



**Review of the Status of Livestock Production and Stocking  
in Zambia**

**Submitted to the Parliamentary Committee on Agriculture,  
Lands and Natural Resources**

**By**

**Musika Development Initiatives**

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# 1. Introduction

This memorandum is submitted by Musika Development Initiatives (Musika) in response to the invitation by the Committee on Agriculture, Lands and Natural Resources of the National Assembly of Zambia to comment on the status of livestock production and stocking in Zambia. As part of its activities, Musika works to stimulate private sector investments in rural livestock markets, and in this paper, it presents its findings and recommendations based on its observations and experiences working in the sector.

In order to develop an understanding of the status of livestock production and stocking in Zambia, the committee presented an outline of the issues it sought to find out, which included but were not limited to the following:

- a) Adequacy of the legal and policy framework governing the livestock sector.
- b) Incentives available to the livestock farmers for production of livestock and trans-boundary disease transmission.
- c) The adequacy and availability of extension services for the livestock industry.
- d) Livestock distribution and marketing.
- e) The challenges facing the livestock sector.
- f) Recommendations on how the livestock sector can be improved.

## 1.1 Data Sources and Methodology

Two methods were utilized to collect the information and comments compiled in this paper. Firstly, a consultative process was undertaken with all of Musika's technical personnel that are stationed in various regional offices nationwide. The technical staff are well versed in designing and implementing diverse agricultural initiatives that encompass multiple sub-sectors, the livestock sub-sector included. Furthermore, Musika uses a facilitative approach to implement its activities which implies utilizing collaborative partnerships to deliver its interventions throughout the country. As a result, Musika's technical personnel extensively engage with various industry players at different levels, and in several supply chains. Because of this, the consultative process was useful in generating information on broad-based industry trends that account for diverse markets and regions.

Furthermore, information pertaining to statistical estimates, the laws governing the livestock sector and livestock policies and programs being implemented was collected from internally generated research papers as well as external agencies such as Indaba Agricultural Policy Research Institute (IAPRI), The National Assembly of Zambia, Ministry of Agriculture (MOA), Ministry of Finance (MoF) and Ministry of Fisheries and Livestock (MFL) among others.

## 2. Overview of the Legal and policy Framework Governing the Livestock Sector

### 2.1 Policy Environment

A conducive policy and regulatory environment is critical for the development and sustainability of any industry. The MFL is yet to finalize the development of a specific livestock policy to govern the sector, therefore, it relies on policy guidelines adapted from broader policy documents and national strategic instruments to develop programs. Some of the key policy documents include the Vision 2030, which provides an overarching and long term development agenda up to the year 2030. It is operationalized through short and medium term national development plans that provide sector specific policy frameworks as well as associated quantifiable programs and implementation plans.

Currently, the major guiding document for the livestock sector is the Revised Sixth National Development Plan (R-SNDP) 2013 to 2016 which focuses on achieving the following five main objectives in the sector:

- i. To improve sustainable and efficient production, productivity and value addition of diversified livestock subsector.
- ii. To create an enabling environment that will improve the functioning of agricultural markets and increase private sector participation in agricultural marketing and promote value addition.
- iii. Enhance Market Access and facilitate trade for Agricultural Products in both regional and international markets
- iv. Promotion of FDI in the Agriculture Sector
- v. To Promote Nationwide Research and Development in Crops, Livestock and Fisheries

However, following the launch of the Seventh National Development Plan (7NDP) 2017-2021 in June, 2017, a realignment of the sector’s objectives is anticipated going forward. Other key policy documents include the Second National Agricultural Policy (SNAP) 2016-2020 which provides a consolidated policy framework designed to guide the development of the agricultural sector in particular, and the National Agricultural Investment Plan (NAIP) 2014-2018 crafted under the CAADP framework, which seeks to identify and prioritize investment areas that can accelerate agricultural productivity growth.

