trade knowledge network

Agriculture: Future Scenarios for Southern Africa

The Livestock Sector in Zambia and Rising Food Prices

Country Briefing – Zambia

Humphrey Mulemba[1]

2009

International Institute for Sustainable Development
Institut international du développement durable

Published by the International Institute for Sustainable Development

International Institute for Sustainable Development
161 Portage Avenue East, 6th Floor
Winnipeg, Manitoba Canada
R3B 0Y4
Tel: +1 (204) 958-7700
Fax: +1 (204) 958-7710
E-mail: info@iisd.ca
Web site: http://www.iisd.org/

Agriculture: Future Scenarios for Southern Africa – The Livestock Sector in Zambia and Rising Food Prices

Humphrey Mulemba

About the Trade Knowledge Network

http://www.tradeknowledgenetwork.net

The Trade Knowledge Network is a global collaboration of research institutions across Africa, Asia, Europe and the Americas working on issues of trade and sustainable development. Coordinated by the International Institute for Sustainable Development (IISD), the TKN links network members, strengthens capacity and generates new research to assess and address the impact of trade and investment policies on sustainable development.

The overarching aim of the TKN is to help ensure that trade and investment contribute to sustainable development, with social development and the environment equitably addressed in trade and investment policies. The TKN furthers this aim by generating compelling research with clear policy recommendations and communicating those effectively to decision-makers nationally, regionally and globally.

The TKN is hosted by the International Institute for Sustainable Development, a Canada-based not-for-profit organization promoting change towards sustainable development. As a policy research institute dedicated to the effective communication of its findings, the Institute engages decision-makers in government, business, NGOs and other sectors in the development and implementation of policies that are simultaneously beneficial to the global economy, the global environment and to social well-being.

About the International Institute for Sustainable Development (IISD)

http://www.iisd.org

The International Institute for Sustainable Development contributes to sustainable development by advancing policy recommendations on international trade and investment, economic policy, climate change, measurement and assessment and natural resources management. Through the Internet, we report on international negotiations and share knowledge gained through collaborative projects with global partners, resulting in more rigorous research, capacity building in developing countries and better dialogue between North and South.

IISD's vision is better living for all—sustainably; its mission is to champion innovation, enabling societies to live sustainably. IISD is registered as a charitable organization in Canada and has 501(c)(3) status in the United States. IISD receives core operating support from the Government of Canada, provided through the Canadian International Development Agency (CIDA), the International Development Research Centre (IDRC) and Environment Canada; and from the Province of Manitoba. The Institute receives project funding from numerous governments inside and outside Canada, United Nations agencies, foundations and the private sector.

1 Humphrey Mulemba is currently the program officer for trade and capacity building in the Debt, Aid and Trade Programme at the Jesuit Centre for Theological Reflection in Lusaka, Zambia. His work involves analysing existing trade policies and the impact they have on the poor, focusing in particular on the agricultural sector.

About the Jesuit Centre for Theological Reflection (JCTR)

http://www.jctr.org.zm/aboutus.html

The Jesuit Centre for Theological Reflection is a research, education and advocacy team that promotes study and action on issues linking Christian Faith and social justice in Zambia and Malawi. The JCTR began in 1988 as a project of the Zambia-Malawi Province of the Society of Jesus and is similar in orientation and activities with other Jesuit social centres around the world.

The Centre engages in research on key social issues like cost of living, social implications of debt servicing, accessibility of healthcare and education, and integrity of local democracy. The JCTR put forward our findings in publications, workshops and conferences, and media presentations. The Centre also joins in advocacy campaigns by mobilising the public through local-based teams around Zambia and by cooperating with other civil society groups.

Contents

Figures, Maps and Tables

Acknowledgements

I would like to thank the members of staff of the National Agriculture Livestock and Epizootics Information Centre for their time and assistance with invaluable information, statistics and insight on the livestock sector. I would also like to thank the Trade Knowledge Network for their patience and thorough editing of the results of the research. Lastly, I would to thank the Jesuit Centre for Theological Centre and the various individuals involved for their additional support throughout the research.

Acronyms and Abbreviations

CBPP	contagious bovine pleura pneumonia
EIF	Enhanced Integrated Framework
EPA	Economic Partnership Agreement
EU	European Union
FMD	foot-and-mouth disease
FNDP	Fifth National Development Plan
FSP	Fertilizer Support Programme
LDC	Least Developed Country
NALEIC	National Agriculture Livestock and Epizootics Information Centre
WTO	World Trade Organization

Executive Summary

The problem of rising food prices has resulted from a general global trend caused by factors that differ from country to country. Although the rising price of oil and price distorting subsidies are causal factors, they are not the only ones. The present research chose to focus on rising prices in the Zambian livestock sector because of the role livestock has in food security, the controversy of livestock disease management in Zambia and the challenges faced by the livestock sector to meet expectations. In Zambia, the livestock sector has experienced general price increases caused by rising costs of fuel and inputs, climate change, and economic pressures that force vendors to sell at a higher price to meet their needs.

The ways identified to mitigate the factors causing price increases were the need for infrastructure development, improved access to credit, funding of research facilities, improved disease control management, improved irrigation management and regional collaboration among institutions.

Zambia has in place targets for the agriculture sector outlined in the *National Agriculture Policy 2004–2015* document and the *Fifth National Development Plan for 2006–2010*.[2] Zambia's development efforts need to be in line with the simultaneous pursuit of national interests and the safeguarding of international trade interests in bilateral and multilateral trade agreements.

In August 2008 Zambia established an ad hoc task force comprising the private sector, the public sector and non-governmental organizations to develop short-, medium- and long-term responses to the rising food prices. In a world of ever increasing complexities, concerted efforts among stakeholders are required to enable substantive outcomes.

2 Ministry of Agriculture and Co-operatives, *National Agriculture Policy 2004–2015* (Lusaka: October 2004); Ministry of Agriculture and Co-operatives, *Fifth National Development Plan for 2006–2010* (Lusaka: December 2006).

1 Introduction

Rising food prices have been a global phenomenon with far-reaching socioeconomic and political consequences around the world. This paper pays particular attention to the local context of the livestock sector and rising prices in Zambia. The purpose of the research is to explore the forces of rising prices and suggest potential domestic policy responses.

2 The Zambian Agricultural Sector

According to government statistics, the agricultural sector employs 92 per cent of the rural and 20 per cent of the urban working populations. The statistics also show that rural poverty stands at 80 per cent and urban poverty at 34 per cent. The sector, therefore, is critical to the alleviation of poverty.

