euro (€) in thousands)*

Data from Tanzania Revenue Authority (TRA) shows that from 2014 to 2019, exports of day-old chicks (DOC) have grown from negligible volumes in 2014 reaching over 850,000 Kg in 2019. In terms of the value, this grew from TZS 2,412,672 (about € 965) to TZS 1,390,891,645 (about € 556,000). However, the highest export values were realized in 2017, reaching a value of TZS 1,504,319,604 (about € 601,728) as depicted in **Figure 9** (facing page). It is likely that the ban on import of DOCs has had a positive effect on this by attracting investments in the poultry-breeding sector, hence increasing the number of DOCs locally produced. There has been an upsurge in breeding farms establishment for both broilers and Sasso/Kuroiler/Tanbro to ensure adequate supplies of DOCs. This explains why Tanzania is now a net exporter of DOCs in the region.

Data from TRA also shows that imports of DOCs have remained steady from 2014 – 2019 ranging from 350,000 to 750,000 Kg and valued at TZS 4,500,000,000 (about € 1.8 mil) to TZS 6,450,000 (about € 2.58 mil) as illustrated in **Figure 9** (facing page).

A major part of these imports may be parent stock DOCs being imported by both the old established farms for replenishment and newly established breeding farms. This is depicted in the decline of imports up to 2017, followed by progressive increases in the following years.

The import of (fertilised) eggs declined gradually from 2014 (55,000 Kg) to 2016 (less than 10,000 Kg), rising again in 2017 (42,522 Kg), since then volumes have decreased to negligible levels. Hence, the value of imported eggs has declined steadily from TZS 75,000,000 (about € 30,000) in 2014 to negligible values in 2019 as depicted in **Figure 10** (left).

This trend can again be explained by the ban on imports of all poultry products in 2015/16 leading to a shortage of DOCs, necessitating the government to allow specific imports of fertilized eggs in 2017 while encouraging investments in local production. The shortage of DOCs gave room to the entry of Sasso, Kuroiler and Tanbro into the Tanzanian market that started with importation of fertilized eggs as parent stock.

### 2.4.2 Influence of the import and export of poultry products on the local market

There is an import ban on poultry and poultry products into Tanzania because of avian influenza (IA); however, importation of breeding stock (fertilised eggs and DOCs) is allowed. Between 2014 and 2019 Tanzania imported over 1,133MT of DOCs from Kenya accounting for 31% of all imported DOCs in that period. Other imported DOCs to Tanzania in the same period include 1,079MT from Netherlands (29% of all imports in that period), 607MT from Malawi (17% of all imports in that period) and 362MT from France (10% of all imports in that period). While imports from Kenya, Netherlands and Malawi were mainly for broiler and layer hybrids, importation from France was mainly Sasso cross-bred and importation from India and Uganda (1.34MT) was mainly Kuroiler cross-bred.

Tanzania will continue to import parent stock for now because there is no company registered in Tanzania that is licensed and contracted to produce parent stock. Contracted companies are in Kenya and Uganda and these will increase intensity of competition in the production and marketing of parent stock business in Tanzania.

Tanzania is a net exporter of DOCs with main destination markets

being Kenya (96%) and Comoros (3%). The explanation of Kenya taking most of exported DOCs from Tanzania is that most DOCs entering Kenya from Tanzania could be re-exported to other countries. This is because Kenya Airways has a robust hub at Jomo Kenyatta International Airport (JKIA) in Nairobi.

Although it is not well captured in TRA data, the World Poultry Foundation is supporting a project to support 1 million rural households in Tanzania and Nigeria to improve poultry production using adapted improved chickens and through this initiative, Silverlands Company in Iringa Tanzania is exporting Sasso DOCs to Nigeria. This consignment could be exported through Nairobi. Insignificant number of DOCs is also exported to Rwanda, Burundi, Malawi, Republic of South Korea, Turkey and DRC. This is an indication that there is a growing potential of the regional market; however, Tanzania needs to reinforce its infrastructure to facilitate this export.

## 2.5 Regulatory and enabling environment

There have been numerous government policy and regulatory interventions to support and regulate the livestock sector in Tanzania. These initiatives were intended to make the livestock sector to grow and become competitive. The National Livestock Policy of 2006 is so far the main policy document that guides the development of the livestock industry in Tanzania. The instruments that support implementation of this policy in the context of poultry industry come from the Livestock Sector Development Strategy of 2010, the Livestock Sector Development Programme of 2011, and various regulatory frameworks with respect to: Veterinary Act, 2003, Animal Diseases Act, the Meat Industry Act, Animal Welfare Act, Livestock Identification, Registration and Traceability Act, and the Grazing-lands and Animal Feed Resources Act (EKN, 2018).

The Meat Industry Act No. 10 of 2006 established the Tanzania Meat Board (TMB) that became effective in 2008. The Tanzania Meat Board carries a vision of "An effective and competitive Meat Industry subsector in the market by the year 2025." TMB is mandated to provide the institutional framework for the Tanzanian meat sector by spearheading the restructuring of the meat industry, establishing a proper basis for its efficient management, to ensure provision of high-quality meat products and for related matters. The Board is working in close collaboration with industry stakeholders including livestock producers, traders, processors, quality control institutions, regulatory organs, consumers and service providers to reorganize the industry for efficient and effective production of high-quality meat products. As part of making more concrete steps to enhance the growth and competitiveness of the poultry industry the Ministry of Livestock and Fisheries (MLF) has developed a three-year poultry subsector development plan (2018-2021).

*Recent tax and fees changes, exemptions, and reductions for poultry sector in 2020*

- Import duty for fertilized eggs for incubation removed
- Export permit for transportation of table eggs reduced from TZS 1,000 to TZS 100 per tray (from €0,40 to €0,04/tray)
- Import permit for table eggs increased from TZS 2,500 to TZS 5,000 per tray (from €1,00 to €2,00/tray)
- Export and import permits for animal feed reduced from TZS 20,000 to TZS 10,000 per ton (from €8 to €4/ton)
- Reduction of the outdoor advertising fee from TZS 10,000 to TZS 4,000 on motor vehicles promoting own products (from €4 to €1,60)
- Exemption of VAT on agricultural crop insurance

*MLF, 2020*

*Policy instruments for specific major regulations for sales of poultry and poultry products*

**Registration of Meat Traders:**
The Meat Industry Act No. 10 of 2006: SME producers and retailers are not well regulated. TMBs require them to register but most of them are not aware and thus not registered. TMB has also not been able to have in place enforcement mechanisms to enforce compliance.

**Registration of Abattoirs and Slaughterhouses:**
Section 18 (1) of the TFDA Act No. 1 of 2003 and Regulations 5 (1) of Animal Disease (Ante and Post Mortem inspection) require all slaughter facilities to be registered before commencing of their operations.

**Import Procedures:**
Tanzania still imports fertilised eggs and day-old chicks (DOCs) especially for parent stock. Import procedures have to be followed to clear goods from customs control as per the East Africa Community Customs Management Act (EACCMA) 2004. Imports to Tanzania are subjected to different stages whereby the importer is advised to make declaration through his appointed CFA by lodging documents at least seven days before arrival of the vessel.

**Importation procedures:**
- The importer is required to appoint a licensed CFA to clear goods.
- Documentation process is done online through Tanzania Customs Integrated System (TANCIS) and can be completed before arrival of the goods; and
- Customs agents/importers are urged to complete a declaration and self-assessment through TANCIS and attach other relevant import/ supporting documents at least 7 days prior to the arrival of the goods.