## 2.2 Legal Environment

The key regulatory instruments governing the livestock sector are primarily concerned with regulating animal health issues, the conduct of veterinary professionals and supporting institutions, livestock products as well as identification and traceability issues. These include:

- i. The Veterinary and Veterinary Para-Professional Act No. 45 of 2010
- ii. The Animal Health Act No. 27 of 2010
- iii. The Animal Identification Act No. 28 of 2010
- iv. Dairy Industry Development Act No. 22 of 2010
- v. Prevention of Cruelty of Animals Act No. 13 of 1994
- vi. Tsetse Control Act No. 13 of 1994
- vii. Medicine and Allied Substances Act N0.3 of 2013

## 2.3 Sector Financing

In 2017, the budget to the livestock and fisheries sub-sector reduced to K642.7 million from K708.5 million in 2016. This represented a 9% decrease in nominal terms. This was a deviation from what was pertaining at the national and agricultural sector level where budgetary allocations were increased by 21.4% and close to 100% in nominal terms respectively, during the same period.

Category	2016	2017
<b>MFL Budget Allocation (K'Million)</b>	708.53	642.7
<b>MFL Budget Releases (K'Million)</b>	121.1	240.1
<b>% Released</b>	17%	37%

Category	2016	2017
<b>Agriculture Budget Releases (K'Million)</b>	1661	3486.3
<b>MFL Budget Releases (K'Million)</b>	121.1	240.1
<b>% MFL Budget Releases Relative to the Agriculture Budget Releases</b>	7%	7%

A comparison between the budget allocation and actual funds released to the livestock and fisheries sub-sectors paints a grim picture. Even though the total funds disbursed for budgeted activities had increased in 2017 to 37% from 17% in 2016, the individual amounts disbursed in the 2016 and 2017 fiscal year were far below budgeted amounts.

In addition, a comparison of the proportion of funds released to the livestock and fisheries sector relative to funds released to the overall agriculture sector over the two-year period shows that the proportion of funding released to the sector was very low at 7%. This indicates the low priority assigned to the sector in terms of funding.

## **2.4 Recommendations**

- *Need for a livestock policy and completion of regulatory provisions*

The policy initiatives currently governing the sector are fragmented. There is need for the Ministry of Fisheries and Livestock to finalize the development of a livestock policy which integrates the various policy objectives affecting the livestock sector contained in the long and medium term development plans. This would ensure a consolidated approach to program development and the implementation of planned activities.

On the other hand, some of the legal provisions governing the livestock sector have not been sufficiently implemented and while others face enforcement issues. The Animal Health Act and Veterinary and Para professions Act still have no regulations approved yet and have not put in place a Veterinary Council for almost 3 years to implement Part III to Part VII of the act. In addition, the regulation of veterinary medicines has also been a challenge. This has led to an increase in illegal “agrovet shops”, which are mostly operated by untrained personnel with little knowledge of veterinary medicines. This scenario has the potential to lead to public health and environmental concerns.

- *Enhance implementation of programs that improve market access, private sector participation and value addition*

In addition to other aspects, the operating policy guidelines emphasize the need to enhance market access, private sector participation and value addition within the livestock sub-sector and agricultural sector as a whole. However, these objectives have not been translated into well-coordinated implementation plans that can easily be delivered even at the lowest levels. Because of this, their implementation has been very weak.

- ***Access to financing***

Policy initiatives have been silent on facilitating access to finance and credit for livestock farmers. It is important that the policy objective contained in the SNAP 2016-2020 to promote credit delivery systems through programs such as Savings Groups and Credit Cooperatives deliberately target livestock farmers as well. Including a specific focus on this in the livestock policy would therefore be a good first step.

- ***Gender mainstreaming***

Evidence has shown that there is low female ownership of high value livestock types such as cattle. For instance, only 23% of female headed households own cattle (RALS, 2015). However, current policies have no strategy on how women's access to and control of high value livestock animals can be enhanced. Key policies, such as the livestock policy currently being developed must endeavour to mainstream gender.