Zambia has a wealth of resources that comprise land, labour and water. Diversification of the national economy can be further enhanced by the potential the agricultural sector possesses. With a combination of favorable policy conditions and the right business climate, the agricultural sector can be a major contributor to economic growth.

Zambia is divided into three different agro-ecological zones, differentiated by variable rainfall and water quality.

Region I receives less than 800 millimetres of rainfall annually and constitutes 14 per cent of Zambia's total land area.[3] The soil is mostly clay-like and it covers the Southern Province and parts of the Eastern and Western provinces. This region has recurrent drought and floods, but shows potential for cattle production, except in the valley areas where the heat and humidity attract tsetse flies, which makes cattle rearing difficult.[4]

Region II (Zone IIA) receives 800–1,000 millimetres of rainfall annually and constitutes 28 per cent of the total land area of Zambia.[5] The soil here is the most fertile in the country, and the area covers the Lusaka, Southern, Central and Eastern provinces of Zambia.[6]

Region II (Zone IIB) receives more than 800 millimetres of rainfall annually and comprises 12 per cent of the land area of Zambia.[7] The soil is sandy and alluvial, and shows potential for poultry and cattle rearing.

Region III, which comprises of Northern, Luapula, and North-Western province, receives more than 1,200 millimetres of rainfall per annum and comprises 46 per cent of the land area of Zambia. The soil is mainly acidic and has low fertility.[8] This area has shown great potential for the fisheries sector.

---

3 Conservation Farming Unit, *Conservation farming and conservation agriculture: Handbook for HOE farmers in agro-ecological zones I and IIa – Flat culture* (Lusaka: CFU, 2007), p. 56.

4 Ministry of Agriculture and Co-operatives (2004), p. 1.

5 Conservation Farming Unit, p. 56.

6 Ministry of Agriculture and Co-operatives (2004), pp. 1–2.

7 Conservation Farming Unit, p. 56.

8 Ministry of Agriculture and Co-operatives (2004), p. 2.

Map 1: Zambia and its nine provinces

3 Background to Zambian Agricultural Policy

Zambia is a landlocked country bordering Zimbabwe, Namibia, Angola, the Democratic Republic of the Congo, Tanzania, Malawi and Mozambique. The country gained independence in 1964 and has since undergone major ideological shifts from the socialist regime of post-independence to the liberal regime of post-democratization in 1991.

Zambia's agricultural policies in the post-independence era limited private sector involvement due to the nature of state ideology. After independence in 1964, Zambia essentially became socialist inclined and increased state intervention in the market through the supply of inputs, production assistance, and the administration of prices and subsidization. The level of subsidization in the agriculture sector, coupled with the growing strains of indebtedness to the international community, bad spells of weather patterns and the collapse of the copper-mining sector, were among the factors that stimulated the demand for a transition from a socialist state into a democratic liberal state in 1991.

In 1992, structural adjustment programs[9] that liberalized the agricultural sector were introduced on the advice of the International Monetary Fund and World Bank. The recommendation was made on the grounds that the post-independence regime's programs, characterized by widespread government intervention, were unsustainable. Zambia's economy could not withstand the pressures of falling copper prices—copper was a major source of government revenue—and high oil prices. This loss of revenue in the mining sector led to an increase in the level of borrowing from the international community, which failed to support state enterprises due to the market inefficiencies present in the system.

9 *Ibid.*, p. vi.

As a result, a schism developed in the agriculture sector, where, to this day, small-scale farmers are resource poor, have low yields and poor production levels, and are highly food insecure. This schism occurred because a number of constraints existed to the overall potential benefit of liberalizing the agriculture sector. In terms of the livestock sector, the prevalence of animal disease, the high cost of veterinary drugs, inadequate access to livestock nutrition and water, poor animal husbandry practices/management, and inadequate marketing infrastructure all proved to be greater challenges than free markets alone were able to address. There was a lack of appropriate livestock research, inadequate livestock extension and health services, and poor linkages between livestock research and livestock extension services.[10] This was because, after the privatization of state entities that collected baseline data and statistical information needed to provide accurate indications, it was assumed that their role would continue after the private sector had purchased these entities. Unfortunately, this did not occur, which led to a fragmentation and scarcity of information on the livestock sector, which made if difficult to plan and implement appropriate state interventions in the event of market failure, as the case of disease outbreaks has shown.

The "new deal government" of the late President Mwanawasa developed a new national agricultural policy that focused on ways to "increase production, sector liberalization, commercialization, promotion of public and private sector partnerships and provision of effective services that will ensure sustainable agriculture growth."[11] Initially, it appeared to be a success, and a bumper harvest was recorded in the 2006/07 season. Since then, however, farmers have faced trying times in the wake of global economic pressures. It has become clear that these policies alone are not enough to withstand the pressures facing the sector.

4 The Effect of the Liberalization of the Agricultural Sector

In 1992, when the privatization program began, there was an immediate impact on the livestock sector, particularly the traditional livestock sector.

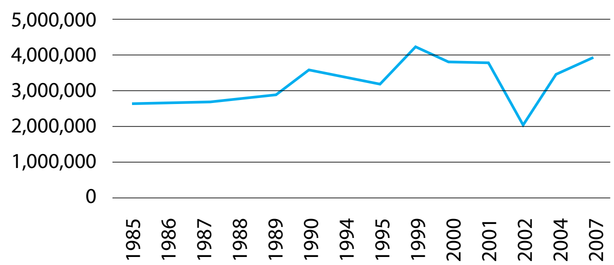
4.1 Trends in livestock numbers

Figure 1 shows a gradual decline in national livestock numbers during the period 1990–95 and a second sharp decline during 2001–02. This is partly due to the extent and rate of liberalization, which simply outstripped the ability of livestock farmers to adjust to the free market system, coupled with drought and disease in some instances. Since the process was not supported with socioeconomic safety nets that may have offset some of the adverse effects of liberalization and adverse circumstances, some farmers remain critical of the free market system.

10 Interview with Dr Christina Chisembele, director of the National Agriculture Livestock and Epizootics Information Centre (NALEIC), October 2008.

