



# agriculture & rural development

Department:

**Agriculture and Rural Development**  
North West Provincial Government  
**REPUBLIC OF SOUTH AFRICA**

*"Let's grow North West together"*

[www.nwpg.gov.za](http://www.nwpg.gov.za)



# Effects of climate change on livestock production

**N. P. Bareki**

Department of Agriculture and Rural Development, Agricultural Research Services,  
Northwest Province, South Africa

☎ 018-295 6500 - (fax) 086 580 4161

✉ [nbareki@nwpg.gov.za](mailto:nbareki@nwpg.gov.za)



**Moretele Livestock Study Group**  
**20 September 2022**  
**Moretele Community Hall**



**agriculture &  
rural development**

Department:  
**Agriculture and Rural Development**  
North West Provincial Government  
REPUBLIC OF SOUTH AFRICA

*"Let's grow North West together"*

[www.nwpg.gov.za](http://www.nwpg.gov.za)



# What is Climate change & Weather

- **Climate change** is a significant **variation** in the measures of climate in relation to “normal” **weather patterns** for a particular place over several decades.
- **Weather** describes the atmospheric conditions such as **rainfall, temperature, humidity and wind speed** at a **particular place and time**



# What are the result in current times??

Global warming  
&  
a strained  
Environment



Global warming  
&  
its effects  
on Livestock

## Global warming & its effects on food security



agriculture &  
rural development  
Department:  
Agriculture and Rural Development  
North West Provincial Government  
REPUBLIC OF SOUTH AFRICA

*"Let's grow North West together"*

[www.nwpg.gov.za](http://www.nwpg.gov.za)