- ***Budgetary allocations***

Despite contributing significantly to agricultural GDP, the livestock sector accounts for a low proportion of funding to agricultural activities. The subsector received only about 37% of the total budget allocation to the MFL in 2017. This presents a key challenge in actualising key policy pronouncements. On the other hand, one area that has received considerable funding against what has been budgeted is the emergency disease control fund. However, this is a reactionary fund, and funding to other activities designed to prevent diseases remains low.

Furthermore, the agriculture budget allocation has been below the CAADP target of 10 percent, falling short of the Malabo declaration of 2014, mainly due to inconsistencies in funding to the agricultural sector. Going forward, there is need to recognize the livestock sector as a key priority investment area not only in terms of policy direction but allocation of resources as well.

## 3. Disease Prevention and Control Mechanisms Available to Control Trans-Boundary Disease Transmission

### 3.1 Regulatory Mechanisms

Transboundary Animal Diseases (TADs) can be defined as highly contagious animal diseases that can be transmitted irrespective of national boundaries. TADs include diseases such as; Foot and Mouth Disease (FMD), Contagious Bovine Pleuropneumonia (CBPP), East Coast Fever (ECF), African Swine Fever (ASF) and Newcastle Disease (ND) among others.

At present, the two main mechanisms used to prevent and control TADs are dipping/spraying and vaccinations. Other mechanisms include the placement of control points at strategic geographical locations, through which inspections of animals moving from one area to another are conducted. The Animal Health Act No 27, of 2010 and other allied statutes are the basis for all the mechanisms employed to control and prevent the transmission of transboundary diseases. In addition, the Statutory Instrument (SI) No 24 of 2014 on compulsory dipping and vaccination makes it a requirement for farmers to dip and vaccinate their animals, however, enforcement of the SI has been challenging. This is because not all livestock farmers have access to dip tanks/spray facilities. According to the report of the Auditor General on the Management and Control of Livestock Diseases of 2015, only 89 out of the 697 dip tanks constructed countrywide were functional. Secondly, smallholder production is still largely traditional. Farmers raise livestock as part of their cultural practices and lifestyle and therefore lack a commercial approach to their production. Because of this, the majority of farmers do not undertake measures to control for ticks and fleas, which are the main vectors for most livestock diseases affecting farmers. Data from the Rural Agricultural Livelihood Survey (RALS) 2015 shows that about 75% of households raising livestock did not undertake any measures to control for ticks and fleas.

### 3.2 Access to Veterinary Drugs and Services

Apart from putting in place regulatory instruments and infrastructure to control for the transmission of TADs, the veterinary department provides farmers with access to veterinary drugs and services. About 44.5% of livestock farmers access veterinary drugs and services from government sources. In addition, the private sector has also played a pivotal role in

providing livestock farmers with access to veterinary drugs and services that aid in the prevention and control of diseases including TADs. According to the RALS 2015, about half of livestock farmers source their veterinary drugs from private sources.

However, the operating environment at the community level has unfortunately not been very supportive of private veterinarians. This is because public veterinary staff commonly provide private services, and they do so at what can be considered a subsidized cost, since public resources (such as vehicles) are used to facilitate the delivery of these services. This creates a competitive and not complementary relationship between the private and public veterinary system, and creates an uneven playing field and thus barriers for real private investment. Furthermore, it creates incentives for the public veterinarians to discourage private sector participation.

### **3.3 Outcomes**

All these efforts have yielded mixed results. An analysis of smallholder households affected by disease shows that between May 2011 and April 2012, about 62% of the cattle and chicken owning smallholder households had their livestock affected by diseases. While between May 2014 and April 2015, 45% of the cattle and chicken owning households had their livestock affected by diseases. This represents a 17% reduction in households reporting livestock disease infections over a period of 3 years for the aforementioned livestock.