11 Ministry of Agriculture and Co-operatives (2004), p. vi.

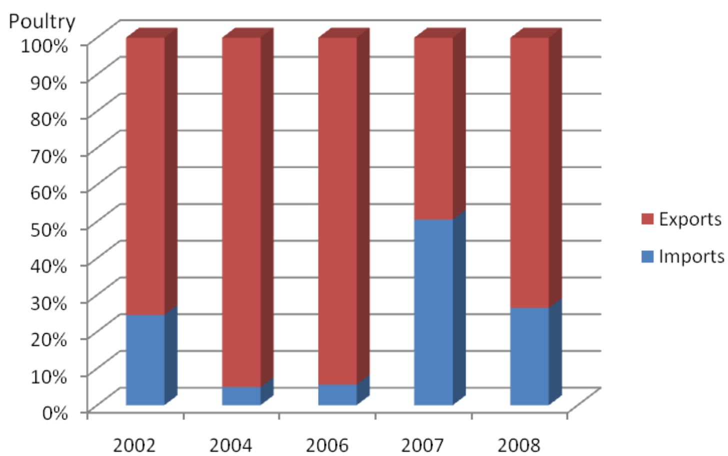
Figure 1: Livestock numbers, 1985–2007*



* Including goats, poultry, cattle, pigs and fish.

Source: NALEIC statistical livestock database, October 2008

Figure 2: Imports and exports of poultry in Zambia, 2002–08 (per cent)

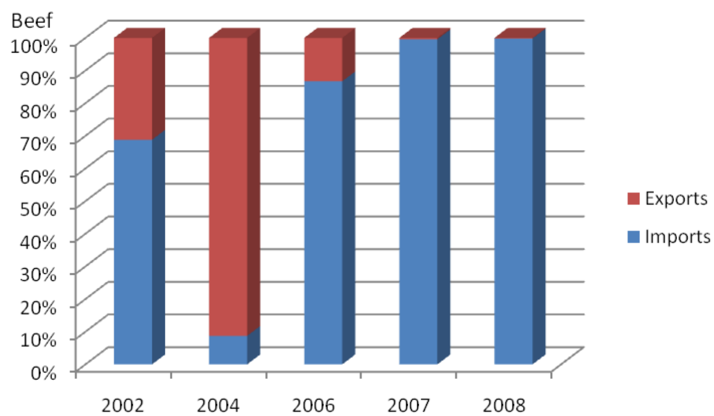


Source: NALEIC statistical database, October 2008

On the one hand, the poultry sector has thrived thanks to economies of scale and the technical know-how of farmers, which has allowed them to meet compliance standards. The organization of the farmers' interest through the Poultry Association of Zambia has also helped in this regard. Since 2002, the poultry sector has significantly benefitted from the export market, in contrast to the other agricultural sectors in Zambia. The Zambia poultry industry has seen steady export growth, as market access has improved through trade arrangements with the Common Market for East and Southern Africa and the Southern African Development Community. This was further supported by the effects of the import ban on Zimbabwean poultry since 1994, when there was an outbreak of Newcastle disease in that country. This gave the sector leverage to develop a hold on its domestic market share, recover costs of capital investment and improve on standards to meet export demand.

The beef sector in Zambia was on average a net importer of beef in the period 2002–08. One of the reasons for this is the persistent outbreaks of livestock diseases such as contagious bovine pleural pneumonia (CBPP), foot-and-mouth Disease (FMD), east coast fever and corridor disease that have intermittently hit the livestock industry in Zambia for more than two decades. In response to this, in 2003 government launched a livestock restocking program to restore breeding stock and increase animal draught power, and the Animal Disease Control Programme to preserve the current population of livestock.[12]

Figure 3: Imports and exports of beef in Zambia, 2002–08 (per cent)



Source: NALEIC statistical database, October 2008

4.2 Management of outbreaks of disease in the livestock sector

The post-democratic regime adopted a combination of a public sector and private sector approach to combatting disease outbreaks and providing veterinary services. The system entailed a new policy that restricted government support in disease control to "disease control of national economic importance,"[13] whereby government will react by subsidizing the provision of a vaccine if there is an outbreak. The only two diseases seen in these terms are CBPP and FMD. All other diseases, such as anthrax, corridor disease and rabies, are classified as "management diseases," where the private sector takes responsibility for combatting them in the case of outbreaks.

With regard to this policy, some key factors affecting the traditional livestock sector have in the past been overlooked, but have recently come to the fore. In the case of cattle, for example, the first issue is the reluctance for cultural reasons to sell livestock in order to be able to pay to vaccinate remaining livestock against threats of livestock disease. For example, Southern Province has the largest population of cattle and is home to the Ila and Tonga tribes, who are traditionally cattle herders. In their respective cultures, cattle are seen to be a sign of wealth and status.[14] The socialist system, which set social reform as a precondition for economic development, was turned on its head when the free market system was introduced, which saw economic development as a precondition for social reform. The farmers' inability to adjust to the free market system due to the culture of not selling animals because of their status as a sign of wealth and the lack of profitable incentive for the private sector to provide this service in remote rural areas has made it difficult to harness the full potential benefits of a liberal economy. As a result, there was a higher frequency of disease outbreaks that eroded the livestock base in the country as diseases that were previously controlled by the post-independent state began to resurface.

12 M. Zappacosta, S. Goodbody and S. Dradr, *Special Report: FAO/WFP crop and food supply assessment mission to Zambia* (Rome: FAO, June 2005).

13 Interview with Dr Liywalii Mata, director of information, NALEIC, October 2008.

14 Interview with Dr Christina Chisembele, director of NALEIC, October 2008.

5 Trade Agreements and Zambian Agriculture

5.1 European Union (EU)–African, Caribbean and Pacific Countries Economic Partnership Agreement (EPA)

The EPA is a reciprocal trade agreement between the East and Southern African states, to which Zambia belongs, and the EU. The agreement must be World Trade Organization (WTO) compliant and consists of liberalization on "substantially all ... trade."[15] There have been difficulties throughout the negotiations on the interpretation of what precisely constitutes "substantially all trade," because the WTO does not provide a definition of this term. In the Zambia–EU case, the EU will liberalize 100 per cent of its imports from Zambia, while Zambia will liberalize 79.6 per cent of its imports from the EU.

The liberalization of products excluding those on the sensitive list will be gradual. Zambia will not undertake any liberalization in the first five years. By the sixth year, duty will be eliminated on capital goods and raw materials. In the ninth year, Zambia will start reducing duties on intermediate goods, and by the eleventh year, on final goods. A situation where "substantially all trade" will have been liberalized will gradually be achieved by the year 2023 after a period of 15 years.

