

# A South African perspective on issues of importance for a sustainable livestock strategy

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# Background documents used to prepare presentation

- 1. Research and Development Plan for the large and small stock meat industries in South Africa that was developed by RMRD SA with the inputs from all the affected stakeholders**
- 2. Projects currently funded by RMRD SA**
- 3. Applicable papers published from South Africa**

**Linked to the 3 Agenda Focus areas**



# Focus area 1: Closing the efficiency gap

- 1. The effect of global warming on livestock production in developing countries of the southern hemisphere.**
- 2. Opportunities for livestock production in developing countries of the southern hemisphere.**
- 3. Unlocking the potential of red meat through commercialization, technology transfer and training.**
- 4. The disconnection between food and nutrition needs**



# Focus area 1: Closing the efficiency gap

1. **The effect of global warming on livestock production in developing countries of the southern hemisphere.**
  - The effect of ambient temperature (heat stress, nutritional stress, lowered production) and possible mitigation strategies
  - Altered patterns of animal diseases
  - Nutritional value of pastures
  - Adaptation of animals to production environments



# Focus area 1: Closing the efficiency gap

## 2. Opportunities for livestock production in developing countries of the southern hemisphere.

- Appropriate genotypes and production systems
- Description of production environments
- Breeding, improvement and genomics
- Low current production levels (how to address it)

## 3. Unlocking the potential of red meat through commercialization, technology transfer and training.

- Political challenges for the previous disadvantaged
- Market access
- Low production levels

(Expand)



### **3. Unlocking the potential of red meat through commercialization, technology transfer and training**

#### **Political challenges for the previous disadvantaged**

- **Human capital (labour, skills, experience)**
- **Natural capital (land, water, vegetation)**
- **Physical capital (livestock, equipment, infrastructure)**
- **Financial capital**
- **Cultural capital (mind set)**



### **3. Unlocking the potential of red meat through commercialization, technology transfer and training**

#### **Market access**

- **Still perceived cases of race-based pricing practises (quality of the animals, distance to markets)**
- **Costs associated with selling in formal markets by low income farmers (transport, tax, auctioneers' commission)**
- **Low-income farmers consider informal markets as their mainstay and formal markets as backup**
- **Demand from the informal markets has been increasing with the decrease in the village herds**
- **Disease constraints (FMD, measles)**



### **3. Unlocking the potential of red meat through commercialization, technology transfer and training**

#### **Production Levels**

**While the off-take (slaughter rate) from the commercial sector is at an acceptable level, the off-take from the other sectors is still low**

**Reasons - low fertility and high mortality (result of diseases and parasites, lack of feed resources and poor rangeland management)**





# Focus area 1: Closing the efficiency gap

## 4. The disconnection between food and nutrition needs.

This should be addressed to enable the development of strategies towards “environmentally-friendly production and processing” while supporting healthy, well-nourished populations.

In addition to the formulation of strategies aimed at greener food environments, health consideration (such as nutrient-density), in addition to carbon footprint calculations, should be considered.



# Focus area 2: Restoring value of grasslands

- 1. Forage resources and management**
- 2. Veld monitoring and management**
- 3. Pastoral risk management and decision support systems**



# Focus area 2: Restoring value of grasslands

## 1. Forage resources and management

- Fodder flow programmes using alternative forages to complement shortcomings
- Breeding and release of new forage and pasture cultivars with higher nutritive quality and less CH<sub>4</sub> emissions
- Improved forage management strategies to maximise efficiency



# Focus area 2: Restoring value of grasslands

## 2. Veld monitoring and management

- Rehabilitation of non productive areas
- Management strategies to maximise the productivity of veld
- Management strategies to reduce enteric methane and nitrous oxide emissions and water use



# Focus area 2: Restoring value of grasslands

## 3. Pastoral risk management and decision support systems

- Decision support tools whereby the stock farmer can be informed in time of environmental risks (e.g. drought and/or floods)
- Provide data on alternative forage sources, stocking rates and expected profit margins



# Focus area 3: Towards zero discharge

- 1. Greenhouse gasses from South African livestock and carbon sequestration.**
- 2. Reducing enteric methane emissions from ruminants, including improved production efficiency to reduce the carbon footprint of livestock products.**
- 3. Climate change and sustainable livestock production**



# Focus area 3: Towards zero discharge

## 1. Greenhouse gasses from South African livestock and carbon sequestration.

- In general, estimates of emissions from livestock are subject to uncertainty because generic coefficients applicable to all animals are commonly used which takes no account of differences in production efficiency and production systems



# Focus area 3: Towards zero discharge

**2. Reducing enteric methane emissions from ruminants, including improved production efficiency to reduce the carbon footprint of livestock products.**

- **Effective crossbreeding using indigenous/adapted genotypes**
- **Improved cow efficiency**
- **Selection for Residual Feed Intake and Residual Daily Gain**





# Focus area 3: Towards zero discharge

## 3. Climate change and sustainable livestock production

- Liaison with other industries / stakeholders regarding common fields of research
- Baseline information on GHG and carbon sequestration
- Turning emissions and waste into assets



**THANK YOU**