On the other hand, some regulatory requirements have led to inefficiencies. For instance, the distribution of vaccines for notifiable diseases such as CBPP and FMD is only permitted by public veterinary staff, however, this process has been under-funded, sporadic and reactive and has led to negative consequences. For example, Zambeef closed its plant in Mbala for over two months because FMD vaccinations could not be conducted by the government personnel due to funding limitations.

### **3.4 Recommendations**

- *Improving Farmers Access to Dipping Infrastructure Alone is Not Enough*

The livestock department has continued to develop and rehabilitate dipping sites around the country, however, the mere provision of these dipping sites is not sufficient. These efforts need

to be accompanied by extension messages that provide farmers with the technical knowledge and encourage them to invest in improved animal health practices. In addition, the participation of the private sector in the provision of dipping or spraying services needs to be encouraged. This can be done by formulating public-private partnerships (PPPs) at the community level, that allow public funded infrastructure to be managed by private veterinary market actors. Furthermore, allowing the private veterinarians to vaccinate for notifiable diseases such as CBPP and FMD, would help deliver more positive results in preventing and controlling for TADs.

#### Case Study Example

LVSCC is a private veterinary firm working with rural livestock farmers in Central Province. Through Musika's support, the firm has set up 9 dipping/spraying centres within the rural livestock communities. By providing extension messages that deliver technical advice and encourage farmers to invest in improved animal health practices, the firm has been able to build a cadre of about 1500 livestock farmers that are more diligent and commercial minded in their approach to preventing and controlling for livestock diseases. As a result, cattle mortality from disease infections has reduced by about 75% amongst the farmers working with the firm. This shows that the private sector can play a pivotal role in preventing and controlling diseases, and therefore, government should encourage more private sector backed dipping/spraying sites.

- ***Quicken the construction of regional laboratories***

The government has been slow to complete the construction of regional laboratories used to test for livestock disease. In addition, some existing laboratories constructed do not have the capacity to test for all the diseases and therefore rely on the laboratory services in Lusaka. This creates very high inefficiencies and raises the cost of doing business as blood samples need to be transported over long distances for testing.

- ***Government to facilitate and encourage production of vet drugs locally***

Government should encourage the local production of veterinary drugs by providing incentives to veterinary firms manufacturing them. This would greatly reduce the cost of veterinary inputs, which are mostly imported and sold to farmers at high prices.

## 4. The Adequacy and Availability of Extension Services for the Livestock Industry.

### 4.1 Public Extension Services

The provision of extension services to farmers continues to be inadequate. The MFL 2015 Annual Progress report cited low levels of frontline staff especially in the old districts. The staffing of livestock extension officers has largely been focused in the new districts created while the old districts remain with low staffing levels. While the government has tried to mitigate this by placing veterinary and livestock assistants in various veterinary camps, the provision of adequate extension services is still a challenge due to funding limitations.

Additionally, the camps assigned to extension personnel are too vast to be managed by a single person with limited or no resources at all. Therefore, it is common place to find livestock farmers that have never been visited by an extension worker. Furthermore, the quality and delivery mechanisms of extension messages needs to be evaluated. According to the MFL, one of the key ways in which educational materials on livestock management practices was disseminated countrywide was through district/provincial field days. However, it is highly likely that the uptake of the information provided might be hampered by the fact that literacy levels are low for the majority of rural farmers. Furthermore, the limited uptake of improved livestock production practices amongst smallholder livestock producers who access extension might be indicative of how ineffective extension services have been in changing farmers' behaviour and approach to livestock production.

### 4.2 Private Extension Services

The private sector is beginning to play an increasing role in the provision of extension services in the livestock sector. Firms such as Vet 24, Silverlands Ranching Ltd, LVSCC and others provide extension services to farmers at the community level as part of their commercial marketing strategy. This helps to bridge the gap in extension service provision and supplements government's efforts which are challenged by resource limitations.