Table 1: The EU–Zambian trade liberalization schedule

	2009	
	2010	
	2011	Moratorium period
	2012	
	2013	
6th year	2014	Customs duties on capital goods and raw materials eliminated
	2015	
	2016	
9th year	2017	Reduction of customs duties on intermediate goods begins
	2018	
11th year	2019	Reduction of customs duties on final goods begins
	2020	
	2021	
	2022	
15th year	2023	Completion of the liberalization process

Ministry of Commerce, Trade and Industry, "Brief on Zambia's market access offer," update for the National Working Group on Cotonou, 14 October 2008b

Zambia's market access provisions ensure that import prohibition for environmental reasons, import restrictions for food security, export taxes for industry development (copper, cotton, scrap) and export restrictions for food security are retained.[16] In terms of future flexibilities, Zambia retains the right to continue negotiations to revise certain provisions of the Interim EPA, for example, in order to improve the safeguards provisions.[17]

15 General Agreement on Tariffs and Trade, Article XXIV.

16 Ministry of Commerce, Trade and Industry (2008b).

17 Safeguards allow a country to reimpose duties in circumstance where imports surges cause or threaten to cause damage to a local industry.

A total of 20.38 per cent of imports from the EU form Zambia's sensitive list of products, i.e., the products that are excluded from liberalization. This list includes 406 tariff lines, selected for two main purposes, which are to protect infant industries and minimize revenue losses. The tariff lines in the sensitive list designed to protect infant industries include the following agricultural products: dairy products, some meat products, honey, sugar, cereals, processed food (oils and wheat products such as flour and pasta) and beverages. In light of this, Zambia has taken preliminary steps to ensure that there is continued market access for these products covered in the EPA. However, there is underlying concern that there is a lack of local capacity to overcome supply side constraints to fully harness the potential of the agricultural sector, and in this case the livestock sector.

5.2 Doha Development Agenda (DDA)

Zambia is classified as a least developed country with preferential access to developed and regional markets.[18] The DDA negotiations have been strained as a result of countries' competing interests and the fact that these negotiations are based on the principle that "nothing is agreed until everything is agreed" in line with the notion of a "single undertaking." This principle is not applied to the Enhanced Integrated Framework (EIF) and Aid for Trade negotiations.

Zambia's participation in the WTO negotiations has mostly been advanced through the Least Developed Countries (LDCs) Group, although it should be mentioned that participation has also occurred in the African Group through a consultative process on matters of common interest. The main areas of interest to Zambia occur in agriculture, non-agriculture market access, services, trade facilitation, and EIF and Aid for Trade negotiations, and details in this regard are as follows:

Agriculture:

- addressing trade distorting domestic support and export subsidies;
- upholding members' commitment to exempt LDCs from undertaking reduction commitments;
- making operational commitments by developed countries and developing countries in a position to do so to grant duty-free and quota-free access to products originating from all LDCs with reference to the commitment made during the sixth WTO ministerial conference to grant at least 97 per cent of products originating from LDCs duty-free and quota-free market access (both agriculture and industrial products);
- having access to the special safeguard mechanism to be established for developing countries; and
- finding an expeditious solution to cotton-related issues.

Non-agriculture market access:

- upholding the commitment to exempt LDCs from participating in the formula for tariff reduction or elimination of tariffs;

18 Sajeev K. S. Nair, *Poverty impact of Doha: Zambia*, The Doha Development Agenda impacts on trade and poverty no. 10 (London: ODI, 2004), <http://www.odi.org.uk/resources/specialist/doha-briefings/10-poverty-impact-doha-zambia.pdf>.

- ensuring that the commitment to grant duty-free and quota-free market access to products originating from all LDCs is in operation;
- simplifying and making transparent the rules of origin;
- addressing non-tariff barriers affecting LDCs' export trade on a substantive basis; and
- maintaining the commitment to make capacity building support an integral part of the modalities to be agreed in the area of industrial products.

Services:

- acquiring exemption from making new market access commitments in the area of services;
- securing targeted technical assistance to assist LDCs undertake the necessary analysis and assessments that would help them make informed decisions in services trade liberalization;
- establishing a mechanism for granting special priority to sectors and modes of interest to LDCs;
- securing commitment from members on mode 4 collective requests;
- developing disciplines in services that would not limit LDCs' capacity to develop their services sectors in line with national development needs and priorities; and
- seeking rules for LDCs that would apply to them on a best endeavour basis.

Trade facilitation:

- identifying needs and priorities to ensure effective participation in the negotiations;
- securing financial, technical and capacity building support to aid the process of negotiations and implementation of results thereof; and
- identifying appropriate special and differential treatment provisions, including exemptions, longer transition periods and other flexibilities.

EIF

- increasing the resource allocation of finances under the Integrated Framework for each beneficiary country;
- restricting the criteria for beneficiary countries under EIF to LDCs; and
- improving the management of the Integrated Framework process at the individual country level and the operations of support institutions.

Aid for Trade:

- securing a package that will address supply capacity constraints; and
- securing additional resources for trade capacity building instead of repackaging of development aid.

Members have resolved to take a break at this point in time in order reflect on the future of the DDA. Zambia hopes that after the break, members will have reflected on the pertinent issues and would have developed a means to advance the negotiations.

