3.0 Livestock Population

The Department of Veterinary and Livestock Services conducts an annual livestock census in August of every year. The domesticated animals covered in this livestock census encompass both food producing animals as well as companion animals. The 2012 census summaries by region are shown in tables 1 and 2 below.

Region	Total Cattle	Beef Cattle	Dairy Cows	Pigs	Chickens	Goats	Sheep
Hhohho	129,539	127,855	1,684	12,019	2,245,668	79,788	3,842
Lubombo	175,938	175,638	300	10,196	245,497	155,731	3,019
Manzini	177,247	174,587	2,660	9,077	1,313,795	131,097	5,391
Shiselweni	151,230	150,650	580	12,256	236,804	119,210	5,042
Totals	**633,954**	**628,730**	**5,224**	**43,548**	**4,041,764**	**485,826**	**17,294**

Table 1: Livestock population for 2012 taken from the livestock census conducted in August 2012

Region	Bulls	Cows	Oxen	2-3 yrs Male	2-3 yrs Female	1-2 yrs Male	1-2 yrs Female	< 1 yr Male	< 1 yr Female	Totals
Hhohho	5,009	47,679	22,179	10,220	14,137	6,328	6,425	7,986	7,892	**127,855**
Lubombo	3,852	66,775	13,566	14,880	22,548	11,616	13,058	15,061	14,282	**175,638**
Manzini	6,177	65,683	23,375	12,523	19,669	11,161	10,901	12,519	12,579	**174,587**
Shiselweni	6,422	56,006	21,318	17,684	17,684	8,467	228	11,411	11,430	**150,650**
Totals	**21,460**	**236,143**	**80,438**	**55,307**	**74,038**	**37,572**	**30,612**	**46,977**	**46,183**	**628,730**

Table 2: Beef cattle herd population for 2012 taken from the livestock census conducted in August 2012

Region	No. Cows	1-2 yrs Female	Total Cattle
Hhohho	1,337	347	1,684
Lubombo	222	78	300
Manzini	1,792	868	2,660
Shiselweni	403	177	580
Totals	**3,754**	**1,470**	**5,224**

Table 3: Dairy cattle herd population for 2012 taken from the livestock census conducted in August 2012

Region	Dogs	Horses	Donkeys	Mules
Hhohho	22,691	302	2,355	1
Lubombo	20,893	72	4,163	4
Manzini	34,077	259	1,592	5
Shiselweni	24,704	57	3,713	1
Totals	**102,365**	**690**	**11,823**	**11**

Table 4: Population of companion animals according to region

The population of dogs increased from 99,672 in 2011 to 102,365 in 2011: while the numbers of horses, donkeys and mules all decreased in 2012.

3.1 Calf Births in 2012

A total of 101,002 calves were born in the period starting in January to December 2012. The highest numbers of calves were born in the Lubombo Region followed by Manzini, Hhohho and lastly Shiselweni. Table 10 and 11 below shows monthly numbers of calves born according to gender and by region. The general observation is that there is a 1:1 ratio in the gender of calves born.

Month	Hhohho Region		Manzini Region		Lubombo Region		Shiselweni Region	
	Females	Males	Females	Males	Females	Males	Females	Males
January	861	893	1,306	1,372	1,979	2,101	1,137	1,067
February	511	580	1,571	1,352	1,298	1,372	959	872
March	437	413	1,006	900	1,192	1,126	792	797
April	585	489	707	787	1,060	1,164	904	867
May	585	577	730	629	748	725	768	772
June	501	519	536	548	866	792	669	714
July	759	742	642	635	820	829	879	806
August	784	823	981	917	758	761	1,033	1,006
September	958	1,020	842	825	912	834	924	896
October	1,102	1,069	1,584	1,423	1,166	1,086	1,232	1,230
November	1,137	1,080	2,391	2,135	1,715	1,611	1,369	1,375
December	1,329	1,249	2,215	2,120	2,512	2,399	1,426	1,525
Regional Totals	**19,003**		**28,154**		**29,826**		**24,019**	

