



**Introduction to the Mnisi Community Programme and the latest findings regarding baseline research on ecosystem health, cattle production- and health management at the wildlife/livestock interface within the GLTFCA, RSA**



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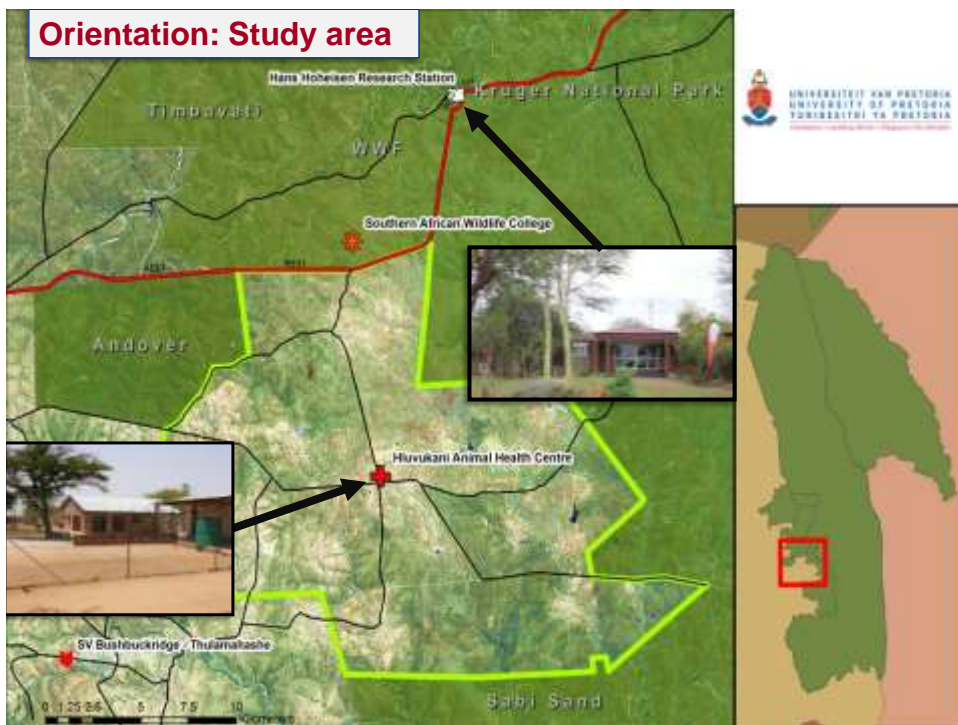
# Mnisi Community Programme



**healthy animals**  
swifuwo leswihanyeke

**healthy people**  
vanhu ivahanyeke

**healthy environment**  
matshameho lamanene ya rihanyu



## Hluvukani Animal Health Centre

- **Primary animal health care to community**
- **2 week clinical rotations from vet students**
- **Services:**
  - Clinical
  - Ambulatory and clinic-based
  - Learner and farmer education
  - Research assistance
- **Vet/medical students interactions through combined lectures:**
  - One Health
  - Human/wildlife/livestock interface
  - State veterinary roles
  - Ecology and health
  - Traditional healing
- **Vet/medical students combined visits to human health clinics as well as dip tanks**
- **One Health assignments through combined fieldtrips of both vet and medic students into KNP**



## Hans Hoheisen Wildlife Research Station

- **Platform to support/drive research and training involving diseases at the wildlife/livestock/human interface**
- **Facilities:**
  - Laboratories
  - Auditorium
  - Library
  - Accommodation
  - Offices
  - Animal holding facilities
- **Activities:**
  - Mhisi Community Programme
  - GLTFCA
  - State Veterinary Offices
  - Risk mapping / surveillance
  - Workshops & conferences