**Import documents include:**
(a) Final invoice; (b) Agent's Authorization Letter from the importer; (c) Import permits from TBS etc.; (d) Exemption documents if applicable; (e) Packing list; and (f) Transport documents i.e. Bill of Lading/Airway Bill/Road Consignment Note

*Note: TRA rejects illegible, incomplete, or insufficient descriptions through Integrated Query System (IQS) that is available in TANCIS. Additional information available at TBS website.*

## Key Messages from Chapter 2

The demand and consumption of poultry meat and products in Tanzania will grow steadily in line with population growth and the rise of the middle class.

If Tanzania per capita consumption of poultry meat will double to 3.66 kg by 2050 and eggs per capita consumption from 106 to 212; whence Tanzania will need to produce 553 million chickens (80% exotic) and 27.35 billion eggs and animal feed demand is projected to increase from 1.5 million MT in 2020 to over 18 million MT by 2050.There is import ban of poultry and poultry products in Tanzania except parent stock day-old chicks (DOC) or eggs.

Export of poultry and poultry products is being promoted through relaxation of taxes and fees while importation is restricted through the number of tariff measures.

The poultry subsector trade is unstructured and fragmented; however, large commercial producers with integrated supply chain are more organized and mostly retailed through supermarkets and specialized outlets

The processing and cold chain in the poultry subsector is also underdeveloped and all large investors in poultry farms own their in-house processing facilities.

Great variations of poultry products throughout the year are mostly related to supply and demand as affected by several factors.

Most animal feed millers operate under capacity due to the reasons above.

Marketing channels and chains differ greatly depending on the type of chicken with broiler marketing entering the formal market.

# Chapter 3 Consumer Preferences & Behaviour

## 3.1 Poultry products (meat & eggs) available on the Tanzanian market

Poultry and poultry products are sold through retail outlets including wet markets, kiosks, corner shops, mini supermarkets and supermarkets. Moreover, some small-scale producers sell their products at the farm-gate as visualised in **Figure 12** (page 23).

**Poultry meat and products:**
*Live and freshly slaughtered*: majority of households' consumers prefer buying live chicken and most of them prefer indigenous chicken including Kuroiler and Sasso.
*Chilled and frozen*: most buyers of chilled and frozen whole chicken buy their products from shops and supermarkets where there are refrigeration facilities. In this market segment there are some who prefer indigenous chicken but the majority still buy broiler. Progressively we see chilled and frozen broiler retailed also through the meat butchers.
*Processed*: poultry processed products chilled and frozen including dressed chicken, dressed cut up; prime cuts; pieces; eggs, sausage and chicken fillets are mostly produced by large-scale poultry producers and are mainly sold through mini supermarkets, large supermarket chains and food service industry especially quick-service restaurants (QSR) and most buyers from this category are middle class and affluent people. In the past each cut was supposed to get a separate certification from Tanzania Bureau of Standards (TBS), which was costly and time consuming. This was a serious hindrance to those processing poultry meat. Fortunately, TBS has relaxed that requirement through request from MLF. This move has encouraged processing thereby encouraging consumers with different income brackets to access differently priced parts.

**Eggs**:
In rural areas eggs are sold mainly at farm-gate and local markets, whereas in urban areas, majority of the eggs are sold in shops from very small kiosks to large supermarkets. This is mainly due to its long shelf life and insignificant storage cost (do not necessary require refrigeration facilities). In addition, the number of fast-food businesses purchases eggs in bulk directly from farms or traders. Due to the fact that in Tanzania poultry farmers are mostly small and fragmented, the role of egg traders is critical in the bulking and distribution of eggs to the retail outlets and wholesale consumers (food service).

## 3.2 Consumer preferences and behaviour: poultry meat and eggs

Poultry meat: During this study it was established that the majority of consumers in Tanzania are price sensitive and only middle income and affluent consumers could afford to buy poultry meat and products regularly. During this study most of respondents were met and interviewed in the vicinity of poultry market outlets or QSR and it's likely the majority of the people interviewed (97%) could afford poultry and poultry products as shown in **Figure 13** (page 23). As this study was not a household survey, it is likely the number of respondents from the low-income bracket were not the majority (34.6%) as 3.6% were affluent and 61.8% were middle class.

This study didn't interview consumers in rural areas; however, it's widely established that poultry meat is less consumed in rural areas because poultry (indigenous chicken) is a source of quick cash in an emergency need e.g. a sick child, buying non-farm food items e.g. sugar, cooking oil, and sundries e.g. soap, detergents etc., so majority of rural population only consume poultry and poultry products during festive seasons and it's thus perceived as a delicacy (FAO, 2014).

Eggs are consumed well in both urban and rural areas because it's cheaper to store eggs for few days without refrigeration facilities whereas there are significantly larger consumption disparities between urban and rural areas. Majority of respondents (43%) consume an average of one egg per week, while 32% consume 3 eggs per week as shown in **Figure 14** (facing page). The documented average per capita consumption is 106 eggs while recommendation by FAO is 300 eggs per annum. Thus, to meet the FAO recommendations, production must be tripled. Affordability is not a serious limiting factor for eggs because there is possibility to buy in small quantities that consumer can afford. Since eggs from indigenous chicken cannot meet this demand, eggs from exotic breeds will continue to play an important role in the supply chain.

### 3.3 Consumer preferences and behaviour: purchasing cold and frozen poultry and poultry products

Primary processing (slaughtering, scalding, plucking, evisceration, offal processing, processing of legs and necks and cooling) provides the whole fresh chicken for commercialisation; however, most Tanzanian consumers prefer their chicken sold as a whole and slaughtered at the time of sale or acquired alive and slaughtered at home (**Figure 12**, facing page). Emerging changes in demographics and consumer lifestyles in urban areas have influenced the ways that poultry products are currently processed and marketed.

Affluent and middle-class consumers value their time and prefer to spend less of it in preparing poultry meat. The emerging sophisticated consumers (home and food service) eating habits are shifting to fast food for middle class and fine dining of high-

*Survey Findings*

**Poultry meat**

It is evident that price and income level are the major driving forces to the consumption of poultry products.

If production and productivity will be increased and cost of production reduced more people will consume poultry and poultry products.

68% of respondents were prepared to pay up to TZS 12,000 per Kg (€4,80/Kg) of indigenous chicken while for broilers 99% were prepared to pay up to TZS 8,000 per kg (€3,20/Kg).

57% (majority) expected the price of indigenous chicken to range between TZS 8,000 – 12,000 (€3,20 - €4,80/Kg) while 58% expected the price of broiler to range from TZS 4,000 – 6,000 per kg (€1,60 - €2,40/Kg).

70% of respondents are aware of Kuroiler and Sasso breeds; 71% indicated their preference for these breeds to broilers.

Affluent people eat poultry meat or poultry products (sausages) at least once per day: middle class people afford at least once per week; whereas, low income population eat poultry meat at least once per month.

**Eggs**

39% of interviewed consumers indicated that they source their eggs and meat from indigenous chickens, an equal percentage indicated their source to be exotic chicken while 22% indicated to source from both.