6 Zambian Livestock Prices

6.1 Factors affecting prices

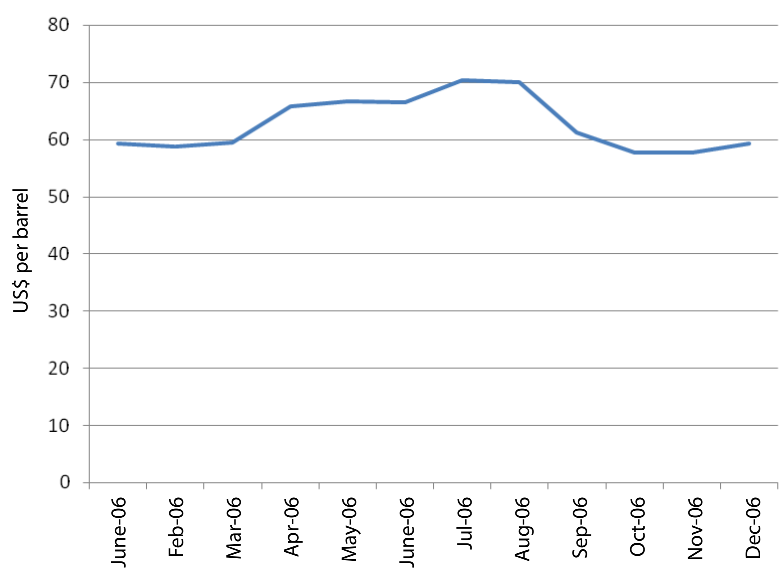
6.1.1 Feed inputs

Zambia has an underdeveloped manufacturing sector, which means it imports substantial amounts of manufactured agro-inputs, such as soya cake used as feedstock for livestock (in particular, poultry). Most livestock farming uses grazing as a means for feeding, although some sectors, like the poultry sector, are developing at an intensive rate due to mechanization[19] and use alternative feeding methods. The poultry sector has began to use soya cake and maize feed for improving the quality of broiler chickens. The impact that this has had on the sector is alarming, because of the increasing cost of soya cake, which needs to be imported, and the rising cost of maize feed in the wake of maize production shortfalls as a result of the recent floods. This has the multiplier effect of increasing the price of chicken, eggs and other products dependent on these as inputs.

6.1.2 Fuel

The rising cost of fuel has had an inevitable impact on the livestock sector in Zambia, especially because the country relies solely on fuel imports. Every time Zambia imports oil, the country incurs external costs that are directly or indirectly factored into all economic activities that use fuel as an input. In particular, this has a significant impact on the price of transported livestock. Figures 4 and 5 show the trends in crude oil prices and the pump prices of fuel in Zambia for 2006.

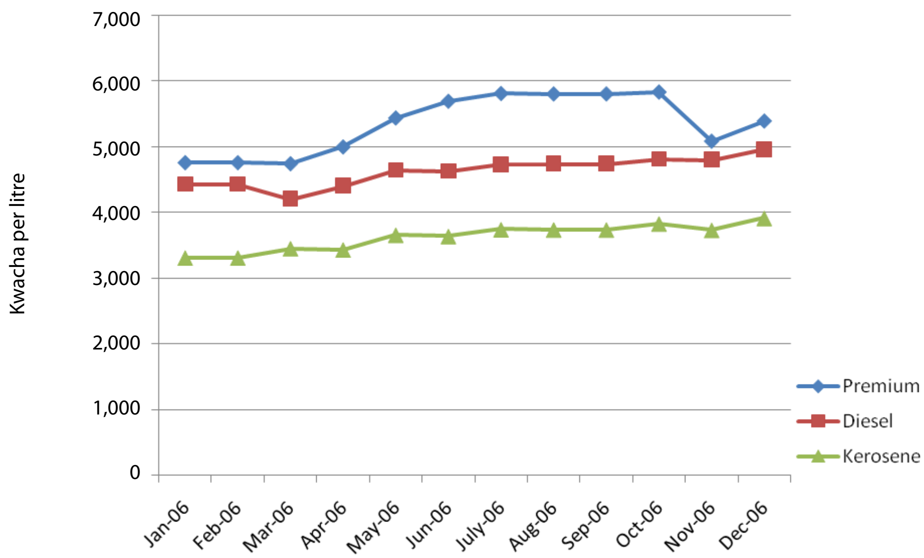
Figure 4: Crude oil prices, 2006



Source: Energy Regulation Board, Energy sector report 2006 (Lusaka: September 2008)

19 Interview with Masiyaleti Mulozo, director of trade and statistics, Ministry of Agriculture, Food and Fisheries, October 2008.

Figure 5: Lusaka pump prices, 2006



* US$1 = 3,623.833 (av. for 2006)

Source: Energy Regulation Board (2008)

6.1.3 Extreme weather patterns

In the case of Zambia, when there are extreme changes in the weather patterns, such as unexpected floods, the likelihood of an outbreak of disease is increased. For example, floods force livestock to move inland to higher plains, and this includes wild animals such as buffaloes. Buffaloes are carriers of FMD, but do not themselves fall ill from it.[20] Therefore, when livestock mix with buffalo through common drinking reservoirs, there is the consequent risk of cattle contracting FMD.[21] When disease outbreaks occur, government imposes a ban on the movement of livestock within an infected zone. This then causes a reduction in the supply of livestock in the market and results in the product becoming scarce, further pushing up the price of livestock.

6.1.4 Economic pressures

Households involved in the livestock sector use the sale of livestock for a substantial part of their income. In Western Province, the sale of livestock accounts for about "60% of income for the average household involved in livestock production."[22] Therefore, increases in the prices of other commodities cause the multiplier effect of an increase in the selling price of their livestock to partially offset the deficit from price increases in other goods.

20 Interview with Dr Christina Chisembele, director of NALEIC, October 2008.

21 Interview with Dr Happy Nzilila, director of agro-marketing, NALEIC, October 2008.

22 S. E. Musialela, M. Mbikusita-Lewanika and C. Nyambe, *A synthesis of case studies on trade constraints faced by local communities in Zambia: Cattle marketing* (Lusaka: Jesuit Centre for Theological Reflection, April 2008).

Item	2005		2006*		2007**		Percentage price increase from 2005 low to 2007 high
Poultry							
Broilers	Low	High	Low	High	Low	High	53%
	13,000	15,000	17,500	20,000	20,000	20,000	
Village chickens	Low	High	Low	High	Low	High	100%
	10,000	13,500	15,000	17,000	18,000	20,000	
Cattle							
Beef	Low	High	Low	High	Low	High	27.3%
(dressed)	11,000/kg	11,000/kg	12,500/kg	12,500/kg	13,500/kg	14,000/kg	
Goats							
	50,000		60,000		80,000		60%
Pigs							
	400,000		500,000		600,000		50%

* US$1 = 3,623.833 (av. for 2006)

** US$1 = 4003.743 kwacha (av. for 2007)

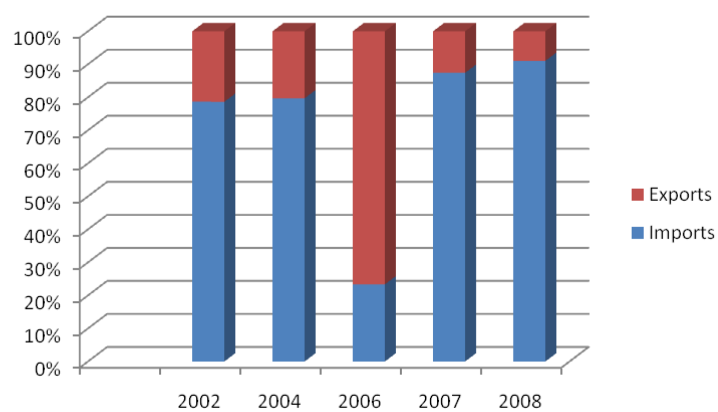
Source: NALEIC Information Centre statistical data, October 2008

6.2 Livestock prices trends

6.2.1 Rising prices

Table 2 shows that Zambia has seen significant price increases across all livestock. Cattle is the lowest with a 27.3 per cent increase from 2005 to 2007, with village chicken prices increasing the most by 100 per cent in the same period.