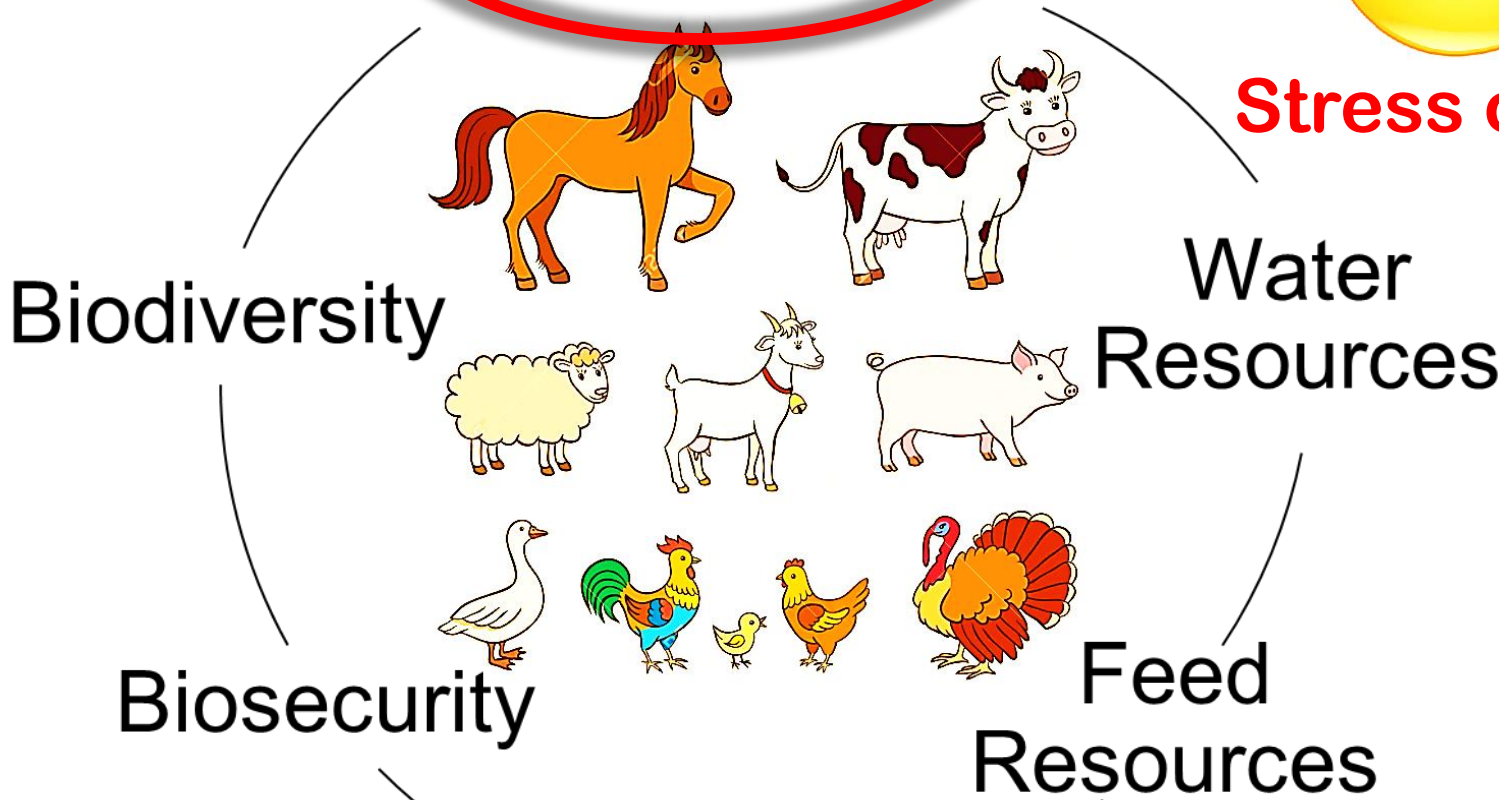


# Global warming impact - livestock production

Temperature  
increases



Stress on:





# Effects of increased ambient temperatures

## Heat Stress

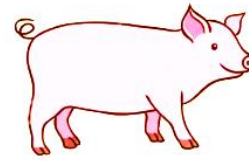
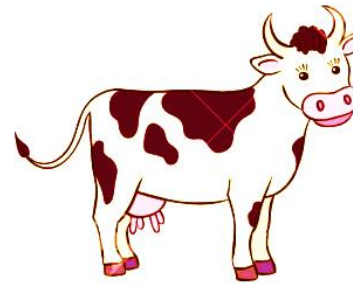
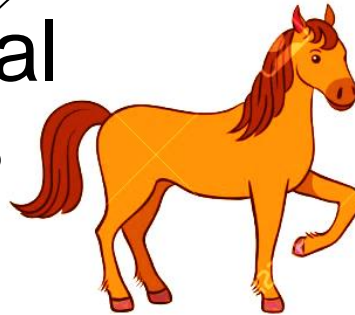
Behavioural  
Changes