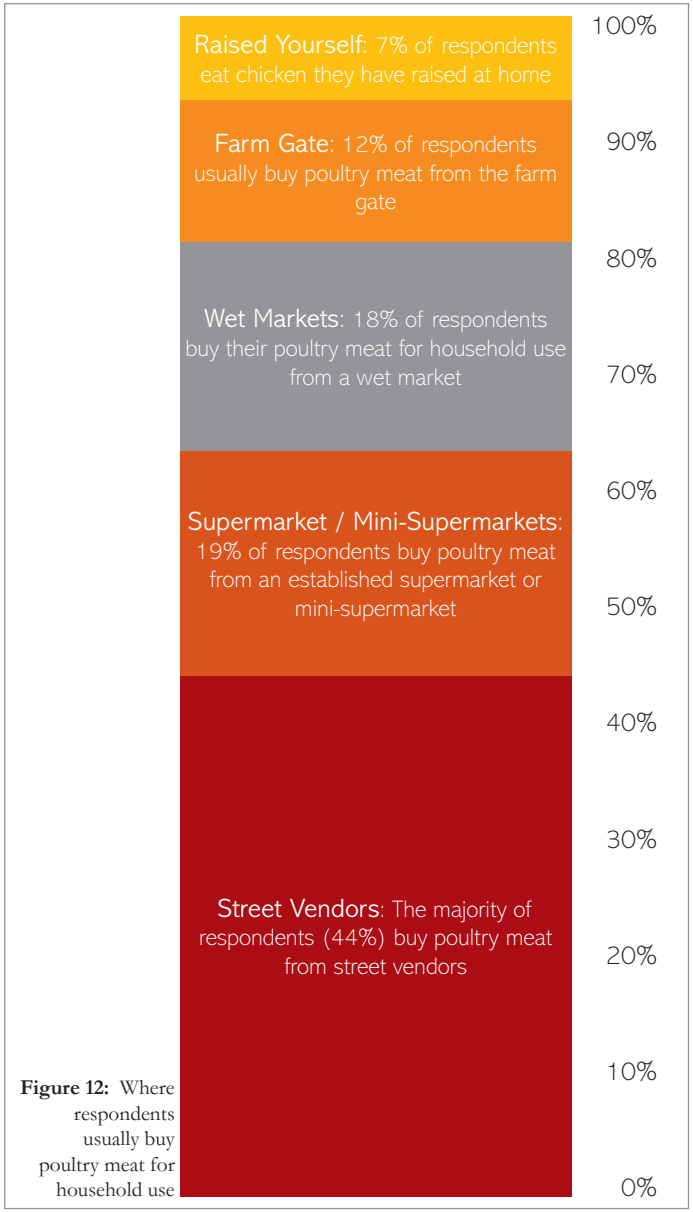



**Figure 12:** Where respondents usually buy poultry meat for household use

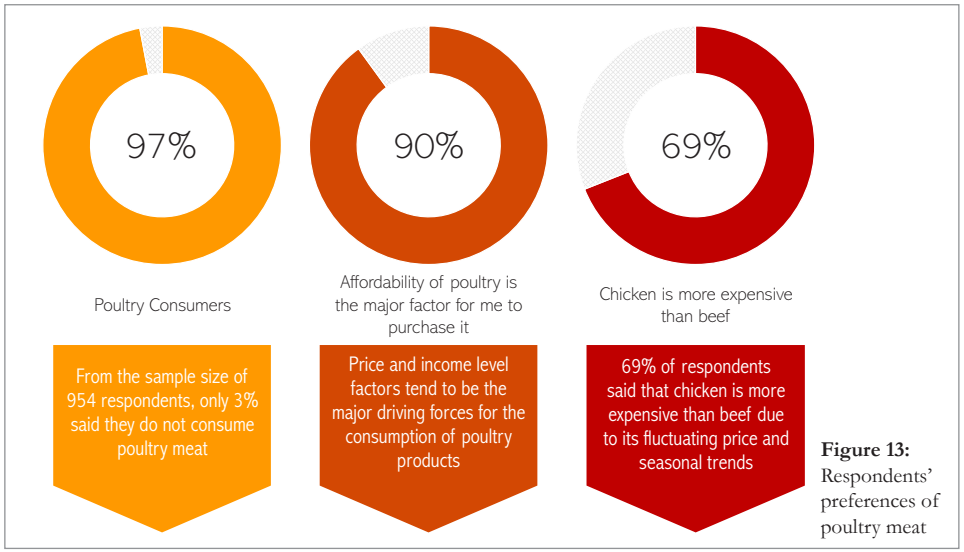



**Figure 13:** Respondents' preferences of poultry meat

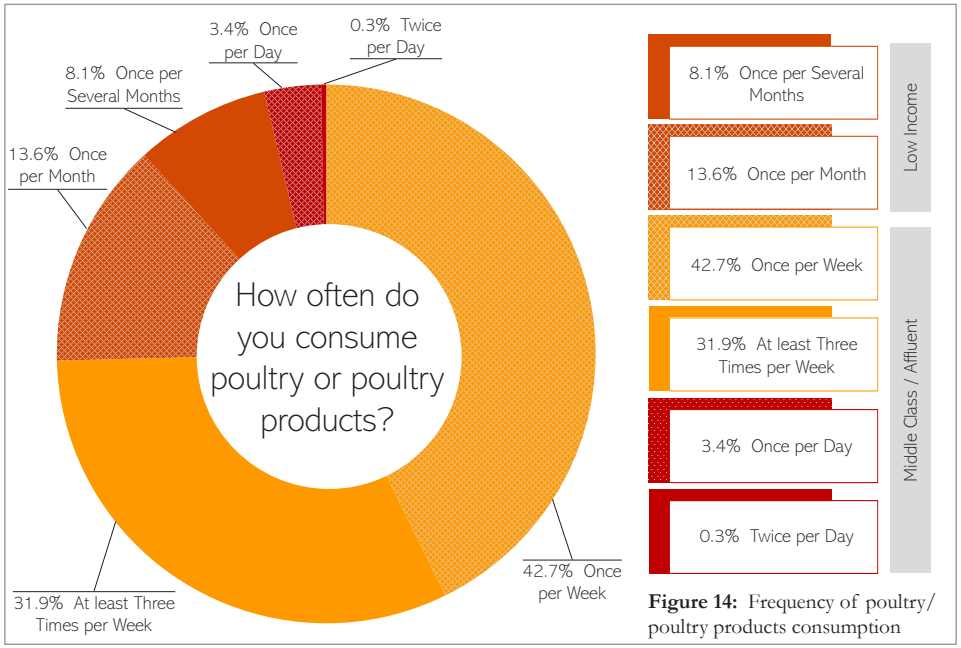



**Figure 14:** Frequency of poultry/ poultry products consumption

end-restaurants in Tanzania. Secondary processing (cuts, sausages, etc.) adds value by changing the product's form but adequate and suitable cold storage is important in order to find time to market the products.

Chilling and/or freezing can prolong shelf life and maintain quality to allow marketing, distribution and retailing of poultry and its products. Furthermore, due to the fact that most farmers are fragmented in Tanzania, slaughtering, dressing, and bulking could take a long time and therefore chilling and freezing could provide sufficient time to bring the products closer to the consumers and essentially increase consumption of poultry products. The demand for such processed products is likely going to increase over time.

High preference for the consumption of freshly slaughtered chicken in Tanzania is not only cultural but also has to do with the lack of robust cold chain infrastructure (means of refrigeration and preservation of the product); limited regulation of quality in refrigeration and limited promotion of branded frozen poultry and poultry products. Although during this study consumers said they do not prefer frozen chicken and poultry products; further probing revealed that they could buy these frozen and chilled products if they are properly branded to ensure traceability, food quality and safety.

