



HELLENIC ZAMBIAN
BUSINESS AND DEVELOPMENT
COUNCIL

Livestock Production in Zambia



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Introduction

Zambia, a landlocked country in south-central Africa, is about one-tenth larger than Texas. It is surrounded by Angola, Zaire, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, and Namibia. The country is mostly a plateau that rises to 8,000 ft (2,434 m) in the east.

Basic Geography Stats of Zambia

STAT	AMOUNT	DATE	RANK
Area (total)	752.618 sq. km.	2013	40th out of 251
Area (Land)	740,724 sq. km.	2008	39th out of 235
Area (Water)	9.220 sq. km.	2013	51st out of 246
Agricultural land (% of land area)	34.42%	2007	113th out of 197
Arable land (% of land area)	4.57%	2011	149th out of 204
Forrest area (sq. km.)	415.624 sq. km.	2007	18th out of 195
Irrigated land	1.560 sq. km.	2008	80th out of 174
Land boundaries (total)	5.664 km.	2013	23th out of 166
Land boundaries	Angola 1,110 km, Democratic Republic of the Congo 1,930 km, Malawi 837 km, Mozambique 419 km, Namibia 233 km, Tanzania 338 km, Zimbabwe 797 km	2013	

Map of Zambia



Basic Agriculture Stats of Zambia

STAT	AMOUNT	DATE	RANK
Agricultural growth	117	2007	67th out of 204
Agricultural land (sq.km)	234.350 sq.km	2011	76th out of 204
Cultivable land (hectares)	5.26 million	2007	39th out of 194
Cereal yield (Kg per hectare)	2.693,03	2012	94th out of 178
Cereal production (metric tons)	226.82	2012	71st out of 180
Farm machinery- tractors	6.000	2007	92nd out of 186
Farm workers	3.12 million	2008	40th out of 194
Livestock- Annual freshwater Withdrawals, total (cubic meters)	1.74 billion	2011	96th out of 179
Renewable internal freshwater resources, total (cubic meters)	80.2	2011	63th out of 176

Background

Relative to its outstanding natural grazing advantages, Zambia has a comparatively small cattle population. The country has approximately 3 million head of cattle with only 0.14 head of cattle per hectare of land suitable for grazing. In comparison, Zimbabwe has three times as many head of cattle per hectare of grazing land and Kenya more than four times as many. Most of the national herd is held by traditional farmers and is concentrated in three of Zambia's nine provinces (which account for over 70 percent of the traditional cattle stock), although other provinces are also well suited to cattle rearing.

Zambia's production and consumption of beef and dairy products is small. Together, the industries contribute approximately 1 percent of Zambia's gross domestic product. In 2008, Zambia produced 58,400 tonnes of beef and 65,000 tonnes of raw milk.

Industry Structure

There are three systems of cattle farming in Zambia and these differ significantly on measures of productivity (see Table 1):

- Commercial farmers (accounting for only 5-6 percent of the cattle population) use advanced cattle husbandry practices and their productivity parallels that of South Africa, the regional leader. Their productivity is, however, somewhat offset by high costs of feed and veterinary services.
- At the opposite end of the spectrum are traditional farmers that own 80 percent of the cattle population but are much less productive than commercial farmers. The behavior and incentives of traditional farmers differ significantly from those of commercial farmers, and are influenced by social and cultural factors (e.g. a tendency to view cattle as a store of wealth, a means of subsistence and of mechanical power rather than a means of generating income), as well as a lack of information and access to commercial markets. As a result, traditional farmers use fewer and lower quality inputs (e.g. feed, breeding stock, and veterinary care) and their cattle have poorer nutrition, lower product yields, and higher rates of disease.
- In the middle of the spectrum are emergent farmers, who are transitioning to commercial farming and combine aspects of both the traditional and commercial systems. They view cattle as both a source of income and a social

asset, and are prepared to invest limited resources in disease prevention and supplementing natural pasture. Despite lower product yields than commercial farmers, emergent farmers are the most cost-competitive of the three systems, primarily due to their reliance on low-cost grazing and supplemental feeding (as opposed to the costly zero-grazing of commercial farmers).