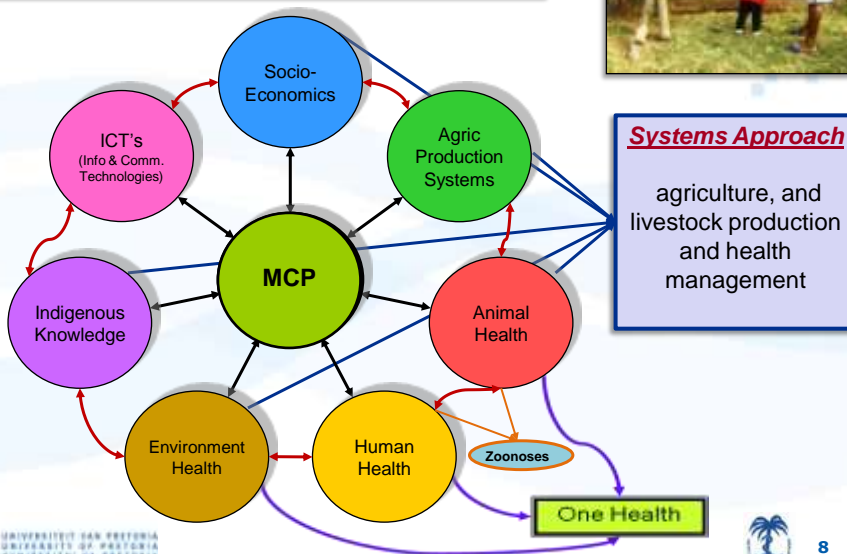
## The Mnisi Community Programme Platform

- **Initiated and driven by-**
  - the Faculty of Veterinary Science, UP
  - start-up funding from ITM, Belgium
  - Partnerships with:
    - UP faculties
    - **Mnisi Traditional Authority**
    - Governmental departments
    - NGOs
- **Platform for-**
  - research,
  - training and
  - community engagement / development
  - ⇒ **core foci of the UP**
- **Vehicle to strategically-**
  - develop One Health thinking within,
  - and collaboration between disciplines
  - with the opportunity for **applied research and training**
- **Learn on a small scale of complexity for application on larger scale**
- **Model that could serve the community and the greater region**



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## Major disciplines involved

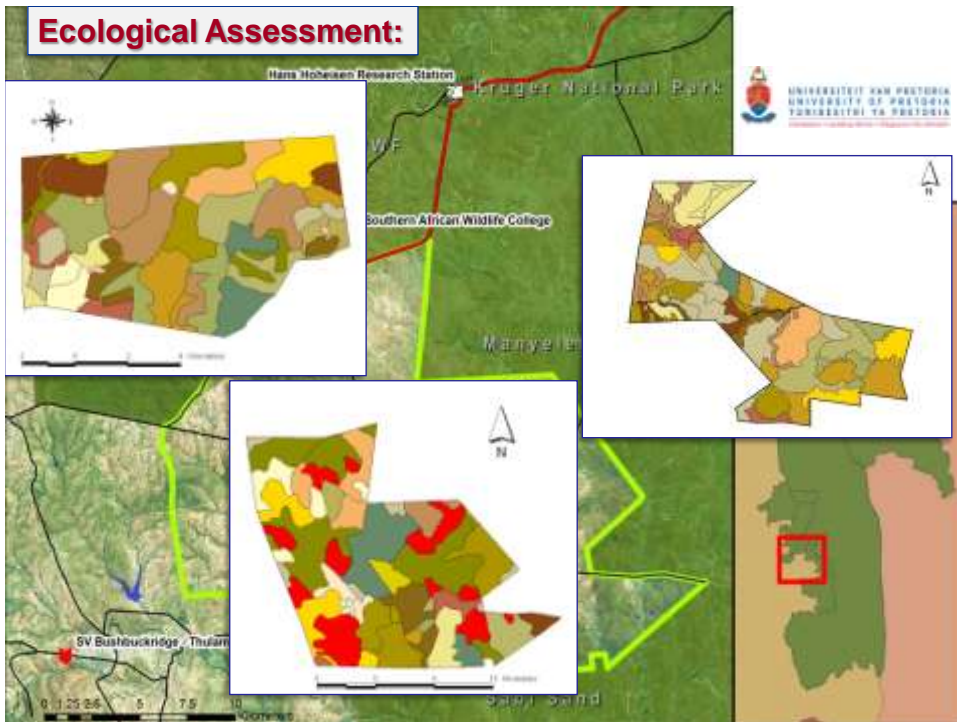
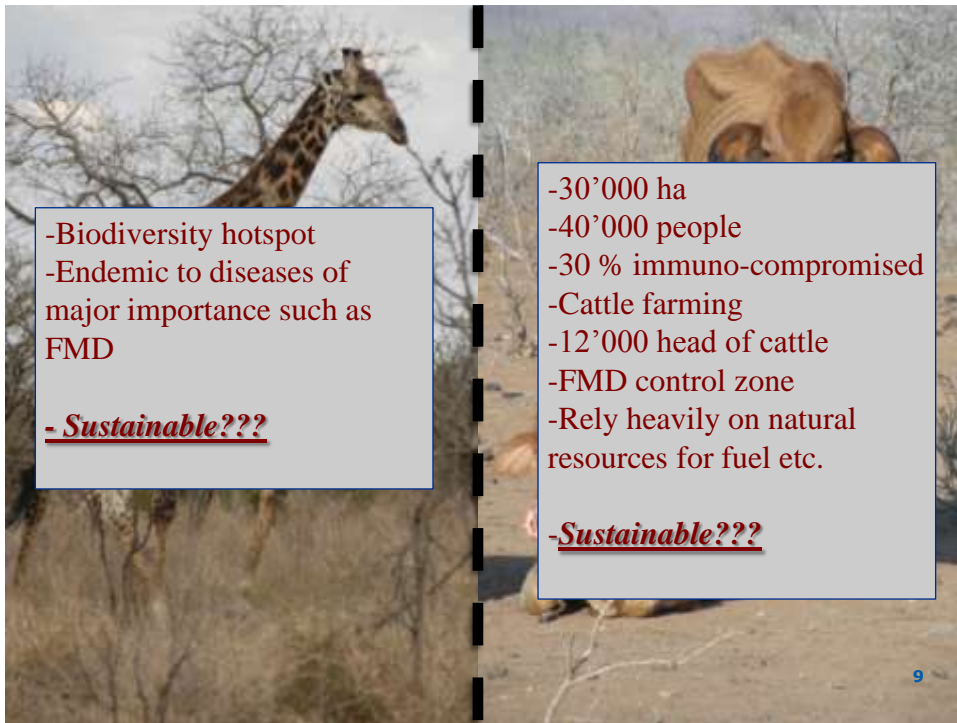