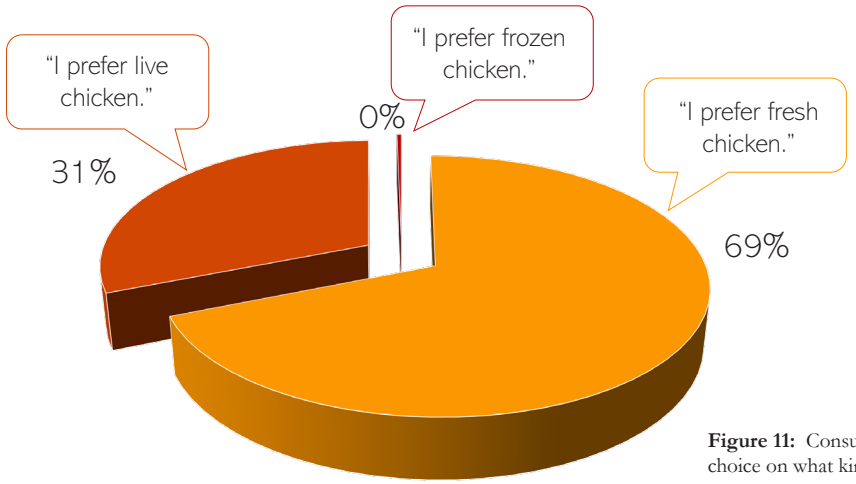



**Figure 11:** Consumers' choice on what kind of chicken they prefer to buy

**Key Messages from Chapter 3**

Price and income level are the major driving forces to the consumption of poultry meat and poultry products; this implies if production cost will go down, consumption will go up.

Poultry meat is less consumed in rural areas because poultry (indigenous chicken) is a source of quick cash for emergency need so majority of rural population only consume poultry and poultry products during festive seasons and it's thus perceived as a delicacy.

Affordability is not a serious limiting factor for eggs because there is possibility to buy in small quantities that consumer can afford. Eggs provide one of the cheapest menus in urban areas (chips and eggs), quite a nutritious diet. Nevertheless, majority of Tanzanians consume 1-3 eggs per week (average per capita consumption is 106 eggs) while recommendation by FAO is 300 eggs. Thus, to meet the FAO recommendations, production must be tripled. Since eggs from indigenous chicken cannot meet this demand, eggs from exotic breeds will continue to play an important role in the supply chain.

High preference for the consumption of freshly slaughtered chicken in Tanzania is not only cultural but also has to do with the lack of robust cold chain infrastructure, promotion and branding of chilled and frozen poultry products.

Thus, a marketing campaign is necessary to promote frozen products as cold chain facilities are introduced.

# Chapter 4 Promoting Consumption of Poultry & Poultry Products

## 4.1 Possible options for promotion and branding poultry/poultry products

In addition to the traditional influences of price, taste and convenience to poultry and poultry products, new factors are now considered by consumers, especially by middle class and affluent consumers. These Tanzanian affluent consumers now want authenticity as it relates to food composition, ingredients and health (food quality and safety) and therefore, the importance of branding poultry and poultry products on the basis of health (food quality and safety) cannot be emphasised enough because traceability especially in the freshly slaughtered, chilled, frozen processed poultry and poultry products is vital for consumer protection. Through branding and labelling, consumers will be more aware of what they are buying and in case of quality or safety problems the source of the poultry and poultry products could be traced. There is no clear strategy to brand live chicken because there will be challenges related to traceability, logo and absence of packaging; however, as public slaughter facilities are emerging across the country, there should be deliberate effort to explore ways of promoting and branding at the source.

There is immediate need of branding of processed, frozen poultry products and packaged chicken or eggs. For the time being, the branded shops (especially supermarkets and mini supermarkets) and dedicated poultry and poultry product's shops could be the entry point to start branding unbranded products, which will be replaced gradually by customized products, then packaged and branded products.

### 4.1.1 Nutrition as a vehicle for branding

In recent years, nutrition and health concerns have had an increasingly significant influence and supermarkets have begun to offer a wider variety of foods and food products that reflect changing consumer tastes and preferences. For poultry and poultry products it's practical also to consider and use nutrition as a vehicle for branding.

Eggs contain several vitamins (A, B12, D, E and K) and minerals (Sodium, Calcium, Iron, Magnesium, Phosphorus, Potassium and Zinc) that are essential parts of a healthy diet. In many parts of the world, eggs are a readily available, inexpensive food. It has been proven beyond reasonable doubt that cholesterol as an essential requirement in the human body, eggs provide a safe source of cholesterol.

### 4.1.2 Social marketing promoting behaviour change

Social marketing strategies are designed to promote specific behaviour changes to attract and retain loyal and satisfied customers, raising brand awareness, building loyalty and advocacy, soliciting feedback and eventually increasing consumption and sales. Unlike commercial marketing that focuses on selling goods or services for profit, social marketing promotes voluntary behaviour that benefits society by addressing specific problems. The relevance of social marketing to public health and nutrition is well-recognized, particularly with respect to promotion and branding of food products based on nutritional qualities. There is a need to initiate a campaign to promote chicken as the most versatile meat in Tanzania.

**Eggs**: For promotion of egg consumption PAT conducts an EGG WEEK/DAY every year to coincide with the annual Poultry Expo. Eggs are contributed by poultry stakeholders and distributed to several schools. The motto is "An egg per child every day". This is continuously promoted by the Tanzania Layer Farmers Association (TALFA) and is expected to create impact on egg consumption. Introduction of eggs in complementary feeding diets of infants elsewhere (in Somalia and Ecuador) resulted in high compliance, low attrition, and infant feeding policy change. Use of social marketing techniques, like those in this initiative, could be key for scaling up this food-based intervention or others like it in Tanzania and beyond.

**Poultry meat and products:** In Tanzania, there is no legislation governing labelling of poultry and poultry products. This makes unlabelled and unbranded chilled, frozen and processed poultry products less attractive to the majority of prospective consumers. It is widely understood that the consumption of broilers and its products exposed to "antibiotics" and "hormones" is responsible for a variety of side-effects related to antibiotics resistance. In Tanzania, the Tanzania Broiler Farmers Association (TABROFA) under PAT is promoting healthy production and consumption of broilers.

### 4.1.3 Organic poultry and poultry products

Currently in developed countries, several operations are using welfare implications to target niche consumer markets that are willing to pay premium prices for poultry produced under ethical and ecologically friendly conditions. Natural poultry or organic poultry products are currently leading the trend of alternative poultry markets. Market indicators in developed countries show continuous growth in these niche markets. Most conditions for these natural or organic products required at the production level during grow-out are commonly based on types of diets and growing conditions. Organic poultry must be fed under a controlled diet composed of organic-only ingredients, which are produced without supplements, chemicals, or pesticides. In Tanzania consumers of indigenous chicken consider them organic and not much effort is done on raising commercial layers and broilers organically.

In an attempt to get better performing chicken than the indigenous chicken, dual-purpose breeds focusing on locally adaptable genetic material with higher productivity than the indigenous poultry are produced (Sasso from France, Kuroiler from India and Tanbro bred locally by Interchick). These can be raised semi-intensively with good feed supplements. There is potential in the future for such breeds to be used for organic poultry production when the market for such products develops.

