

# 8.0 Veterinary Public Health





## Veterinary Public Health

The Veterinary Public Health Section is responsible for food production and safety with particular reference to zoonotic and environmental hazards associated with food of animal origin from farm (production) to fork (consumption). This section incorporates meat hygiene activities which include import and export certification of food of animal origin as well as meat inspection services. The section is still teething and the Veterinary Public Health Act 2013 through its implementation is expected to facilitate the growth and institutionalisation of this function.

Meat inspection services are carried out primarily in the livestock product export establishments but also in local slaughter establishments. The VPH section (meat hygiene unit) oversees slaughter and food production standards at the beef export establishment SG-1 in Matsapha, an international requirement for the export of food of animal origin.

### 8.1 Permits Issued and Revenue Collected

The Meat Hygiene Unit in carrying out its mandate of food of animal origin product control is responsible for the issuing of import permits and issuing health certificates for the export of such products from establishments under their supervision. The services are charged for and revenue goes into government consolidated fund. The number of permits and health certificates issued is shown below.

Import permits	Transit permits	Health Certificates	Revenue collected (E)
7 979	2	407	229 440.00

**Table 38:** Permits Issued and revenue accrued by the VPH Unit

### 8.2 Prosecutions

The work of the Veterinary Public Health Section in its work comes across issues of non-compliance to various laws especially that of animal movement control where animals are moved without fulfilling the necessary movement control protocols. There were 3 such cases all of which were convicted and fined a total of E180.00.

## 8.3 Total Cattle Slaughtered

This section deals with Cattle Slaughtered at Matsapha Export Abattoir (SG1)

Animal Class	Bulls	Oxen	Steers	Young Bulls	Cows	Heifers	Total
<b>Annual Totals</b>	<b>2,368</b>	<b>2,330</b>	<b>905</b>	<b>917</b>	<b>1,141</b>	<b>35</b>	<b>7,696</b>

**Table 39:** Classes of Cattle Slaughtered at Swaziland Meat Industries in 2012

Table 39 shows a trend almost similar to that observed in the cattle slaughtered in municipal abattoirs and butcheries as well as those slaughtered for home consumption. While at SG1, the number of steers is high, the bulk of cattle slaughtered at this abattoir are the older groups like bulls, oxen and cows.

Cattle Origin	Oxen	Bulls	Heifers	Cows	Steers	Young Bulls (1-2Yrs)	Totals
<b>Swazi Nation Land</b>	<b>2172</b>	<b>1231</b>	<b>5</b>	<b>956</b>	<b>385</b>	<b>518</b>	<b>5267</b>
% SNL slaughters by category	41.24	23.37	0.09	18.15	7.31	9.83	
<b>Title Deed Land Farms</b>	<b>158</b>	<b>1137</b>	<b>30</b>	<b>185</b>	<b>520</b>	<b>399</b>	<b>2429</b>
% TDL slaughters by category	6.50	46.81	1.24	7.62	21.41	16.43	
<b>Total Slaughtered</b>	<b>2330</b>	<b>2368</b>	<b>35</b>	<b>1141</b>	<b>905</b>	<b>917</b>	<b>7696</b>
% Total slaughters by category	30.28	30.77	0.45	14.83	11.76	11.92	

**Table 40:** Classes and origin of Cattle Slaughtered at Swaziland Meat Industries in 2012

Table 40 shows that there were 7696 cattle slaughtered at the export abattoir (SG1) in 2012, an increase of 1428 (22.78%) from 2011 which stood at 6268. The animal class composition of slaughter cattle from SNL was dominated by oxen (41.24%) followed by bulls (23.37%), cows at 18.15%, young bulls at 9.83% and finally heifers at 0.09%. The animal class composition of slaughter cattle from TDL consisted primarily of bulls at 46.81%, steers at 21.41%, young bulls (16.43%), cows (7.62%), oxen (6.5%) and finally heifers (1.24%). Overall the dominant category is the bulls (30.77%) followed by oxen (30.28%) then cows, young bulls, steers and finally, heifers (0.45%).

## 8.4 Condemnations

The following condemnations were obtained from the meat inspection services at Matsapha Export Abattoir SG-1.