Table 1: Traditional Farmers own the Most Cattle, yet they are the Least Productive

	<i>Farmer Type</i>		
	Traditional	Emergent	Commercial
Cattle population (% of total)	80%	14-15%	5-6%
Calving rate (% per year)	55%	In between traditional and commercial	70-80%
Calving mortality (% per year)	20%	In between traditional and commercial	1-2%
Adult deaths (% per year)	5% (adult) -7% (heifer)	Lower than traditional	Lowest
Off-take rates (% of herd per year)	10%	10-15%	17-18%
Live weight (kg per cow)	250	250	300
Milk yield (litres per day)	2	7-10	17-23
Characteristic	Low growth	Dynamic	Dynamic

Over 310,000 households own cattle, and individual farmers' herd sizes are fairly small. In the case of small-scale farmers, the mean number of cattle owned is 9. Amongst medium-scale farmers, this number is 17, and amongst large scale farmers it is 66.

The processing stage of the beef and dairy value chains is immature and inefficient. For beef, the major processors are vertically integrated from the farm to retailing, and the specialization that produces efficiencies in international industries is yet to take hold. The beef industry used to be dominated by a single, large firm, but new competitors have recently emerged and there are now 10-15 sizeable businesses in this market. That said, the largest player still has a market share of 40-45 percent and still possesses a dominant market position. The beef value chain is buyer-driven, with processors having power over both farmers and consumers.

Livestock Population

Livestock population among the smallholder sector has increased over time. Figure 1 shows that in 2001, the livestock population was estimated at 1.5 million cattle, 1.2 million goats, 500,000 pigs, and 51,000 sheep. By 2012, the population of livestock was estimated at about 2.2 million cattle, 2.0 million goats, 942,000 pigs, and 49,000 sheep. However, these increases have been spatially uneven with livestock populations even decreasing or remaining stagnant in some provinces. It is evident that about half of cattle, over a third of goats and close to 40% of sheep are found in Southern Province, while Eastern Province accounts for more than 60% of all pigs. For all the livestock species, Luapula, Lusaka, North-western, and Copperbelt Provinces have relatively low populations. With such an uneven geographic distribution of livestock, interventions to do with livestock infrastructural developments outlined in the SNDP should be area specific taking into account the livestock composition by Province.

Table 2: National Livestock Population by Year 2001, 2004, 2008 and 2012

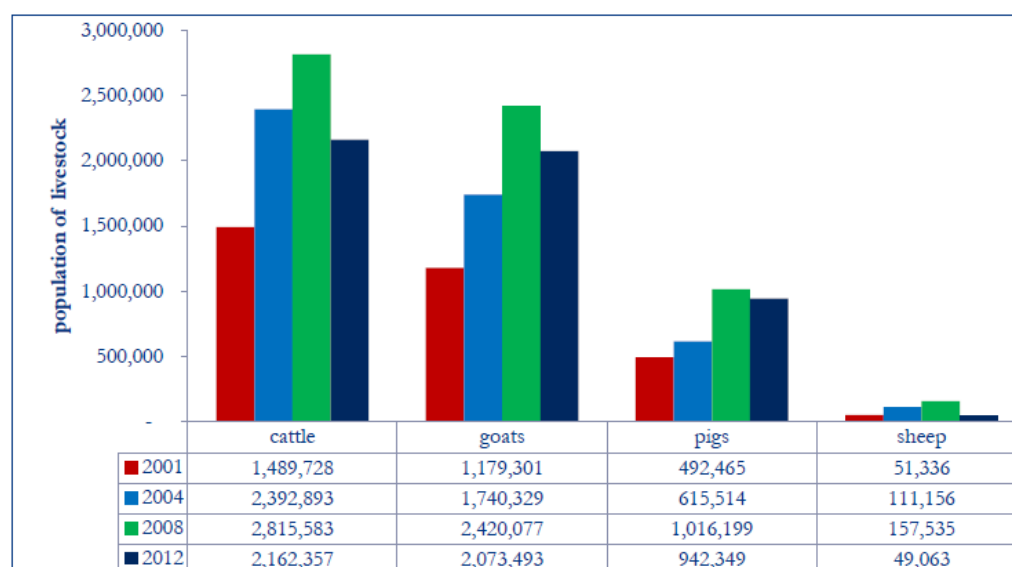
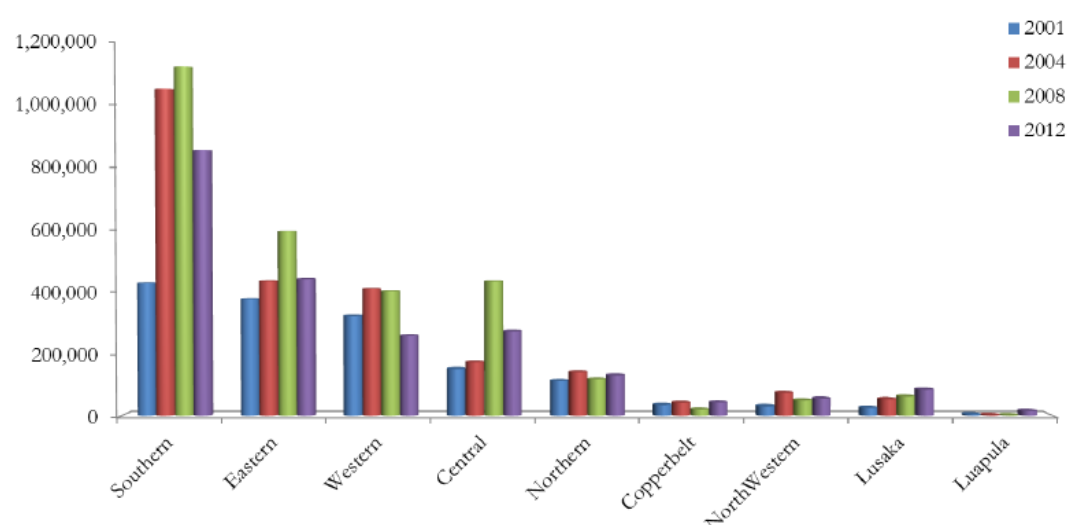