### 4.3 Recommendations

- ***Encourage Provision of Private Extension Services***

Given the resource constraints faced by the livestock department, it is critical that efforts are made to find alternative sources of resources. The private sector has the potential to bridge the gap in extension service provision, therefore, deliberate efforts that encourage the participation of the private sector in extension service provision should be developed. This can include public veterinary support for private veterinary initiatives, where public extension personnel support and facilitate field days held by veterinary retail firms. In addition, tax incentives could possibly be provided to firms that demonstrate strong engagement with the lower end of the market. This would help leverage the efforts of the private sector and increase the efficiency and efficacy of limited resources.

- ***Conduct Research and Mapping of Public and Private Extension Services***

There is need to conduct a study to understand the extent to which the mode and quality of extension service provision has improved livestock production practices amongst farmers. Anecdotal data suggests that there has been little or no change in the livestock production methods employed by farmers, even in areas where farmers interact with livestock extension personnel. Such a study would help to identify gaps in the quality and mode of delivery of extension services, and help improve the effectiveness of the public and private extension service system.

- ***Realign Staffing Criteria for Extension Personnel to Prioritize Areas with High Livestock Population***

Like many other sectors in Zambia, the level of financing to the livestock sector is critically low. This implies that there is an inadequate fiscal framework to support an increment in staffing levels for extension personnel. According to the MFL, staffing considerations seem to favour the newly created districts as opposed to allocating the limited resources in a way that is more likely to maximise returns. For instance, as a short term solution, the placement of livestock extension staff should prioritize areas with high livestock populations. Current, staff placement does not seem to take into account such considerations.