## 4.2 Possible options for circular farming for sustainability and efficiency in poultry farming

Tanzania poultry production has not reached the industrial scale seen in developing countries. Classical poultry farms like Kipster Farm[6] that practice circular farming principles in the Netherlands are yet to come to Tanzania; however, producers should consider transitioning to circular agriculture and increasing sustainability, integrating sustainable and low-emission animal accommodation and rearing systems with emphasis on circular farming principles of reuse, recycle and reduce (3R). One area of circular farming for poultry is recycling or reuse of poultry by-products such as feathers - Treated poultry feather waste (TPFW) are often processed into valuable products such as feather meal and fertilisers, eggshells (may be processed to provide calcium and phosphorus to animals including human beings) and manure (if properly handled, is the most valuable of all manures produced by livestock).

When a family raises chickens, they have a ready supply of brown gold from composted or aged manure to benefit their garden and landscape plants. Uisso and Bakengesha (2015) reported Tanzania to rank second in organic farming in Africa after Uganda, with Morogoro region dominating the industry accounting for 52% of the industry, distantly followed by Tanga at 11%, Pwani region at 9%, and Kilimanjaro at 7%. There are several exemplary farms, which practise ecologically organic agriculture by integrating livestock with crops and use of animal manures for providing healthy food and preserving the environment, improving soil structure and soil fertility. By products: usage of by products from poultry processing as source of protein of animal feed is a common practise in mature market; however, in Tanzania as the poultry subsector is still small more research is required to explore this potential.

6 https://www.kipster.farm

## 4.3 Recommended good practices on effective marketing strategies to penetrate the Tanzanian market

Current marketing practice: A majority of poultry producers in Tanzania are small and medium enterprises (SMEs). With the exception of large farms, for most SME producers the marketing system remains highly fragmented in traditional and heterogeneous condition (number of intermediaries is high). As a result, SME producers are not getting remunerative price and the consumers are not receiving the most competitive price per unit product.

### *Innovative marketing practices*

**Branding followed by digital advertising**

The revolution of technology has changed the way people interact and therefore advertising also has undergone a significant shift. Digital advertising is a modern trend and has been proved to be an effective technique in influencing customer behaviour. The effectiveness of digital advertising has been approved throughout several successful campaigns, leading to huge brand awareness and revenue of sales. Using digital advertising in such a proper way can bring more benefits to organizations, compare to traditional techniques.

**SME commercial producers to join local butchery's cold chains**

Supply chain management should be improved so that where possible the poultry farmers can supply directly to the retail outlets and cut out the intermediaries and increase profit and reduce selling price. There is an emerging trend of SME commercial producers selling their freshly slaughtered poultry to butcheries as these are meat specialists and have refrigeration facilities and are widely distributed in the urban centres.

**Large farms versus SME commercial poultry producers**

Large farms are competing head to head with fragmented SME commercial poultry producers who have invested less in the cold chain logistics infrastructure and distribute unbranded poultry and poultry products at comparative prices. Large farms need to strengthen their efficiencies in production and distribution and ensure their prices remain competitive. This could include entering into contracts with competent 3PL providers and targeting large supermarket chains and institutional buyers.

### *Reasons for Ineffective Marketing Strategies and Uncompetitive Prices in Tanzania*

a) Producers are struggling to establish a marketing system in unstructured trade;
b) Some large farms are located far from critical mass of urban and institutional consumers;
c) Most SME poultry producers are too small as regards output-absence of economies of scale-and do not have established efficient supply chain to bring products to consumers promptly and consistently;
d) Most consumers are not habituated to unbranded processed poultry and poultry products, mistrust on dressed birds or slaughtering method (Halal or not) and food safety (diseased or dead bird);
e) Live chicken marketing is popular in Tanzania, because of consumer preferences (taste, firmness, pigmentation and leanness), but has limited and fragmented logistics infrastructure.

### Key Messages from Chapter 4

The importance of branding poultry and poultry products on the basis of health (food quality and safety) cannot be overemphasised because traceability especially in the freshly slaughtered and processed poultry and poultry products is vital for consumer protection.

For poultry and poultry products it's practical also to consider and use nutrition as a vehicle for branding and promotion through social marketing.

Large farms are competing head to head with fragmented SME commercial poultry producers who have invested less in the cold chain logistics infrastructure and distribute unbranded poultry and poultry products at comparative prices. Large farms need to strengthen their efficiencies in production and distribution and ensure their prices remain competitive.

Circular farming has a role to play in the future with the coming of large-scale poultry farms Price and income level are the major driving forces to the consumption of poultry meat and poultry products; this implies if production cost will go down, consumption will go up.

# Chapter 5
# Recommendations

## 5.1 Recommendations for the government

The poultry subsector heralds immense potential for the Tanzania economy. The subsector also promotes inclusive growth given the observed gender parity in ownership and employment in the sector. Despite this potential, poultry has not received enough attention as an important subsector within the livestock sector and the private sector has not invested substantially in the production, processing and marketing and thus more joint effort by both government and private sector is still required.

A deliberate effort by the government to promote poultry production through offering incentives to the private sector would benefit the country and people in terms of economic activity, nutrition and employment. The government could think of the following incentives for the private sector to invest in this sector: Measures to boost competitiveness, promote local and export trade; and increase consumption of poultry and poultry products. Rationale: A joint study of the World Bank, FAO, AU-IBAR, ILRI and the then Tanzania Ministry of Agriculture, Livestock and Fisheries – MALF (Covarrubias et al., 2012) established that the major challenges of smallholder livestock producers include insignificant usage of purchased inputs; prevalence of diseases and parasites; limited access to extension and veterinary services and limited access to lucrative markets. Other major challenges include limited access to finance; shortage, seasonal unavailability and low nutritive value of feeds and lack and low adoption rate of improved technologies. Organisational related challenges include lack of organisation among producers; limited enforcement of regulations and policy. There is also limited organised marketing, processing and generally low productivity per producer (MMA, 2016).

### 5.1.1 Poultry Development Strategy

Development of a strategy for poultry development is seen as a good entry point towards promotion of production and consumption of quality and safe poultry and poultry products in Tanzania. This strategy should build on the government's ongoing initiatives i.e. Tanzania Livestock Modernization Initiatives (TLMI) 2015/2016 - 2020/2021 and the Ministry of Livestock and Fisheries' (MLF) three-year poultry subsector development plan (2018 – 2021). Other stakeholders need to join these efforts and develop an inclusive and robust strategy building pillars:

1. Credit and Insurance
2. Promotion of supply chains of poultry feed resources
3. Promotion of private sector processing facilities;
4. Promotion of contract farming; and
5. Promotion and strengthening of sector associations
6. Developing and implementing specific certificate and diploma courses at LITAs
7. Continue providing tax incentives aimed at encouraging production and promoting export as done in the 2020/21 Budget

### 5.1.2 More regulation of the poultry subsector

More regulation is required by MLF: Processed poultry products pose more risk to food quality and safety. While processed poultry and poultry products from large companies are regulated because they retail through structured markets, most of the live poultry and processed poultry products from small and medium enterprises are sold in an unregulated market, hence this remains a matter to be resolved by MLF.