Table 5: Calf Births in 2012 according to region and Season

Total Calf Births in 2012

Month	Total Calf Births		Total
	Females	Males	
January	5,283	5,433	**10,716**
February	4,339	4,176	**8,515**
March	3,427	3,236	**6,663**
April	3,256	3,307	**6,563**
May	2,831	2,703	**5,534**
June	2,572	2,573	**5,145**
July	3,100	3,012	**6,112**
August	3,556	3,507	**7,063**
September	3,636	3,575	**7,211**
October	5,084	4,808	**9,892**
November	6,612	6,201	**12,813**
December	7,482	7,293	**14,775**
Totals	**51,178**	**49,824**	**101,002**

Table 6: Totals of Male and Female calves born in 2012

3.2 Calf Births by Region in the Year 2012

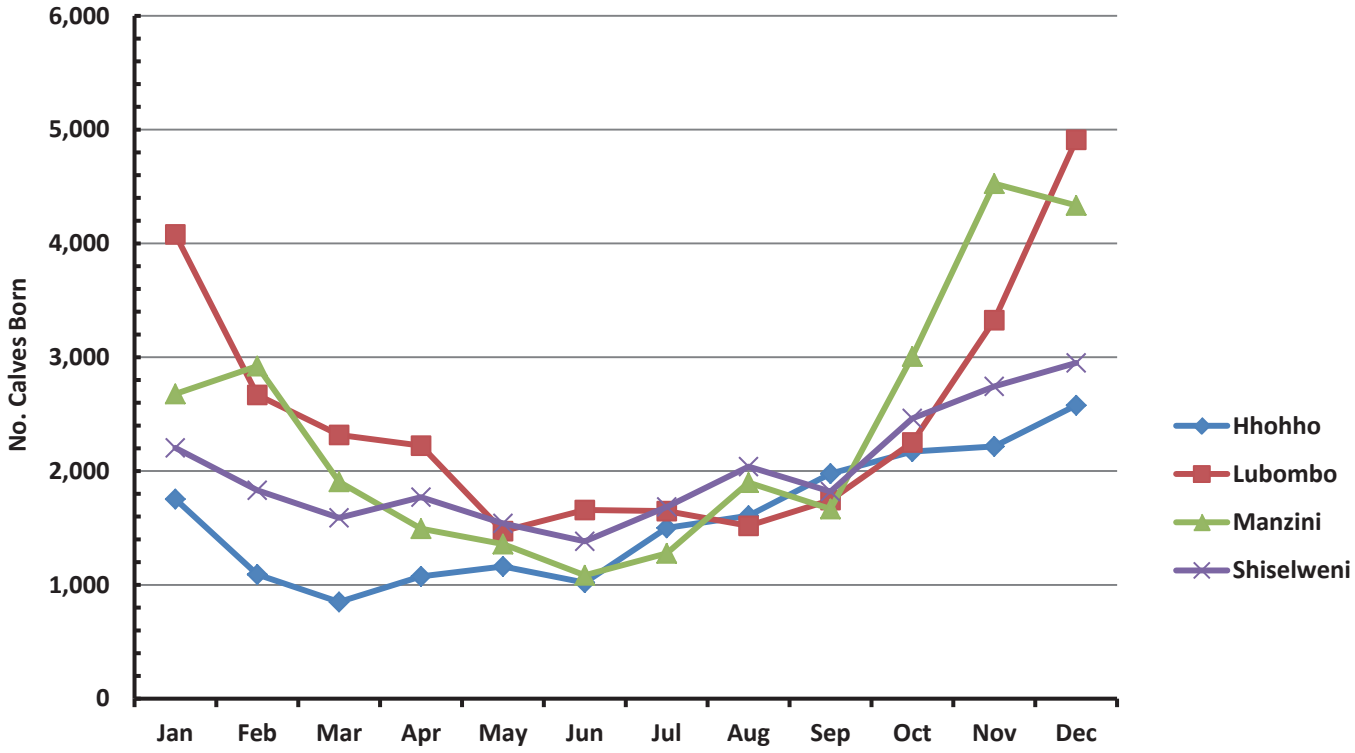

Figure 2: Calf Births in 2012 by region

The pattern of calving observed in 2012 (Figure 2) is similar to those observed in previous years (2009 – 2011). There is an exponential increase in the number of calves born starting from September to January of the following year, subsequent to which there is a sharp decline in the number of calves born from February to March of the following year. The number of calf births then remains relatively constant until September. This implies that the calving season starts in October and ends in February of the following year, remaining constant until the next calving season. In total number of calves born in the year 2012 were 101,002 and the calving breakdown per region was as follows: Hhohho 19,003; Lubombo 29,826; Manzini 28,154 and Shiselweni 24,019.