Table 3: Cattle Population over Time by province 2001, 2004, 2008 and 2012

In 2012, among cattle owners, a household owned an average of seven cattle, six goats, five pigs, and six sheep. It is worth noting that a significant proportion of households owned between one and six head of cattle.

The potential for industry growth

Vast grazing lands could support a significantly larger cattle population in Zambia and, therefore, an increased supply of beef. The country's extensive grazing lands (4 times more grazing than arable land) offer a clear comparative advantage over its regional neighbors and provide ample capacity for Zambia to increase its relatively low cattle density. Cattle-farming is concentrated in just three of Zambia's provinces currently, but all of the country's agro-ecological zones have rainfall levels that are well suited for raising livestock. Zambia's carrying capacity suggests that the country could support over 7 million cattle, more than twice its current population of 3 million.

Favorable market prospects, especially within the region, provide an opportunity to rapidly grow demand for Zambia's beef and dairy products. Rising incomes, urbanization, and changing consumption patterns could drive some growth in Zambia's domestic market for beef and dairy products, albeit from a small base today. Regional exports provide considerable scope for growth in demand. Zambia can develop a sizable volume of beef exports to the region targeting the Democratic Republic of Congo, Angola, and, if it can meet sanitary standards, South Africa. While there is substantial global demand, international markets for beef and dairy products are fiercely competitive and many countries impose strict

quality standards. Therefore, it may take Zambia several years to compete successfully.

Potential, both on the demand and supply sides provides an opportunity to rapidly expand Zambia's beef and dairy industries. Assuming other conditions are right, Zambia can leverage its abundance of land and take advantage of the favorable market prospects. In this way, the beef and dairy industries can expand.

Results Needed for the Beef Industry to Achieve its Potential

Why is Zambia's beef industry not growing faster when there is strong market demand for beef and Zambia has the land to sustain a significantly higher cattle population? As highlighted in Table 4, there are several results that, if achieved, could narrow Zambia's productivity gaps and unleash growth in the beef industry. A description of each result, ordered by its position in the beef value chain (rather than its relative priority) is provided underneath the figure.

Table 4: Results Needed for the Beef Industry to Achieve its Potential

Cattle Farming (Farming & Feedlots)	• Better disease prevention systems and lower cost drugs and veterinary care could improve cattle health and facilitate cattle population growth • Better availability and affordability of breeding and feeding inputs could reduce production costs and improve calving rates and yields • Improved farming practices and business acumen of traditional farmers could translate into greater productivity and returns
Intermediary Markets	• Improved market access could facilitate greater market participation and income generation by traditional farmers
Product Processing	• Greater specialization along the beef processing chain could help to address Zambia's uncompetitive dressed weight prices
Enabling Environment	• Easier access to and lower cost of finance could facilitate greater investment in and growth of the beef industry • Better road and electric power infrastructure could lower the costs of doing business • A better regulatory environment could increase investment in the beef industry and enhance their performance