### 5.1.3 Agricultural training institutions should train more youth and young mothers

Tanzania agricultural educational institutions (LITA, MATI, SUA, etc.) should include or strengthen courses on ICT innovations in their curricula. This is essential to nurture a generation of young agriculturalists fully prepared to take advantage of ICT innovations in their professional career after graduation. Campaigns in schools and colleges and mentorships (e.g. SUGECO model, business incubators, exchange programmes, etc.) could enhance giving technical, entrepreneurial, and business skills among youth. There should be a deliberate effort to strengthen ICT use in agriculture by public and private institutions through awareness creation and capacity building. This involves improving equipment in ways that enhance work environments and make them more conducive to innovations by youth in agricultural professions.

## 5.2 Recommendations for the private sector

Poultry supply chains targeting local market are generally not very long. The production base is in the vicinity of the market. What is lacking most of the time is coordination of critical services and logistics to bring poultry and poultry products to the market cost effectively. The private sector has an opportunity to pilot and demonstrate that SME commercial poultry farming is economically viable and could contribute to the development of poultry subsector in Tanzania.

### 5.2.1 Potential investment opportunities

There are several prospective areas for investments in Tanzania (EKN, 2018) which are narrated further in **Table 3** (below). EKN also has developed an investment guide that will further shed more light on these investment areas (EKN, 2020); however, these would require further in-depth feasibility and business plan

**Table 3:** Key areas for investment in the poultry subsector in Tanzania

| INVESTMENT AREA | DESCIPTION | PRIORITY |
|---|---|---|
| Animal Feed | Animal feed technologies (pelleting technologies, extrusion of soybeans, other efficient feed processing technologies)<br>Warehousing and grain silos management | HIGH |
| Breeder Farms | Breeding – crossbreed chicken<br>Building on the on-going R&D by ACGG<br>Producing parent and grandparent stock | MEDIUM |
| Hatchery Farms | Importing parent stock, grandparent stock, and at times fertilised eggs<br>Producing and distributing day-old chicks (DOCs) | MEDIUM |
| Integrated Poultry Farms<br>*including, hatchery, production & processing* | Importing parent stock, grandparent stock, and fertilised eggs<br>Producing and distribution of day-old chicks (DOCs)<br>Production of broilers and layers<br>Processing of poultry products<br>Distribution of poultry products | MEDIUM |
| Third-Party Logistics (3PL) Cold Chain | Cold transportation and storage along the poultry food chain<br>This may include a high care food grade processing facility<br>Transportation management and trucking software | HIGH |
| Processing Facility | High care slaughterhouse designated for poultry<br>This should include cold storage facility | HIGH |
| Supply of Poultry Equipment and Technologies | Farm infrastructure including automated feeding and innovative waste management<br>Animal feed processing technologies and equipment<br>Transportation and storing equipment | HIGH |

*Source: EKN (2018)*

development with potential investors.

### 5.2.2 Building capacity of Poultry Association of Tanzania (PAT)

Globally the poultry subsector has developed through global, regional, and national poultry associations. At the global level are the World Poultry Foundation (WPF) and World Poultry Science Association (WPSA). In Africa, the South African Poultry Association (SAPA) is the most advanced national association, which has been responsible for the great achievement of the poultry subsector in South Africa. SAPA is the organ of the poultry subsector and conducts major activities including overseeing compliance with regulations, training, research, and trading. SAPA was instrumental in establishing the SADC Poultry Forum, which meets annually by rotation. Tanzania is a member of SADCPF and PAT sends a delegation whenever resources allow.

Organisations under PAT will be able to support activities of the TMB and other relevant government organs at both national and local government levels. However, the existing organizations are few, fragmented and still at infant stage and need to be nursed by a strong PAT. Therefore, there is a need to have a strong PAT to play a more active role in organising the sector for compliance with regulations, enact new standards, develop a joint marketing framework, promote structured marketing of poultry products, and organize and support financing/credit mechanisms for the poultry value chain actors. Arusha Poultry Keepers Association (APOKA) that is a member of PAT, has been supporting members through business development services (BDS) such as writing loan proposals and organising annual poultry show at regional level. PAT organises poultry shows every year at national level.

For the purpose of reaching out to as many farmers as possible, PAT should engage with MLF and Impact Cluster Poultry and explore possibilities of working closely with the Livestock Training Agency (LITA) and other training providers to design and deliver tailor made training on poultry farming.

To build the capacity of PAT to be a self-sustaining organisation taking the lead in the development of the poultry subsector the following are recommended:

- Impact Cluster Poultry and MLF should explore mechanisms to give technical and financial support to PAT secretariat to meet salary of an executive officer for three years during which PAT will develop a Strategic Plan and respective Business Plan including designing, developing, and managing PAT income generating activities e.g. Poultry Show. Tanzania Horticultural Association (TAHA) has a lot to offer in terms of how PAT can engage members commercially (marketing infrastructure, logistics, financial/credit linkage)
- Support PAT for greater engagement with global, regional, and national poultry associations/forums.

## 5.3 Recommendations for Private-Public Partnership (PPP)

### 5.3.1 Build capacity of poultry extension workers including para-vets and CAHWs

Develop and include in the pilot business cases a good number of poultry extension workers including community animal health workers (CAHWs), paraprofessional vets (para-vets) and private sector veterinarians to enhance bird health (bio security), focus on increased adoption of the ND vaccine by SME poultry commercial farmers including developing the last-mile delivery of vaccines and medicines to farmers and convincing them that there is value in investing in their chickens' health. Working with Tanzania Veterinary Paraprofessionals Association (TAVEPA) could be explored.

### 5.3.2 Develop Demonstration Farms within a cluster of SME commercial poultry producers

Promoting expansion of SME commercial poultry farms in the country through network of demonstration farms including extension workers and existing training institute partners and support training providers (Kilacha, LITA) in the updating of poultry short course training materials tailored for SME commercial producers. In the demonstration farm package include training on technical aspects (animal science), fully developed and tested farmers' business school (FBS) and farmers' marketing school (FMS) training modules with an emphasis on practical

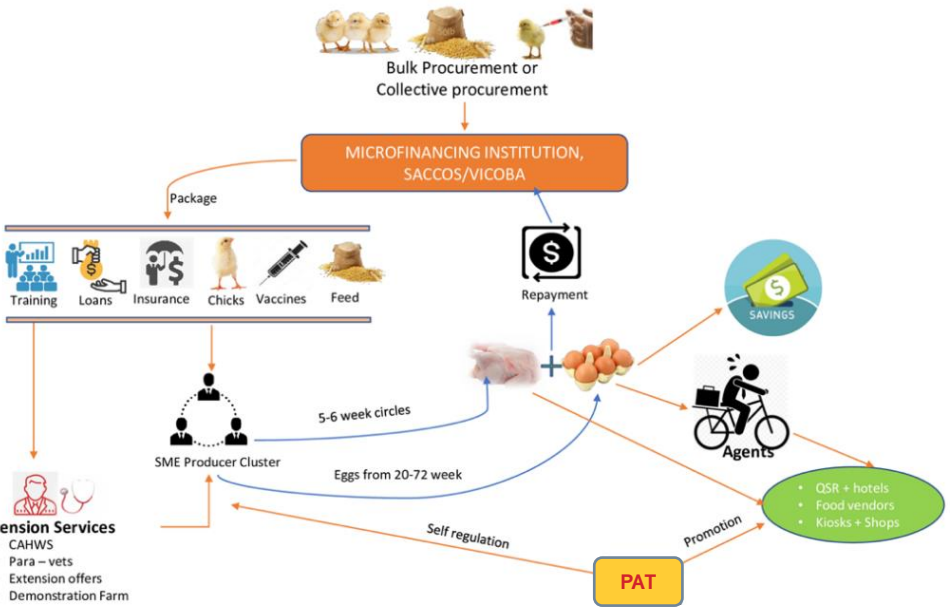



**Figure 15:** Model 1, Micro-financing (meat and eggs)

training methodologies. Additional modules on ICT modules to entice youth engagement in poultry value chain could be explored.