Tenure	Animal Class /Proportion	Hhohho	Lubombo	Manzini	Shiselweni
SNL	Beef Cows	46,367	56,428	56,884	51,419
	Beef Heifers	13,545	19,224	17,410	16,429
	Dairy Cows	1,149	141	1,020	382
	Dairy Heifers	292	59	593	170
	Calves	15,788	24,160	22,000	21,040
	% Cows	33.23	42.71	37.99	40.62
	% Cows & Heifers	25.73	31.85	28.98	30.76
TDL	Beef Cows	1,312	10,347	8,799	4,587
	Beef Heifers	592	3,324	2,259	1,255
	Dairy Cows	188	81	772	21
	Dairy Heifers	55	19	275	7
	Calves	437	5,183	3,098	1,801
	% Cows	29.13	49.70	32.37	39.08
	% Cows & Heifers	20.35	37.64	25.59	30.68

Table 7: Calf births as a Proportion of the Estimated Reproductively Mature Bovine Population

Table 7 shows the absolute number of calves born per region as well as expressing their numbers as a proportion of the number of cows and the number of both cows and heifers, respectively on SNL and TDL. It's important to note that the numbers of cows and calves used in table x were obtained from the annual livestock census (covering the period from September 2011 to August 2012). The calf births reported in Figure 1 however were those recorded on a monthly basis throughout the year (January to December 2012). The relative comparisons reveal what appears to be a disproportionate amount of calves born in contrast to the number of reproductively mature females in the herd. Bringing into consideration the numbers of male to female cattle (bearing in mind the recommended bull to cow ratio for mature bulls which is 1:20), the coverage of the reproductively mature females in the population by males appears to have been more than adequate as shown in the table 8 below.

Tenure		Hhohho	Lubombo	Manzini	Shiselweni
SNL	**Cows**	47,516	56,569	57,904	51,801
	Bulls	4,935	2,919	5,379	6,060
	Bull: Cow Ratio	1:10	1:19	1:11	1:9
	Cows & Heifers	61,353	75,852	75,907	68,400
	Bulls (Mature & Young)	14,980	14,761	16,834	22,489
	Bull: Cow Ratio	1:4	1:5	1:5	1:3
TDL	**Cows**	1,500	10,428	9,571	4,608
	Bulls	74	933	798	362
	Bull: Cow Ratio	1:20	1:11	1:12	1:13
	Cows & Heifers	2,147	13,771	12,105	5,870
	Bulls (Mature & Young)	249	3,971	1,866	1,617
	Bull: Cow Ratio	1:9	1:3	1:6	1:4

Table 8: Bull to Cow ratios per region with respect to mating potential

Table 8 shows the bull to cow ratios (mature bulls) per region as well as the total reproductively mature male to female (cows and heifers) proportions of the herd on SNL and TDL, respectively. While the bull: cow ratios appear to be low, it should also be borne in mind that the statistics do not necessarily mean that these females were actually in physical contact with the given male population so as to facilitate reproduction; furthermore, the animal numbers are a snapshot of the population, since they were obtained from the annual livestock census. In spite of that fact, however; there remains a reason for concern about the reproductive health and perhaps even the nutrition of the national cattle herd.

Tenure		Hhohho	Lubombo	Manzini	Shiselweni	Totals
SNL	Births	18,351	27,760	25,198	23,851	**95,160**
	Census Calves	15,788	24,160	22,000	21,040	**82,988**
	% Survivors	86.03	87.03	87.31	88.21	**87.21**
TDL	Births	395	5,364	4,662	2,095	**12,516**
	Census Calves	437	5,183	3,098	1,801	**10,519**
	% Survivors	110.63	96.63	66.45	85.97	**84.04**

Table 9: Reproductive efficiency of the National Cattle Herd

Table 9 shows a comparison of the total number of calvings (for the period ensuing in September 2011 to August 2012) per region to the total numbers of calves recorded during the livestock census in August 2012. There is an apparent loss of some of the calves as shown by the lower populations of calves noted during the census than those born. Under TDL both the Hhohho and Lubombo regions had notably high numbers of surviving calves that had been born within the year. The higher number of calves recorded under TDL in the Hhohho region could be as a result of either stock movement into the region or an error in recording. The Lubombo region however had the highest proportion of surviving calves, indicating perhaps an elevated level of calf management and good calf rearing practices.