### Systems Approach

agriculture, and livestock production and health management

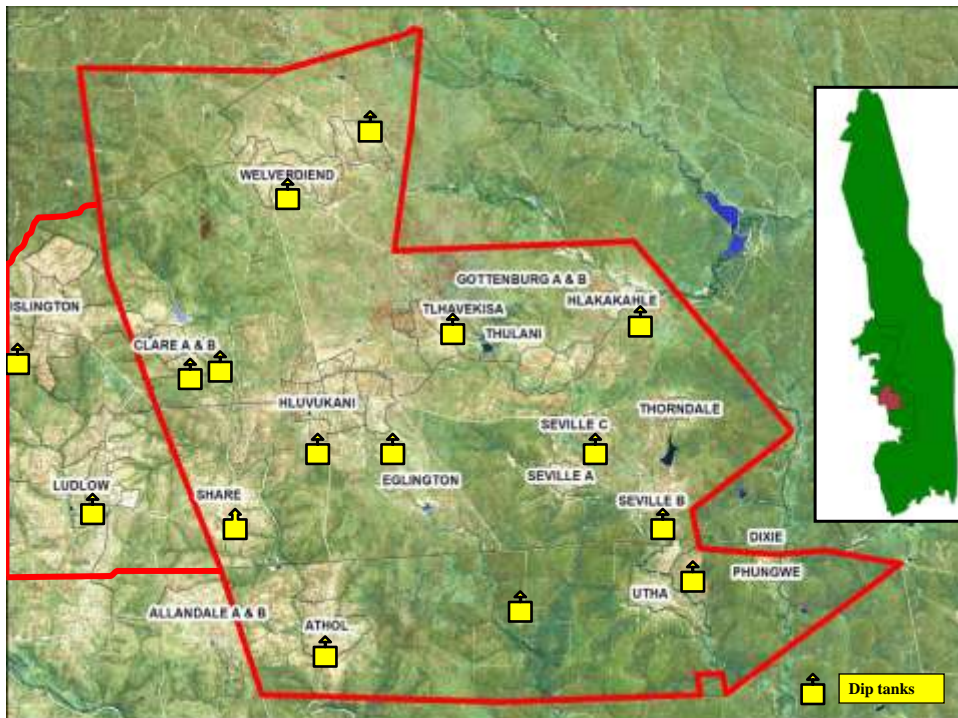


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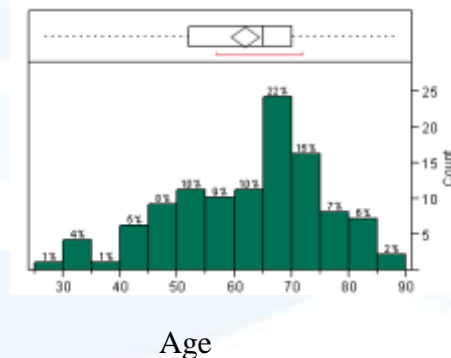


