

## 7.0 Central Veterinary Laboratory

The Central Veterinary Laboratory based in Manzini is a Government Veterinary Laboratory, responsible for providing diagnostic services to the livestock industry both within the public and private sector. The laboratory also handles specimens to be submitted to be submitted to reference laboratories for testing, in the instances where independent analysis is required for animal diseases that impact on livestock and animal product trade.



### 7.1 Specimen Submission for Testing and Diagnosis

Region	No. of Specimens	No. of Tests
Manzini	914	1,033
Hhohho	277	267
Lubombo	754	555
Shiselweni	607	607
<b>Total</b>	<b>2,552</b>	<b>2,462</b>

**Table 27:** Diagnostic specimens submitted by regions

Species	Number of Submissions	Percent Submissions
Avian	62	15.31
Bovine	226	55.80
Caprine	34	8.40
Canine	45	11.11
Equine	6	1.48
Feline	1	0.25
Ovine	11	2.72
Porcine	17	4.20
Lapine	3	0.74
<b>Totals</b>	<b>405</b>	<b>100.00</b>

**Table 28:** Number of submissions by species

Note: A submission is an individual request or incident report for each species or it corresponds to a single request form.

Species	No. of Carcasses
Bovine	47
Caprine	23
Canine	34
Lapine	3
Porcine	11
Equine	2
Ovine	2
Avian	73

**Table 29:** Post mortem request submissions at the CVL

Table 27 and 29 reveal that a total of 195 specimens out of the total specimen submission of 2552 came as carcasses.

## 7.2 Tuberculosis

There were 40 samples tested at the veterinary Laboratory for tuberculosis using the Acid Fast method. These samples are submitted by the Meat Hygiene Section of the Department from post mortem TB suspects at slaughters.

## 7.3 Brucellosis

### Bovine brucellosis

Region	Test result	Number
Hhohho	Positive	52
	Negative	75
Manzini	Positive	23
	Negative	211
Shiselweni	Positive	12
	Negative	240
Lubombo	Positive	34
	Negative	492
<b>Total Positives</b>		<b>121</b>
<b>Total Negatives</b>		<b>1018</b>
<b>Total Submissions</b>		<b>1139</b>

**Table 30:** Bovine Brucellosis Test results

## Caprine brucellosis

Region	Test result	Number
Hhohho	Positive	0
Hhohho	Negative	5
Lubombo	Positive	0
Lubombo	Negative	0
Manzini	Positive	0
Manzini	Negative	3
Shiselweni	Positive	0
Shiselweni	Negative	0
<b>Total Positives</b>		<b>0</b>
<b>Total Negatives</b>		<b>8</b>
<b>Total Submissions</b>		<b>8</b>

**Table 31:** Caprine Brucellosis Results

## 7.4 Tick Borne Diseases

Eleven (11) out of the 56 heartwater cases, 3 out of the 33 bovine babesiosis cases and 4 out of the 23 bovine anaplasmosis cases were confirmed by the laboratory as shown in table 32 below.

Disease	Number Positive	Species
Anaplasmosis	4	Bovine
Babesiosis	3	Bovine
Heartwater	5	Bovine
Heartwater	5	Caprine
Heartwater	1	Ovine

**Table 32:** Number of heartwater cases diagnosed at CVL

## 7.5 Other Diseases Diagnosed (by species)

### Bovine diagnoses

There were various diagnoses of bovine diseases and conditions and these are shown in table 33 below. Other diagnoses are shown in the various disease sections below.

Disease/Condition	No. of Positive Diagnoses
<i>Clostridium novyi</i>	1
Electrocution	1
GIT foreign body obstruction	2
Hepatitis from naval infection	1
Mastitis	35
Pneumonia	1
Trauma Injuries	1

**Table 33:** Bovine diagnoses at CVL

### Canine diagnoses

There were various diagnoses of canine diseases and conditions and these are shown in table 35 below. Rabies was also diagnosed and is shown in the rabies sections below.

Disease Diagnosed	No. Positive Cases
Biliary fever	15
Canine Parvovirus	1
Demodecosis	6
Sarcoptic Mange	1

**Table 34:** Canine diagnoses at CVL

### Caprine diagnoses

There were various diagnoses of caprine diseases and conditions and these are shown in table 35 below. Other diagnoses i.e. Tick-borne diseases are shown in the various disease sections below.

Disease diagnosed	No positive	Species
Bloat	2	Caprine
Coccidiosis (and Helminthosis)	2	Caprine
Gastric rupture	3	Caprine
Helminthosis (Haemonchosis)	8	Caprine
Internal bleeding	1	Caprine
Helminthosis	5	Ovine

**Table 35:** Caprine diagnoses at CVL

### Porcine diagnoses

There were various diagnoses of porcine diseases and conditions and these are shown in table 36 below. Other diagnoses i.e. Tick-borne diseases are shown in the various disease sections below.

Disease diagnosed	No Positive	Species
Porcine stress syndrome	4	Porcine
Gastric adhesion and Peritonitis	1	Porcine
Gastroenteritis	1	Porcine
Dystocia	1	Porcine
Porcine Stress Syndrome	1	Porcine
Streptococcal infection	3	Porcine
Oedema disease & Pneumonia	1	Porcine
Embryonic Deformities	1	Porcine

**Table 36:** Porcine diagnoses at CVL

### Alpaca diagnoses

Two alpacas were diagnosed at pathology with pneumonia.

### Rabbit diagnoses

Three rabbits were submitted at CVL and these were diagnosed with septicaemia (1), Coccidiosis and bacterial diarrhoea (1) and acute haemorrhagic fever (1).

### Equine diagnoses

Samples were sent to Onderstepoort Veterinary Institute for African horse sickness and 3 were confirmed positive on ELISA and virus isolation.

## 7.6 Avian Diseases

There were various diagnoses of avian diseases and conditions and these are shown in table 37 below. Other diagnoses i.e. Tick-borne diseases are shown in the various disease sections below.

Disease diagnosed	No positive
Botulism	1
Egg Peritonitis	5
Septicaemia	1
Colibacillosis	8
New Castle Disease	6
Fowl Pox	2
Helminthosis	5
Swollen head syndrome	1
Pneumonia	1
Helminthosis and Coccidiosis	2

**Table 37:** Avian Diagnoses at CVL

## **7.7 Wart Vaccine Production**

The CVL produces crude warts autogenous vaccine whereby the warts are grounded, sterilized and purified. The vaccine is obtained from bovine warts and so is used in the bovine species.

There were 204 requests for warts vaccine in 2012 with 87 of these coming from Manzini, 55 from Lubombo, 36 from Hhohho and 26 from Shiselweni.