Condition	Number
Cattle dead before slaughter	1
Cows in calf	216
Freezing treatment (localised <i>C. bovis</i> )	598
Oesophagus <i>C. bovis</i>	9
Triceps <i>C. bovis</i>	71

**Table 41:** Findings at post mortem and ante mortem inspections at SG1

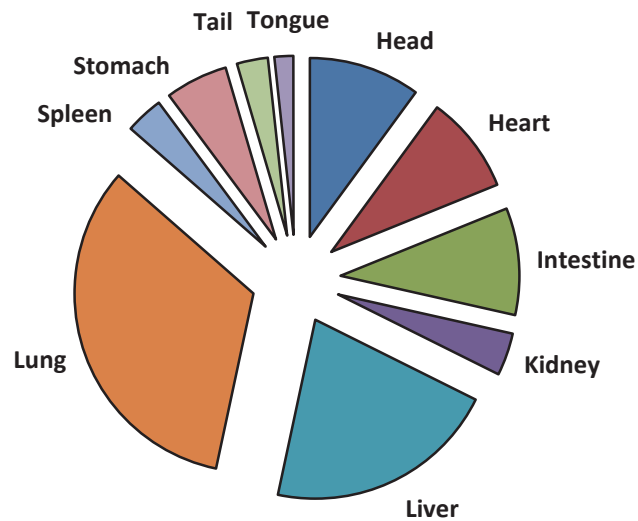
### Whole Carcass Condemnations

There were 40 whole carcasses that were condemned for tuberculosis and one condemned due to generalised *C. bovis*, one due to extensive pus contamination, five due to oedema and one due to generalised bruising. Of the 40 TB cases the highest numbers that came from a single farm was 10 (25% of total) that came from a private farm whereas there were 26 (65% of total) that came from a variety of individual owners in the SNL sector.

Organ	Number Condemned	Percentage Condemned
Lung	1,809	33.07
Liver	1,149	21.01
Head	550	10.05
Intestine	527	9.63
Heart	483	8.83
Stomach	308	5.63
Kidney	210	3.84
Spleen	186	3.40
Tail	154	2.82
Tongue	94	1.72
<b>Total</b>	<b>5,470</b>	<b>100.00</b>

**Table 42:** Organ Condemnations at SG1

The five most condemned organs are the lungs at 33% followed by liver 21%, head and intestine each at 10% and heart at 9%.



**Figure 21:** Pie chart showing the percentage of organs condemned at SG1

Condition	Number Organs Condemned	Percentage by Condition
Emphysema	1,013	19.24
Contamination	950	18.05
<i>C. bovis</i>	478	9.08
Abscess	465	8.83
Peritonitis	401	7.62
Stilesia	298	5.66
Pimply gut	296	5.62
TB	269	5.11
Pleuritis	221	4.20
Liver fluke	166	3.15
Hydatid cyst	126	2.39
Nephritis	113	2.15
Pneumonia	95	1.80
Angioma	79	1.50
Congestion	62	1.18
Endocarditis	53	1.01
Pericarditis	44	0.84
Hydronephrosis	42	0.80
Other Conditions	93	1.77
<b>Grand Total</b>	<b>5,264</b>	<b>100</b>

**Table 43:** Number of Condemned Organs by Condition

Organ	Total Organs Condemned	% Organ Condemned	Leading conditions responsible for condemnation in each organ
Lungs	1,808	34	Emphysema (56%), Contamination (13%), Pleuritis (12%), Hydatid cysts (7%), Pneumonia (5%), Congestion (3%), TB (2%).
Livers	1,167	22	Stilesia (26%), Peritonitis (23%), Liver fluke & Abscesses (14% each), Contamination (11%), Angioma (7%), TB (3%)
Intestine	536	10	Pimpily Gut (55%), Contamination (17%), Abscesses (17%), TB (6%)
Heads	544	10	<i>C. bovis</i> (72%), Contamination (12%), TB (10%), Abscesses (4%)
Stomach	317	6	Abscesses (38%), Contamination (30%), Peritonitis (21%), TB (10%)
Kidneys	210	4	Nephritis (54%), Hydronephrosis (20%), Contamination (13%), TB (8%), Cysts (5%)
Spleen	187	4	Contamination (39%), Peritonitis (37%), TB (12%), Abscesses (9%), Haematoma (3%)
Hearts	249	5	Contamination (27%), <i>C. bovis</i> (26%), Endocarditis (21%), Pericarditis (18%), TB (8%)
Tails	152	3	Contamination (84%), Abscesses (10%), TB (7%)
Tongue	94	2	Contamination (40%), <i>C. bovis</i> (26%), TB (18%), Abscesses (12%), Actinobacillus (4%).
<b>Total</b>	<b>5,264</b>	<b>100</b>	