3.3 Cattle Mortalities

The general mortality trend for cattle in 2012 was similar to that observed in 2011, with calves and cows having higher levels of mortalities respectively, relative to the other cattle classes. In a similar fashion to that observed in 2011, the levels of both calf and cow mortalities are at their lowest in the months of June and July. In 2012 the number of calf mortalities increased significantly from 999 in August to 2813 in September. Though the exact ages of the calves that died in these months are not available for consideration in this report, if the number of cattle mortalities (considering that the majority are calves) are expressed as a proportion of the calves born in a particular month, we find that September had the highest proportion (39.01%), followed by October (24.48%), declining to the lowest mortalities in December (7.13%).

Figure 5 (cattle mortalities by region) shows a relatively similar mortality trend in all regions. This was also explained in 2011 report that Lubombo region also has the highest calf births, which may explain 'normal' mortalities. The spike of total cattle deaths from 2481 to 8075 as seen in figures 2, 3 and 4 was abnormal in 2012 and associated with massive cattle deaths when the weather changed to unexpected levels during this period. This happened from the 2nd to the 15th of September 2012; when the country received a lot of rainfall along with very cold temperatures. As a result, a number of animals died of hypothermia during and after the rains; owing to their poor body condition and the wet conditions which exacerbated body heat loss. The total numbers of confirmed deaths due to hypothermia were 7,422. Manzini region had the highest mortalities at 2,847, followed by Hhohho at 1,987; Shiselweni at 1,776 and lastly Lubombo at 812 cattle. The graph illustrates exponentially high mortalities for both September and October. This is due to the fact that the mortalities occurring on the last week of September and the first weeks of October get reported as October mortalities.