Figure 6: Zambia livestock imports and exports, 2002–08 (per cent)



Source: NALEIC statistical database, October 2008

As the overall trend between 2002 and 2008 shows, Zambia has on average imported more livestock than it has exported, with 2006 seeing a significant variation in favour of livestock exported as compared to livestock imported.

The reasons for Zambia being a net livestock importer are as follows:

(a) *Disease outbreaks:* Because the market faces a shortage of supply when there is a disease outbreak, the incentive to import is created to make up for the shortfall. Zambia has persistently experienced outbreaks of disease, ranging from FMD to the now endemic swine fever in Eastern Province.

(b) *Poor funding:* The lack of funding to the agriculture sector in support of data collection to effectively monitor the impact of floods and disease outbreaks means that local stocks are not properly managed, leading to deaths from disease, which lead to imports.

(c) *Lack of technical knowledge:* Most livestock holders do not come from an agro-scientific background, making it difficult for them to understand how to control and manage their livestock in an economically viable way.

(d) *Poor infrastructure:* Because Zambia faces many challenges like proper livestock management and disease control, there is the problem of poor infrastructure to implement sanitary standards to meet export demand.

(e) *Stocking and restocking:* The process of replenishing stocks continues without addressing the root of the problem, which is essentially the control of disease outbreaks.

7 Challenges and Opportunities in the Development of Agriculture and the Livestock Subsector

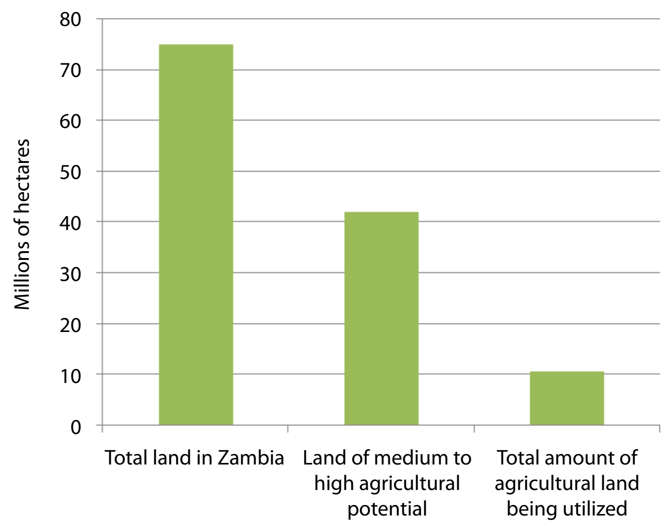
7.1 The effect of traditional farming methods

The Zambia land administration and management policy estimates that 94 per cent of Zambia's land is under customary title. There has been a lack of coordination between the role of traditional establishments and government in developing agriculture policies to harness the full potential of the agricultural sector. The under-utilization of land illustrates where farm blocks can be established in conjunction with the traditional establishments. This would improve the coordination of agriculture cooperative efforts and stimulate private sector agro-commercial investment, fostering the benefits to economies of scale.

Zambia has a total of 75 million hectares of land, for which 42 million hectares are considered suitable for agricultural production. Currently, only 10.5 million hectares are being used.

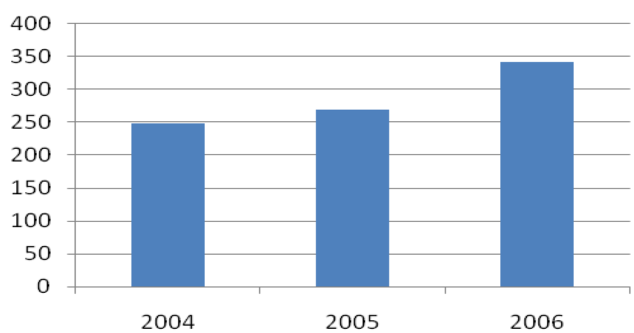
With regard to food security and rising food prices, the livestock sector is a key part of the traditional agriculture sector in the normal way, but also because of the extensive use of cattle or other livestock for draught power for irrigation purposes and for tilling the land for crop production. If livestock are lost due to a disease outbreak or drought, the anticipated yield per hectare for farmers is reduced as a result of the loss of this draught power, while the amount of water that can be drawn for irrigation in the event of a drought is reduced for the same reason. As a result, farmers are locked into a cycle of poverty because they are unable to increase their yield per hectare and so earn a higher income or sustain food security. More income over time would enable reinvestment in the inputs for capital equipment such as tractors as an alternative to livestock or even investment in basic irrigation such as boreholes.

Figure 7: Land use in Zambia



Source: Ministry of Agriculture and Co-operatives (2004)

Figure 8: Properties titled for agriculture, 2004–06

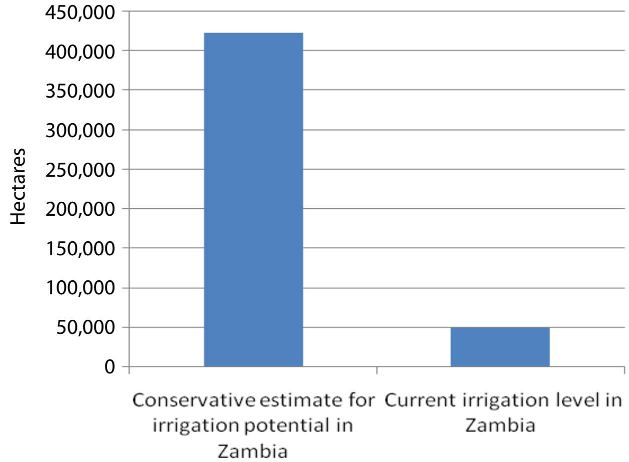


Source: Ministry of Finance and National Planning, 2006 final economic report (Lusaka: 2006)

7.2 Under-utilization of water for irrigation

Zambia has an irrigation potential of 423,000 hectares, but only 50,000 hectares are irrigated. Improved irrigation use would provide for the development and sustainability of a wide range of crops, livestock and fish. This is because it would enable the planting of crops during the winter season and during droughts; livestock survival would be improved during droughts; and, lastly, the fisheries sector could further benefit from through increasing the amount of fish stock countrywide for potential export.