## Ecological Comparison:

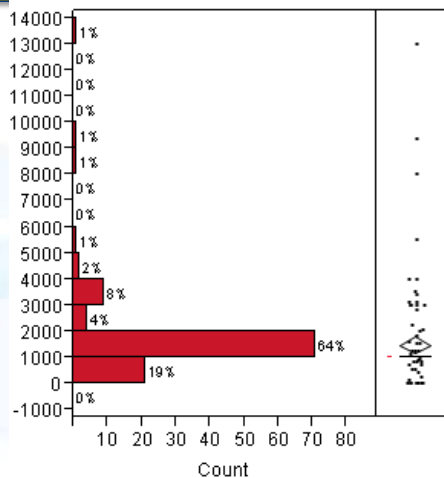
	MAYELETI	MNISI	ANDOVER
<b>GEOLOGY</b>	GRANITE	GRANITE	GRANITE
<b>SOILS</b>	GLENROSA/MISPAH	GLENROSA/MISPAH	GLENROSA/MISPAH
<b>SIZE</b>	22593 HA	25221 HA	6774 HA
<b>LAND USE</b>	CONSERVATION	AGRICULTURE	CONSERVATION
<b>PLANT COMMUNITIES</b>	2	2	2
<b>SUB-COMMUNITIES</b>	13	18	17
<b>MANGEMENT UNITS</b>	4	4	4
<b>VELD CONDITION SCORE</b>	810	570	640
<b>GRAZING CAPACITY</b>	5718 LSU	4765 LSU	1369 LSU
<b>BROWSING CAPACITY</b>	6487 BAU	8358 BAU	640 BAU
<b>STOCKING RATE</b>	UNKNOWN	230% LSU + 50% BAU	26% GAU + 35% BAU



## Cattle Owners – age & HH income



Age

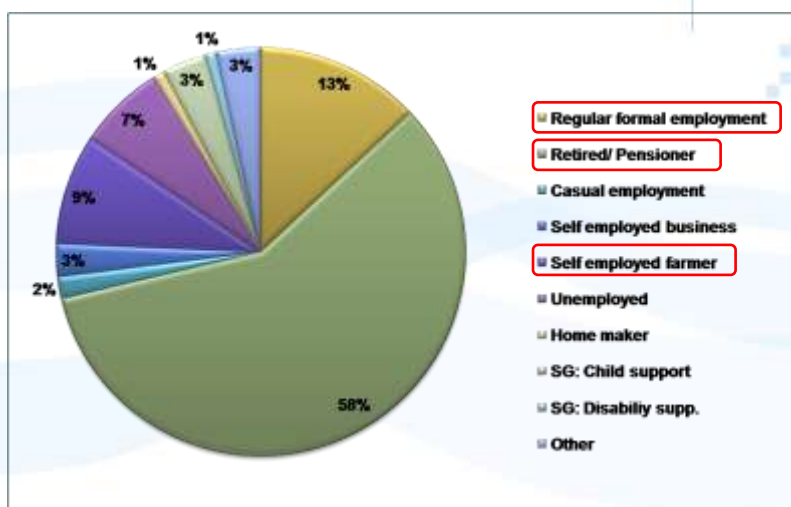


HH income



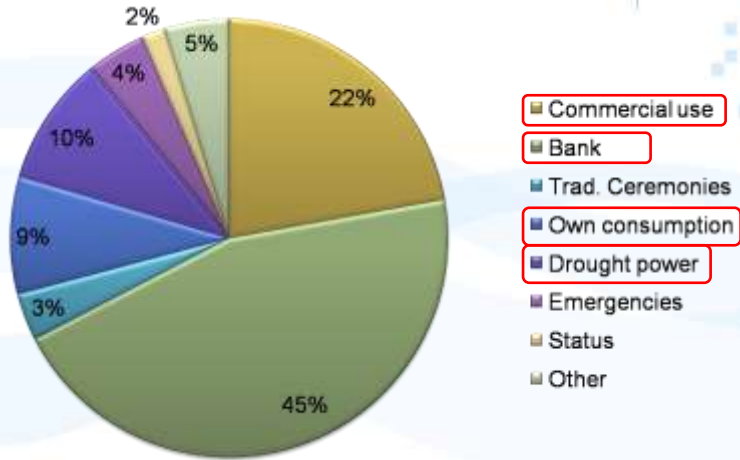
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## Cattle owners – sources of income