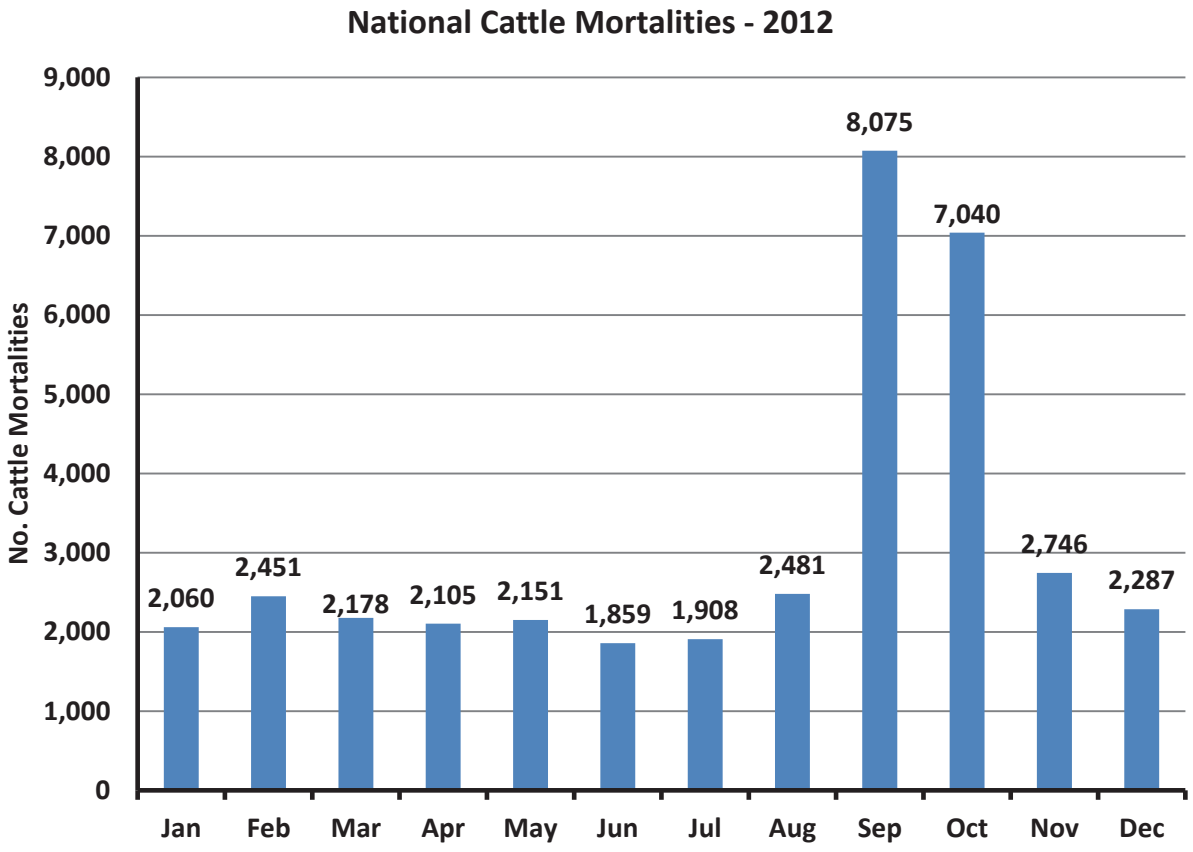

Figure 3: National Cattle Mortalities in 2012

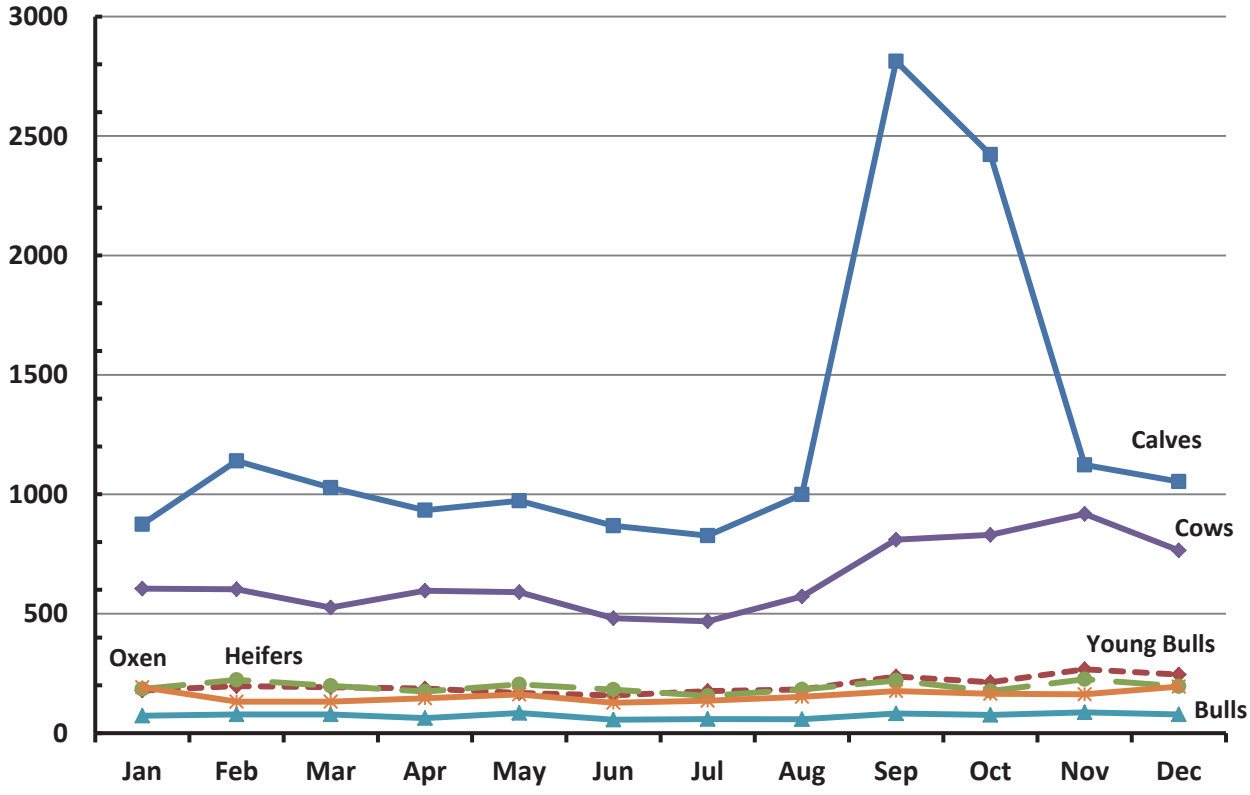