**Table 44:** Common causes for condemnation by each organ

The five most common causes of organ condemnations at SG1 are Emphysema (all in lungs), contamination (in all organs), *Cysticercus bovis* (mostly in heads), abscesses and peritonitis. This hierarchy is not much different from the 2011 findings. Twenty five percent (25%) of all the 950 contamination findings in organs occurred in lungs, 14% in liver, 13% in tails, 10% each in stomach and intestines, 8% in spleen, 7% each in hearts and heads, 4% in tongue and 3% in kidneys. Eighty one percent (81%) of all the 478 findings of *C. bovis* were diagnosed in heads, 13% in hearts and 5% in tongues. Twenty one (20) percent of the 269 findings of TB was diagnosed in heads followed by 12% each in lungs, liver, intestines and stomach. Nine percent (9%) of TB was diagnosed in spleens, 7% in hearts, 6% each in tongue and kidneys and 4% in tails. Thirty five percent (35%) of the 465 findings of abscesses in organs occurred in the liver, 26% in stomachs, 20% in intestine whereas less than six percent was found in each of the other organs being lungs (5%), heads and spleen (6% each), tails (3%) and tongue (2%).

## 8.5 Laboratory Tests

The Meat Hygiene Laboratory currently housed in Matsapha at the Export Abattoir facility provides laboratory testing facility to the VPH and Meat Hygiene services at the export abattoir and to other abattoirs inspected by the mandated government section. At the export abattoir the laboratory is guided by standards of the importing countries mostly EU standards. The following activities were done at the Meat Hygiene Laboratory.

Overall the laboratory sent all their samples for Salmonella analysis to Deltamune Laboratory in South Africa, and there were 6 samples which tested positive. The laboratory sent water samples to the accredited Water Services Laboratory for general microbiological analysis. In February a sample of water was sent to Seven Trent Services for chemical parameters analysis in accordance with the 2011 Annual Residue Plan.

In September there was no activity in the laboratory because the establishment had to shut down for servicing. Samples of meat were sent to Deltamune for total viable counts and enterococci analysis. Samples of different matrixes for residue surveillance were collected and sent to L.G.C. laboratory in the United Kingdom as per EU Approved Residue Plan.

Although the number of water samples has decreased, the number of tests increased because of additional tests requested by the EU. All TB suspect specimens are sent to the Central Veterinary Laboratory for confirmation. The percentage of positive Salmonella samples decreased from 0.79% to 0.29%. This may be attributable to the continuous farmer education carried out by the Swaziland Meat Industry Company. A total of 6443 samples were collected from various sources.

Total Samples Taken	6 443	
	No. of Samples	No. of Tests
Examination of water	241	1735
<b>Findings: None</b>		
Examination of meat	2407	916
<b>Findings: Acid fast bacteria</b>	<b>26</b>	
Tests for inhibitory substances	252	816
<b>Findings: None</b>		
Investigation of personnel	874	1748
<b>Findings: Insufficient Personal Hygiene</b>	<b>47</b>	
Investigation of containers and equipment	550	816
<b>Findings: Excessive bacteria counts</b>	<b>47</b>	
Salmonella	2050	2050
Salmonella cases isolated	6	
<b>Findings: None</b>		
LGC Samples:	69	
Serum	23	
Liver	15	
Muscles	4	
Urine	17	
Kidney	7	
Fat	3	
Head	1	

**Table 45:** Results of samples taken and analysed

Samples of meat, kidney, fat, urine, serum were sent to SABS in South Africa for residue analysis. This involved hormones, heavy metals etc. Meat and kidney samples were collected and analysed in the meat hygiene laboratory for antimicrobial residues. This topic is discussed under programmes above.