### 5.3.3 Take a lead in pilot of business models that will promote poultry value chain development

This study has established that there is a clear unmet demand for poultry and poultry products and a significant percentage of the population does not consume poultry and poultry products on a regular basis because it is expensive.

Based on study findings, the authors recommend two business models (micro-financing model and contract farming model) that could work around the demonstration farms. These models are elaborated here.

### Model 1: Micro-financing model (meat and eggs)

In this model, a micro-finance institution (MFI) include producers' own saving schemes (VICOBA, SACAs, SACCOS) procures inputs from a supplier and distributes them to members (SME commercial poultry producers) along with loans and insurance, training and extension services. SME commercial poultry producers thereafter produce and sell meat and eggs while repaying the loan (**Figure 15**, left).

The vast presence of micro-finance organizations and informal saving groups in Tanzania is a promising channel to leverage for increased egg production. Since MFIs would not have poultry farming expertise, Impact Cluster Poultry role would be to ensure engagement with a wide range of partnerships from private sector (veterinary and other extension services), input suppliers and one who coordinate activities along the value chain.

*Advantages of this model*

- SME commercial producer could start with small number of chicks, 200-500
- After new producers improve their skills, they can increase number of chicks per batch and even venture into production of eggs.
- After building experience and capital, could move into contract farming (Model 2)
- There are huge opportunities to promote structured trade throughout the supply chain

*Critical services*

- Access to finance (presence of micro financing mechanisms from MFIs and informal saving groups)
- Extension services (from para-vets and CAHWs)

• Market development through PAT and local associations

## Model 2: Contract Farming model (eggs)

In this business model, a hatchery sells layer DOCs, together with vaccines and feed to mother units under contract. Mother units (normally owned by progressive and commercial poultry farmers) take care of the chicks till they are 4 to 6 weeks old, thus ensuring they are past the high-mortality period and resilient when introduced to SME commercial producers. They then sell these chicks to the SME producers, sometimes together with feed.

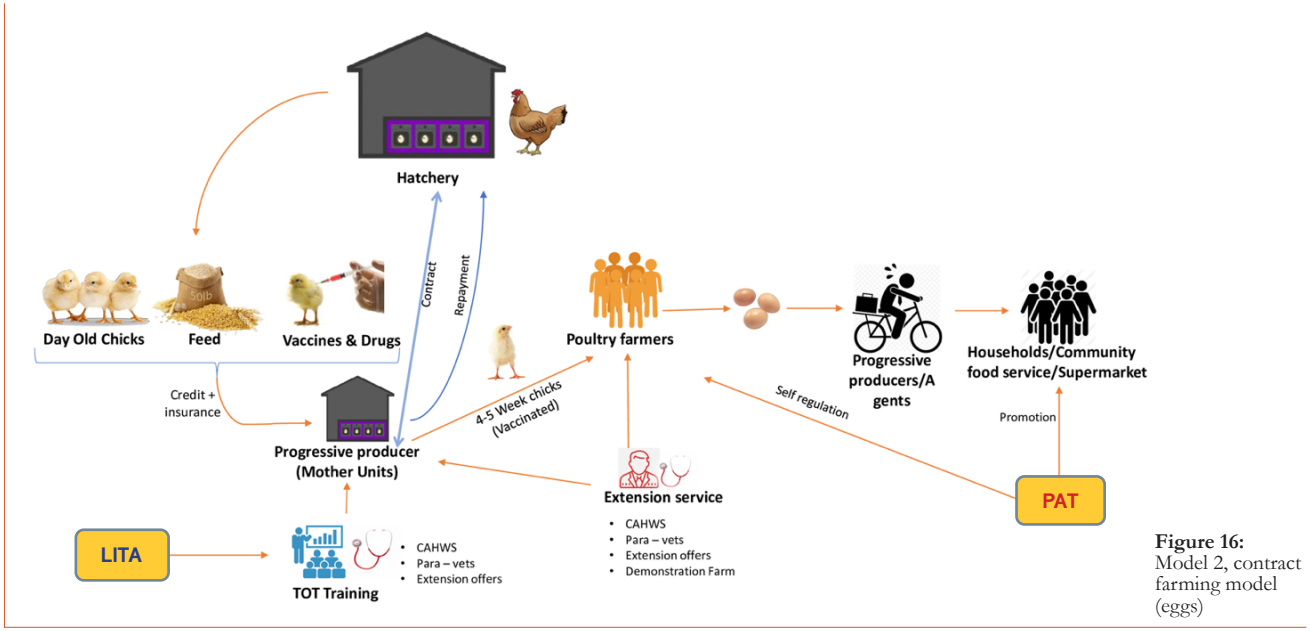



**Figure 16:** Model 2, contract farming model (eggs)

Some hatcheries have started to develop mother unit networks and a replicable distribution model to reach many SME commercial producers (**Figure 16**, above right) at higher efficiency and profitability. The hatcheries normally transport the DOCs to mother units located across the country where they are vaccinated and raised for 4 – 6 weeks.

These mother units (progressive producers) would need to invest on their own or use credit from the hatchery to meet their costs before selling the 4 – 6 weeks old chicks to SME commercial farmers in their own network. Each progressive producer can cover between 10 and 50 SME commercial poultry producers, each of whom could take at least 200 – 500 chicks per batch. SME commercial producers could source their capital from micro finance or own savings from sales of eggs.

On the market side, the majority of SME commercial poultry producers rely on egg traders who normally use bicycles and buy at farm-gate and distribute to their own retail network in urban centres. Over the years, some of these egg traders have developed trusted relationships with producers and retailers and are linking pins between supply and demand.

Recently, some SME commercial producers in some areas such as Dar es Salaam are getting more organised through their sector organisations and undertake collective bulking and marketing; whereby their organisation aggregates all eggs from members and sells on their behalf; however, the egg traders' role remains the transportation from farm-gate to egg collection centre.

*Advantages of this model*

• Introduce new and inexperienced poultry producers into commercial production of eggs with limited risk during critical period 0 – 6 weeks.

• SME commercial producer can start with small number of chicks (200 – 500)

• After new producers improve their skills, they can source DOCs

directly from the hatcheries.

• There are huge opportunities to promote structured trade throughout the supply chain

*Critical services*

• Contract farming between hatchery and mother units (progressive commercial producers)

• Access to finance (blended financing mechanisms)

• Extension services (from para-vets and CAHWs) and professional veterinary officers

• Market development through PAT and local associations

### 5.3.4 Support MLF in initiatives to enhance competitiveness of the poultry subsector in Tanzania

• Actively participate in the development of the Poultry Strategy and the strengthening of PAT and building its capacity to help members in self-regulation.

• Take deliberate initiatives in branding poultry products, promotion campaigns through media.

• Work closely with MLF and specifically with Director of Production and Marketing (DPM) and Director of Veterinary Services (DVS) on establishing Poultry Data Centre (PDC) under the Ministry's Poultry Desk.