Figure 4: National Cattle Mortalities by class in 2012

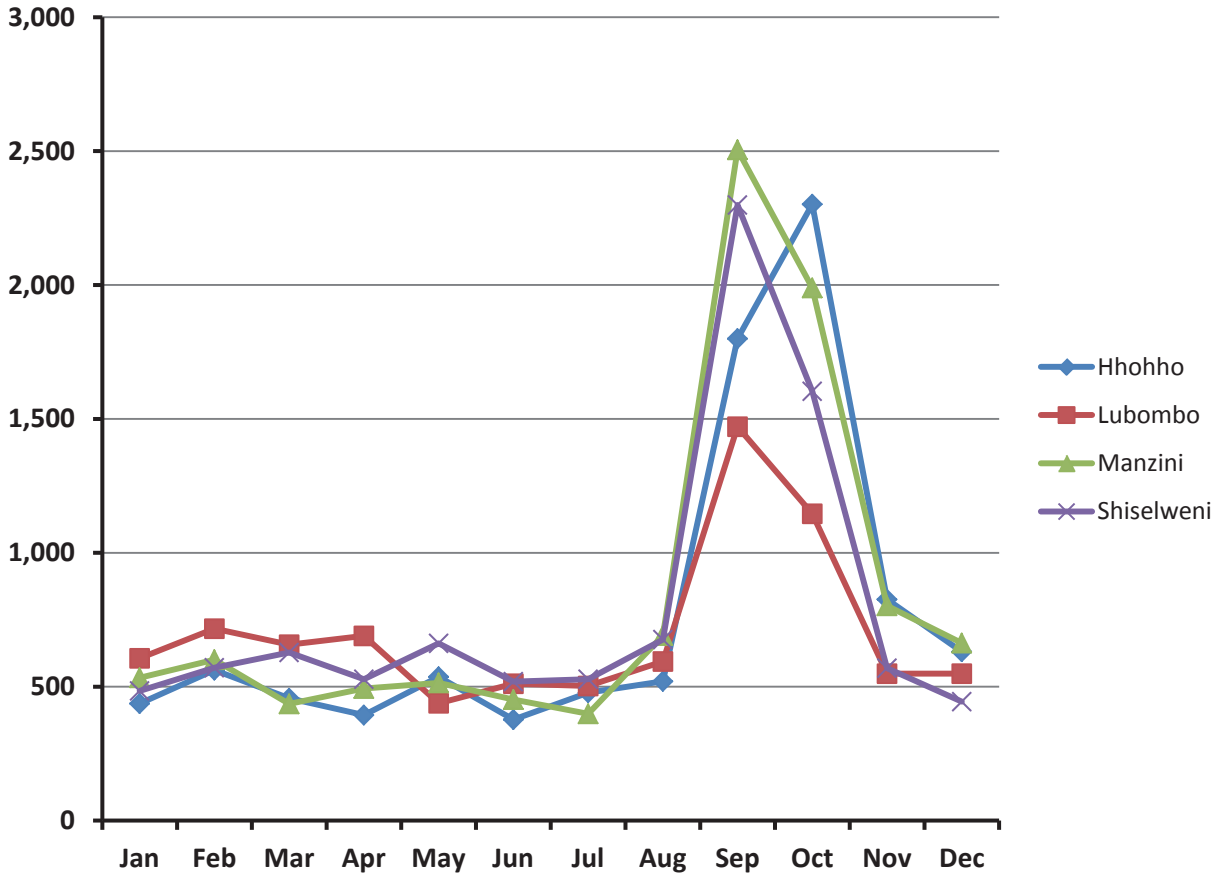

Figure 5: Cattle Mortalities by Region