## 5. Livestock Distribution, Marketing and Incentives

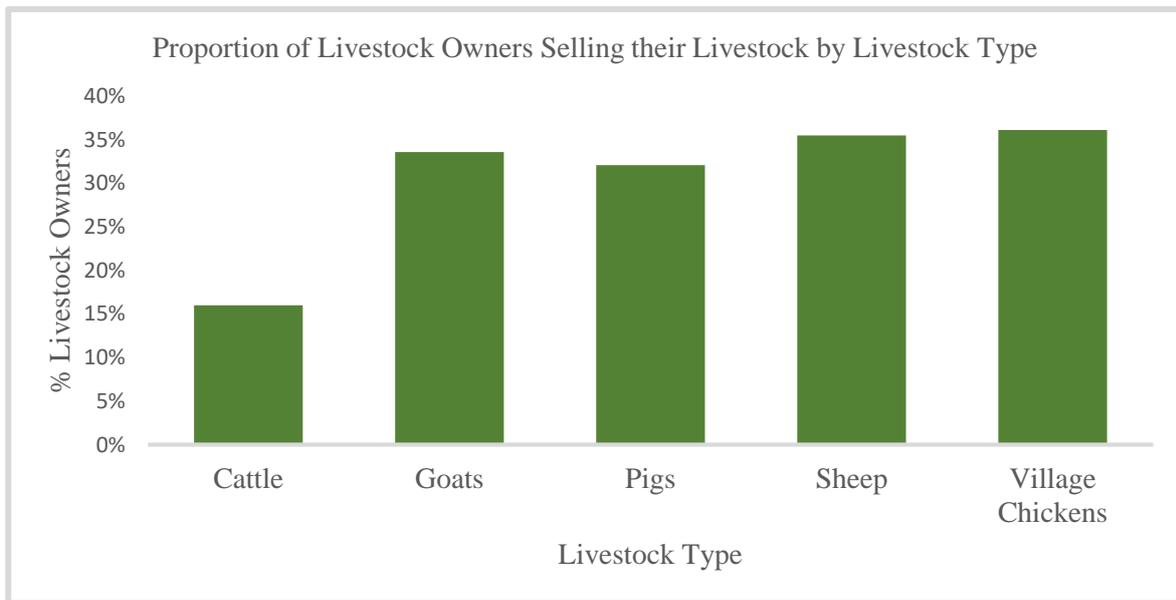
### 5.1 Livestock Marketing

Livestock markets are predominantly unorganised (MFL, Musika). The sector has two types of markets, these being formal and informal markets. Informal markets are more common, and they are characterized by traders who buy live animals from the farm gate or local markets. There is high information asymmetry and no transparent pricing mechanisms in these markets, and buyers and sellers engage in negotiations to determine the price. The bargaining power in the negotiations largely rests with the buyer as the more traditionally minded farmers often sell under duress for immediate cash needs. On the other hand, formal markets are dominated by processors such as Zambeef, Kachema and other privately owned abattoirs. Price information is known before a transaction occurs, sales are generally made based on scale-determined weights and there are set standards and rules governing transactions.

In terms of government initiatives regarding livestock marketing, not much has been done. This is because the livestock marketing department under the MFL was recently formed and has only been operational for a year. In addition, the initial marketing department, before the Ministry of Agriculture and Livestock was split into the two ministries, concentrated much on the crop sub-sector. The newly formed livestock marketing department is expected to be in full operation in the beginning of 2018 as there is now a budgetary allocation for it.

At the farmer level, the low levels of productivity amongst livestock farmers has provided disincentives for the major players, who fail to establish a stable supply in most of the areas. Furthermore, there is little formation of horizontal alliances amongst farmers such as livestock cooperatives, which would not only improve farmers' bargaining power but also reduce the high transaction costs they face. Farmers have limited entrepreneurship skills, such that even in instances where livestock markets exist, livestock sales are low and largely motivated by immediate financial needs such as school fees, hospital bills, funerals etc, as opposed to commercial reasons. Figure 1 shows that across all livestock types, less than 35% of the livestock owners sold their livestock.

**Figure 1: Proportion of livestock owners selling their livestock**



Source: IAPRI, 2015

This was also validated by the low farmer turnout to the livestock auction initiatives supported by Musika, that sought to link smallholder livestock suppliers to buyers through transparent trade. Other issues inhibiting the viability of livestock markets include technical barriers, such as the low standard sanitary conditions amongst producers which detract potential buyers and inhibit expansion into export markets that have very high safety standards and requirements.

The market for other livestock products such as milk and eggs remains largely untapped. The total production of milk by the smallholder sector is about 263 million litres per year, however, only about 34% of this enters the market (IAPRI, 2012). Similarly, the eggs produced by smallholder farmers are mainly consumed within the households.

## **5.2 Livestock Distribution**

The spatial distribution of livestock in Zambia has been highly shaped by tradition and culture with Southern, Eastern and Western provinces having the highest livestock population. In these provinces in particular, livestock rearing has been passed on from one generation to the next and is traditionally considered a store of wealth rather than a part of the farming business. The more animals one has, the wealthier they are.

However, it should be noted that there is a significant lack of empirical data on different aspects of livestock production and distribution. Initiatives are currently being developed to conduct a livestock census that would provide a comprehensive data base of various livestock information. To this end, surveys on crop farming have been used to gather some data on livestock. The following statistics show the cattle distribution by province in Zambia since the year 2010.

**Table 3: Cattle Distribution by Province**

YEAR	Zambia	Central	Copperbelt	Eastern	Luapula	Lusaka	Muchinga	Northern	North-western	Southern	Western
2010	3,038,000	272,945	74,357	291,645	13,960	265,838	110,000	102,025	652,420	1,009,257	763,183
2011	3,837,880	544,620	53,314	593,388	10,315	97,194	126,739	70,704	67,093	1,571,521	702,992
2012	3,932,269	505,016	54,774	637,912	13,867	100,371	134,373	67,277	71,313	1,636,298	711,070
2013	4,026,658	465,412	56,234	682,436	17,419	103,548	142,007	63,850	75,533	1,701,075	719,148
2014	4,300,000	497,005	60,051	728,761	18,601	110,577	151,646	68,184	80,660	1,816,549	767,965
2015	4,624,220	534,479	64,579	783,710	20,004	118,914	163,081	73,325	86,742	1,953,517	825,870
2016	4,984,909	576,169	69,616	844,839	21,564	128,190	175,801	79,044	93,508	2,105,891	890,288