Figure 9: Irrigation use in Zambia



Source: Ministry of Agriculture and Co-operatives (2004)

7.3 Budget disbursement

Infrastructure continues to be a problem that plagues not only the overall development efforts of Zambia, but more especially the development of the country's livestock sector. As Zambia has the potential to not only be a bread basket for the region, but also a conduit to stimulate trade in the region, the development of basic transport infrastructure such as the railway system could provide significant contributions to reducing the costs of transportation. However, the secretary to the Treasury, Evans Chibiliti, revealed an estimate of 900 billion kwacha (US$224.8 million) of the 12.4 trillion kwacha national budget in 2007 was not spent. The factors that attributed to this are bottlenecks and poor approval and implementation cycles of expenditures that determine the financing of development and infrastructural projects, which he referred to as "structural deficiencies."[23]

7.4 Lack of private sector incentives to provide vaccines

As we saw earlier, there is a lack of private sector incentive to engage in certain aspects of the livestock sector such as the distribution and procurement of veterinary vaccines. This is because the economic viability of the process is cast in doubt because of the costs of distributing and providing this service by the private sector. In rural areas, farmers are sparsely spread and do not have the income to afford the vaccines.

7.5 Opportunities for the agricultural sector to reach its potential

Zambia shares borders with Zimbabwe, Namibia, Angola, the Democratic Republic of the Congo, Tanzania, Malawi and Mozambique, for which it could find itself become a bread basket, as Zimbabwe once was in the Southern African region. If or when this potential is harnessed with complementary support programs in infrastructure development designed for competitive export growth and trade, Zambia could become a hyper trade zone, increasing the flow of goods within and between countries in the region.

23 *The Post*, "K900bn from 2007 budget not spent, reveals Chibiliti," 2 January 2008, accessed on 20 September 2008, <http://www.pangaeapartners.com/zambia/moneyweekApr0308.htm>.

Zambia has ore reserves of phosphorous deposits in the Eastern and North-Western provinces, while there are significant deposits of natural gas in Southern Province. These are two key ingredients in the manufacture of fertilizer. The Zambia Agriculture Research Institute carried out research in 1990 to see how phosphorous could be mined for the purpose of domestic fertilizer, since large sums of money was being spent on the importation of fertilizer.

The development of domestic fertilizer production would potentially:

- provide employment;
- provide stability in the costs of production in the agriculture sector resulting from the price of fertilizer inputs;
- create a situation where, if the Fertilizer Support Programme (FSP; see below) were to continue to exist, then money would be spent in the local economy, thus relieving external pressure on the kwacha;
- stabilize prices, affording some insulation from exogenous shocks in the international market, which means that the agriculture sector would remain competitive in the international and domestic market;
- free up additional fiscal space to develop other components of the agricultural sector, like the livestock sector and irrigation development;
- diversify the economy from resource extraction to value added production; and
- move Zambia from being a net importer to a net exporter of fertilizer in the region, improving the balance of payments.

8 Agricultural Policies to Deal with These Problems

Currently, the National Agriculture Policy is in place, which was developed in 2004 to last until 2015; it is divided into 11 subsection themes. The 'livestock' subsection identifies the market constraints as the

> prevalence of animal diseases, non availability of veterinary drugs, high cost of veterinary drugs, inadequate livestock nutrition and water, poor animal husbandry practices/management, inadequate marketing infrastructure, lack of appropriate livestock research, inadequate livestock extension and health services, lack of linkages between live stock research and livestock extension services.[24]

The policy highlights as the objectives to improve animal health, livestock research, animal production and extension services through increasing efforts by using appropriate strategies.

To complement these efforts, the Fifth National Development Plan (FNDP) was developed, which is a broader national development policy document that aims to develop the agricultural sector through trade. The FNDP focuses on agro-producers developing through diversification and value added production.

24 Ministry of Agriculture and Co-operatives (2004), p. 26.

8.1 Are policies working?

The National Agriculture Policy remains as the guiding policy document for decisions made and actions to be taken by the Ministry of Agriculture and Cooperatives. Policies have fallen short with regard to how quickly they are designed and implemented, and the extent to which they are implemented. The livestock sector has been plagued with intermittent disease outbreaks for more than two decades, yet the most recent policy response occurred in 2003, comprising a livestock restocking program to restore breeding stock and increase animal draught power, and the Animal Disease Control Programme to preserve the current population of livestock.[25] Yet in the Eastern Province there has been an endemic outbreak of swine fever for the past two years.[26] The Ministry of Agriculture and Co-operatives continues to be plagued with underfunding and understaffing of extension officers countrywide, affecting its ability to implement policies and provide the much needed extension services.

The FNDP is currently undergoing a mid-term review, and will need some readjustments in light of what has happened in the international economy. In the case of its agricultural policy, there have been significant drawbacks to the overall success of the policy due to high turnover at the Ministry, as well as unanticipated events in the international economy. For example, the FSP, which already consumes a significant proportion of the budget, continues to marginalize the allocation of resources to develop other capacities needed to stimulate the diversification and development of the sector through trade. More recently, there was an unbudgeted amount for the increased allocation of resources to the FSP in an attempt to offset the cost of this input to small and medium scale farmers in crop production.

Estimates show, however, that only 20 per cent of the small scale farmers who are the intended recipients actually receive fertilizer from the FSP.[27] The process to access fertilizer involves cooperatives making an application for fertilizer to the FSP, which approves the amount. Through the cooperatives, farmers then collect their fertilizer at district level, but the actual amount of fertilizer collected is not documented at that level. Furthermore, fertilizer received has been re-exported and resold through the FSP, both domestically and internationally, which is also not properly documented. These factors result in a poor accounting system for amounts distributed and actual amounts collected. Thus, the documentation system for the FSP is flawed, resulting in waste.

8.2 Zambia's response to problems in the agricultural sector

An ad hoc task force was formed in August 2008 comprising the private sector, government and agro-focused non-governmental organizations. The task force is exploring short-, medium and long-term solutions to the problems faced by the agricultural sector as a whole, and seeks to explore more substantive and responsive reactions to the challenges faced by the sector.