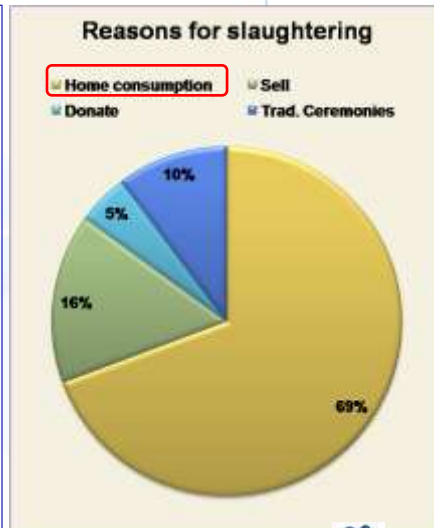
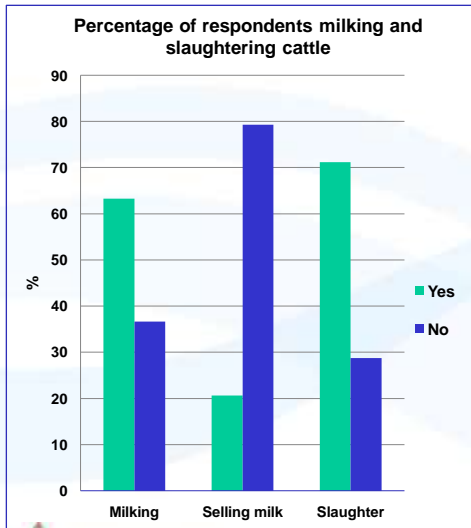


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## Reasons for keeping cattle



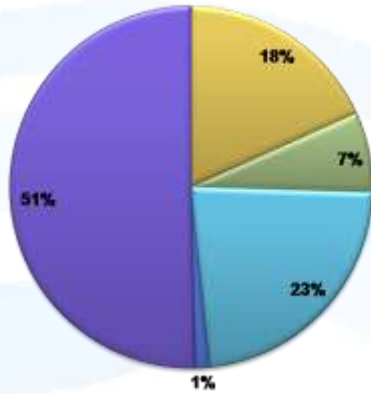
## Home consumption:





## Live cattle trading...

■ Bulls 
 ■ Oxen 
 ■ Cows 
 ■ Heifers 
 ■ None



**TOTAL: 153 cattle sold by approx 70 farmers**



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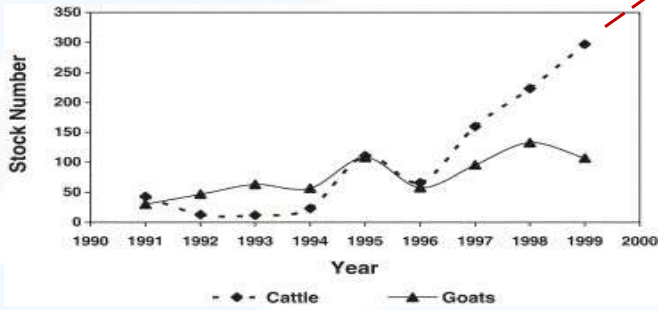
## Cattle trade and off-take

	BUTCHER	PRICE	OTHER FARMERS	PRICE	OTHER	PRICE	TOTAL
Bulls	44(22)	R 3,686	12(5)	R 4,000	3(3)	R 3,167	
Oxen	9	R 3,583	6	R 3,875	1	R 4,500	
Cows	26	R 2,089	29	R 3,733	5	R 3,167	
Heifers	2		1		2	R 3,000	
	<b>81 (58%)</b>	<b>R 3,119</b>	<b>48(34%)</b>	<b>R 3,869</b>	<b>11(8%)</b>	<b>R 3,459</b>	<b>140(100%)</b>
		<b>R 252,666</b>		<b>R 185,728</b>		<b>R 38,044</b>	<b>R 476,438</b>