Source: MFL, 2017

The distribution for other types of livestock like goats, pigs, poultry and sheep by province are as follows:

**Table 4: Livestock Distribution by Province for Goats, Pigs, Poultry and Sheep**

PROVINCE	GOATS	PIGS	POULTRY	SHEEP
Central	348,788	60,442	20,352,475	20,264
Copperbelt	56,209	60,442	7,846,737	7,311
Eastern	216,010	496,726	20,352,475	3,145
Luapula	51,139	36,265	7,724,132	35,205
Lusaka	108,623	29,672	5,149,421	2,638
Muchinga	86,537	10,990	10,544,053	457
Northern	76,894	120,885	12,873,554	10,000
North-western	51,380	32,969	6,252,869	558
Southern	1,040,731	224,186	25,747,107	46,411
western	73,858	26,375	5,762,448	558

Source: MFL, 2013

### **5.3 Incentives for Livestock Production**

There are a number of factors that present incentives for livestock production. The recent adjustment to the E-voucher program expands the provision of subsidies to include veterinary products. This will increase farmers access to a wide variety of improved veterinary products and reduce the cost of livestock production for farmers.

The expansion of off-take markets for other livestock products such as milk is increasing farmers' access to diversified income opportunities. Firms such as Parmalat and Zambeef have developed milk collection centres into new geographical markets, that initially had no such markets. According to a survey conducted by Musika in 2017, the commercial linkage between livestock farmers and Parmalat in Namwala has directly resulted in increased farmer income and other positive multiplier effects. These include the rise in new business activity from milk trading by non-livestock owners, and the 'crowding in' of veterinary, nutrition, genetic and financial market actors. Furthermore, farmers have been observed to utilize the income gained from milk sales to invest in better livestock production practices and other areas such as crop production and social services.

Despite this, the majority of the livestock farmers producing various livestock types such as cattle, goats, village chickens and others have limited access to markets that are able to deliver value added services such as market information and incentives for quality. Furthermore, there is an uneven playing field where the smaller, less formal abattoirs or processors manage to circumvent public health and veterinary provisions and requirements, which are applied vigorously to the larger players. However, enforcement of rules and regulations needs to be applied fairly across all industry players.

### **5.4 Recommendations**

- Promote private sector participation in the procurement of livestock products such as milk by providing tax incentives to firms purchasing milk storage or processing equipment.
- Conduct research initiatives on livestock marketing to ensure wide understanding of livestock marketing issues.

- Government and private sector players should promote animal nutrition initiatives such as supplementary feeding, farm-level feedlots, and other aspects of animal nutrition to increase the productivity of individual animals. This way, the increase in consumer demand for standard grade meet can be met not only through increasing the livestock population but heavier existing animals coming to the market as well.

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### **About Musika**

Musika is a non-profit company that works to stimulate private sector investments in rural agricultural markets. It achieves this by helping businesses to develop mutually beneficial and transparent commercial relationships with smallholders that integrate the provision of information and technology adoption, thus providing confidence and long term incentives for smallholders to invest in their farming business. It mainly works with corporate organizations that are willing to engage the rural poor as their clients, suppliers and consumers. Musika provides its corporate clients with high quality, commercially focused technical advice, business model support and where relevant, smart subsidies to bring down some of the initial risks of doing business with the smallholder market. The organization began implementing its activities in 2012, and has since expanded its operations to all of Zambia's provinces.

### **Acknowledgements**

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