9 Recommendations

The following recommendations are offered for the improvement of the agriculture sector in general and the livestock sector in particular.

---

25 Zappacosta, Goodbody and Dradr (2006).

26 Interview with Dr. Christina Chisembele, director of NALEIC, October 2008.

27 *Farmers Gazette*, p. 26.

Strengthening of research facilities: Local research institutions should be strengthened through increased funding and collaboration with renowned foreign research institutions for the purpose of making a positive and tangible contribution to the overall revamping of the agriculture sector. A competitive edge will be attainable with investment in science, research and technology to meet international standards.

Stepping up of efforts to introduce real-time sharing and capturing of data: This will assist policy-makers to develop responses with holistic perspectives. In particular, it will promote policies that will provide complementary efforts to specializing in livestock production through competitive production techniques, enabling more responsive regional responses to livestock monitoring and control.

Acting on policy: A general policy direction exists to harness the will, courage, vision and technical capacity of the country to promote agriculture to its full potential and embark on an intense restructuring of the agriculture sector by coordinating producers, research institutions, government and consumers. Policies are well formed often in light of broad consultations with experts and stakeholders. But now there is need to begin to act on policy, as more often than not, qualitative implementation of policy is lacking.

Provision of direction by the Ministry of Agriculture and Co-operatives: There needs to be a realistic coordination by the Ministry of efforts between the private and public sector to be able harness the potential of the livestock sector. If the state withdraws from unviable support programs such as veterinary extension services, the private sector must be directed and given incentive to adequately fulfill this role.

Involvement of traditional establishments: There needs to be increased involvement by traditional farmers in the agricultural sector to better inform them of the role they can play to support efforts in improving standards of living and income levels.

Increased scope of animal diseases of national economic importance: There needs to be an increase in the scope of diseases covered in the policy on diseases of national economic importance to include diseases such as corridor disease, anthrax and rabies. As we have seen, when there is an outbreak of disease that results in livestock loss, a price increase occurs due to a smaller amount of the commodity being available on the market.[28] Increasing the scope of diseases of national economic support would subsequently sustain increasing amounts of livestock available on the market, thus stabilizing prices.

Construction of dams and reservoirs: This will provide benefit on two counts. Firstly, during seasons of excess rains that result in floods, additional water will be stored for drought periods, while flooding will simultaneously be reduced. Secondly, this will enable the protection of livestock from exposure to contamination from wild animals such as buffalo, which carries FMD, as access by buffalo to dams where livestock drink can be controlled.

Promotion of vertical integration: If livestock farmers are able to partner ownership and control agro-processing facilities, this will ensure that added value arising from processing accrues to the farmers, which can be reinvested in the agriculture sector. Investments could be made in bulk transportation and storage facilities so as to ensure timely deliveries and minimize wastage.

28 Interview with Dr. Christina Chisembele, director of NALEIC, October 2008.

Establishment of storage and other facilities: The development of efficient storage facilities in areas of high production and the extension of cold room facilities would enhance the availability of international dairy and meat products. The introduction of breeding centres, genetic banks, agriculture nurseries and farming techniques would encourage the introduction of new farming practices.

Provision of credit: The provision of a revolving fund for cooperatives and associations would allow them to make timely investments throughout the year.

10 Conclusion

There is no doubt that Zambia faces similar challenges to other countries as the price of food rises. But Zambia faces added setbacks associated with bad policy practices and the undernurturing of agriculture sector. Part of the problem arises from having had policies that emphasized social change as a precondition for economic development, a perception that matured and was embedded in institutions from post-independence until 1991.

Secondly, market access provisions are not the sole basis for improving trade, but are rather a conduit for such improvement. The provision of market access by the EU in the case of Zambia must be complemented by the development of capacity. Development takes time and involves large public investment and lengthy implementation programs. In the case of the livestock sector, Zambia still has a long way to go in meeting sanitary standards, controlling disease outbreak and educating livestock holders on best management practices that can enable Zambia to compete and export to the EU.

Thus, agro-economic efficiency needs to be ensured by optimizing the use of resources through the coordinated efforts of stakeholders. In a world of increasing complexity, collective action is greater than the sum of individual and isolated actions taken by government, institutions, civil society and business. Uncertainty, passive actions and—even more so—passive thinking cannot substantially impact on the future. Thus, continuous interaction among the stakeholders is necessary in the future for effective and substantive action to be taken in the broad development of the agricultural sector in Zambia.

11 Bibliography

Bigsten, A. and K. B. Mkenda. *Impact of trade liberalization*. Country economic report. Stockholm: SIDA, 2002.

Conservation Farming Unit. *Conservation farming and conservation agriculture, Handbook for HOE farmers in agro-ecological zones I and IIa – Flat culture*. Lusaka: CFU, 2007.

Energy Regulation Board. *Energy sector report 2006*. Lusaka: September 2008.

Farmers Gazette. "Subsidies – misguided resources." September 2008, p. 26.

Ministry of Agriculture and Co-operatives. *National Agriculture Policy 2004–2015*. Lusaka: October 2004.

———. *Fifth National Development Plan for 2006–2010*. Lusaka: December 2006.

Ministry of Commerce, Trade and Industry. *Current negotiations under the WTO DOHA Development Agenda*. Lusaka: 31 July 2008a.

———. "Brief on Zambia's market access offer." Update for the National Working Group on Cotonou, 14 October 2008b.

Ministry of Finance and National Planning. *2006 final economic report*. Lusaka: 2006.

Ministry of Lands. *Draft Land Administration and Management Policy 2002*. Lusaka: 2002.

Musialela, S. E., M. Mbikusita-Lewanika and C. Nyambe. *A synthesis of case studies on trade constraints faced by local communities in Zambia: Cattle marketing*. Lusaka: Jesuit Centre for Theological Reflection, April 2008.

Nair, S. K. S. *Poverty impact of Doha: Zambia*. The Doha Development Agenda impacts on trade and poverty no. 10. London: ODI, 2004. <http://www.odi.org.uk/resources/specialist/doha-briefings/10-poverty-impact-doha-zambia.pdf>.

The Post. "K900bn from 2007 budget not spent, reveals Chibiliti." 2 January 2008. Accessed on 20 September 2008. <http://www.pangaeapartners.com/zambia/moneyweekApr0308.htm>.

Zappacosta, M., S. Goodbody and S. Dradr. *Special Report: FAO/WFP crop and food supply assessment mission to Zambia*. Rome: FAO, June 2005.