## Key Messages from Chapter 5

*The public sector should:*

Take a lead in the development of the poultry strategy in Tanzania in close partnership with private sector;

Build and strengthen the capacity of Poultry Association of Tanzania (PAT) and other sector associations to be a self-sustaining organisation taking a lead in the development of the poultry subsector;

Enact regulations: While processed poultry and poultry products from large companies are regulated because they retail through structured markets, most of the live poultry and processed poultry products from small and medium enterprises are sold in an unregulated market, hence this remains a matter to be resolved by MLF.

*The private sector should:*

Consider investing in several prospective areas for investments in Tanzania along the poultry subsector;

Take a more active role in organising themselves into associations/ cooperatives, create self-regulation;

Promote production, processing with standard operation procedures (SOPs) and structured marketing.

*Private-Public Partnerships should:*

Build capacity of poultry extension workers including CAHWs;

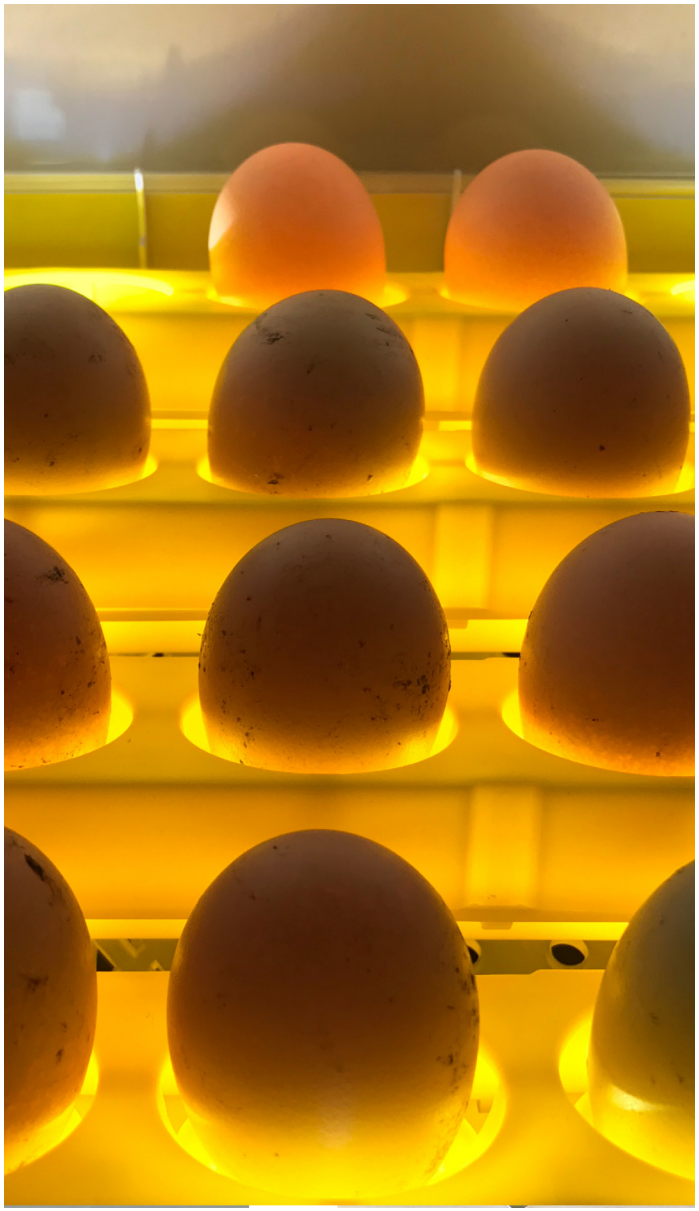
Develop Demonstration Farms within a cluster of SME commercial poultry producers;

Take a lead in pilot of business models that will promote poultry value chain development;

Actively participate in the development of the Poultry Strategy and the strengthening of PAT;

Take deliberate initiatives in branding poultry products, promotion campaigns through media;

Work closely with MLF to establish a Poultry Data Centre (PDC) under the Ministry's Poultry Desk.



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# Abbreviations

| | |
|---|---|
| ACGG | African Chicken Genetic Gains |
| APOKA | Arusha Poultry Keepers Association |
| AU-IBAR | African Union Inter-African Bureau for Animal Resources |
| BDS | Business Development Services |
| CAGR | Compounded annual growth rate |
| CAHW | Community animal health workers |
| CFA | Clearing and Forwarding Agent |
| DADPs | District Agricultural Development Plans |
| DFID | Department for International Development of the United Kingdom |
| DOCs | Day-old chicks |
| DPM | Director of Production and Marketing at MLF |
| DRC | Democratic Republic of Congo |
| DVS | Director Veterinary Services |
| EACCMA | East African Community Customs Management Act |
| EKN | Embassy of the Kingdom of the Netherlands |
| FAO | Food and Agriculture Organization of the United Nations |
| FBS | Farmers' Business School |
| FCR | Feed conversion ratio |
| FMS | Farmers' Marketing School |
| ICBT | Informal Cross-Border Trade |
| ILRI | International Livestock Research Institute |
| IQS | Integrated Query System |
| JKIA | Jomo Kenyatta International Airport |
| KIPOCOSO | Kisutu Poultry Cooperative Society |
| LITA | Livestock Training Agency |
| MALF | Ministry of Agriculture, Livestock and Fisheries |
| MFI | Microfinance Institution |
| MLF | Ministry of Livestock and Fisheries |
| MMA | Match Maker Associates Limited |
| MoU | Memorandum of Understanding |
| MT | Metric Tonnes |
| ND | Newcastle Disease |
| NFRA | National Food Reserve Agency |
| OECD | The Organisation for Economic Co-operation and Development |
| PAT | Poultry Association of Tanzania |
| PDC | Poultry Data Centre |
| PPP | Private-Public Partnerships |
| QSR | Quick Service Restaurants/Fast Food establishment |
| SACAs | Savings and Credit Associations |
| SACCOS | Savings and Credit Cooperative Societies |
| SADC | Southern Africa Development Cooperation |
| SADCPF | SADC Poultry Forum |
| SAPA | South African Poultry Association |
| SMEs | Small and Medium Enterprises |
| SOPs | Standard Operation Procedures |
| SUA | Sokoine University of Agriculture |
| SUGECO | Sokoine University Graduate Entrepreneurs Cooperative |
| TABROFA | Tanzania Broiler Farmers Association |
| TAFMA | Tanzania Animal Feed Manufacturers Association |
| TAHA | Tanzania Horticultural Association |
| TALFA | Tanzania Layer Farmers Association |
| TANCIS | Tanzania Customs Integrated System |
| TAVEPA | Tanzania Veterinary Paraprofessionals Association |
| TBS | Tanzania Bureau of Standards |
| TCPA | Tanzania Commercial Poultry Association |
| TFDA | Tanzania Food and Drugs Authority (dissolved-2019, food aspects moved to TBS) |
| TLMI | Tanzania Livestock Modernization Initiative |
| TLMP | Tanzania Livestock Master Plan |
| TMB | Tanzania Meat Board |
| TPBA | Tanzania Poultry Breeders Association |
| TPFW | Treated Poultry Feather's Waste |
| TRA | Tanzania Revenue Authority |
| TZS | Tanzanian Shillings (1 Euro = TZS 2,500) |
| UFUKUDA | Association of Dar es Salaam Poultry-Keepers |
| URT | United Republic of Tanzania |
| UWAFUKUMO | Association of Morogoro Poultry Keepers |
| VICOBA | Village Community Banks |
| WPF | World Poultry Foundation |
| WPSA | World Poultry Science Association |

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September 2020

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Match Maker Group