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**Cattle population growth:**

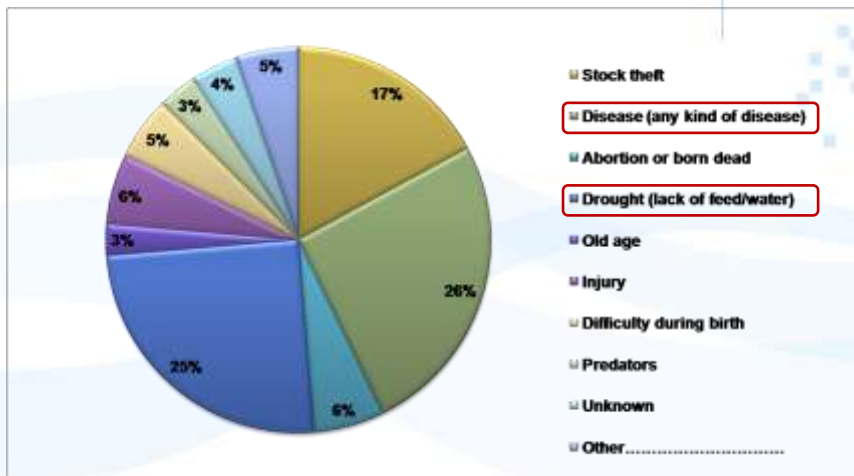


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2009

**Current cattle stocking rate in Mnisi – approx 2.3ha/LSU**

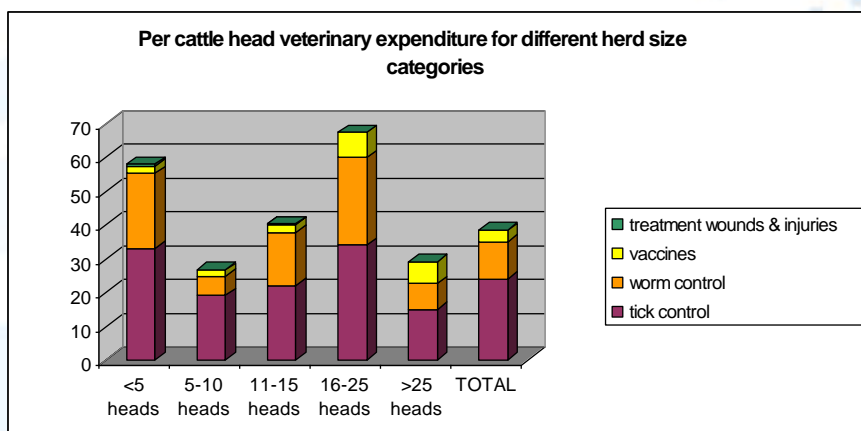
**Reasons for cattle losses:**



## Major AH constraints...

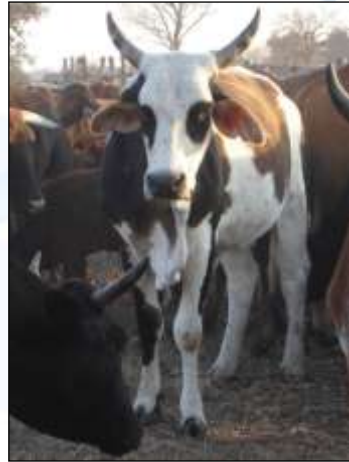
	Most Important	2 <sup>nd</sup> Most Important	3 <sup>rd</sup> Most Important
Ticks	16.5	13.5	0.8
Lumpy skin disease	15.8	10.5	5.3
Worms	12.8	3.8	3
FMD	9.8	3	2.3
None	9	39	64.7
Black Quarter	5.3	6	1.5
Wounds	5.3	3	1.5
Three days stiffness	3.8	0.8	3
Gallsickness	2.3	3	3
Foot rot	1.5	3	0.8

## AH Investment (cattle)



## Reasons for not selling:

- Lack of market access
- Lack of competition (take it or leave it...)
- Very low prices – as little as 50% of market values in open market
- Cascading effect...



Essentially unsustainable systems:

- Rely on grants for income
- Rely on gov. for animal health management
- The higher level of unsustainability – the more vulnerable the system
- The more vulnerable the system on the one side – the higher the risk to the system on the other side (conservation efforts)