Reduced  
Feed Intake

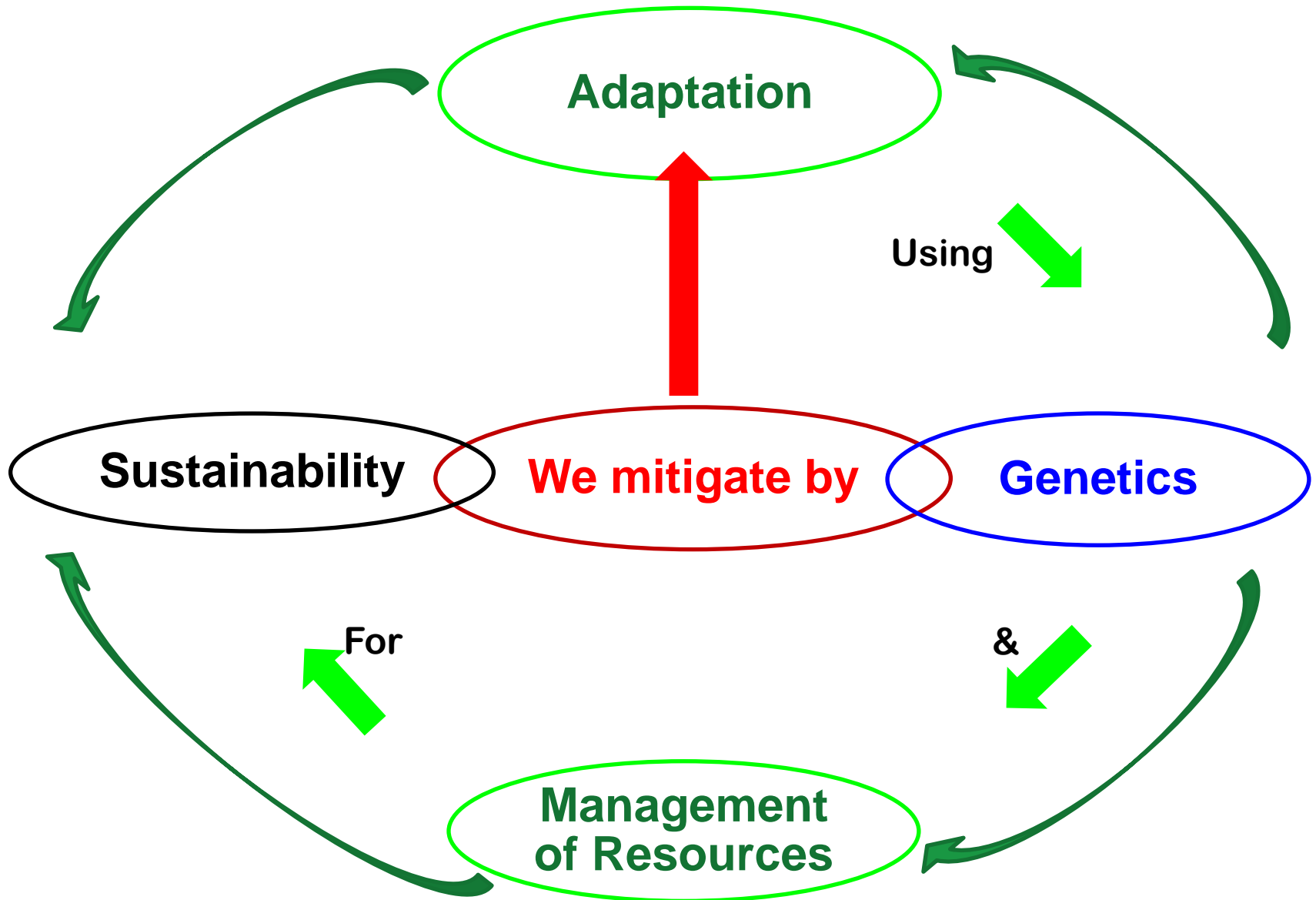
Poor  
health

Lowered  
Production

Poor  
Reproduction



# What can we do?







**Adaptation**

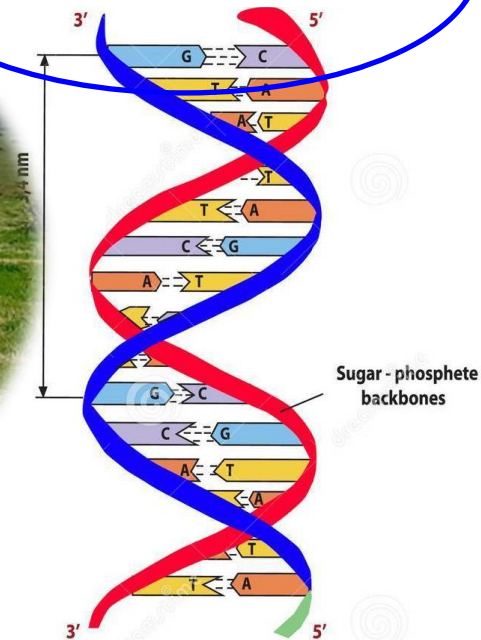
**Mitigation**

**Sustainability**

**Genetics**



**Resources**





# Mitigation Strategies

## **Livestock will have to adapt to:**

- Higher ambient temperatures,
- Higher exposure to diseases and
- Lower grazing nutritional value
- Reduced water and grazing availability

## **We can achieve such adaptation by:**

- Matching genotypes to production environments,
- Improving within genotype resilience and tolerance and
- Improving on grazing and veld management practices
- Improving on water resource management.

**What about (plant based water?)**

# Mitigation Strategies...



**Animals see value in plant based water!!**

# Conclusion

- Adapt livestock to the environment
- Adapt management to the environment
- Adopt sustainable farming practices
- Remain alert to environmental risks

Remember, **genetic improvement** is

both

**PERMANENT** and **CUMULATIVE**.





**The choice remains yours!  
RE A LEBOGA!**



[wpg.gov.za](http://wpg.gov.za)