

**AGRICULTURAL DEVELOPMENT SERVICES**  
**AGRICULTURAL RESEARCH SERVICES**

**Event: Farmer Information day**

**Title:** REPRODUCTIVE AND GROWTH PERFORMANCE OF BEEF CATTLE HERDS  
PARTICIPATING IN THE SIRE SUBSIDY SCHEME IN THE

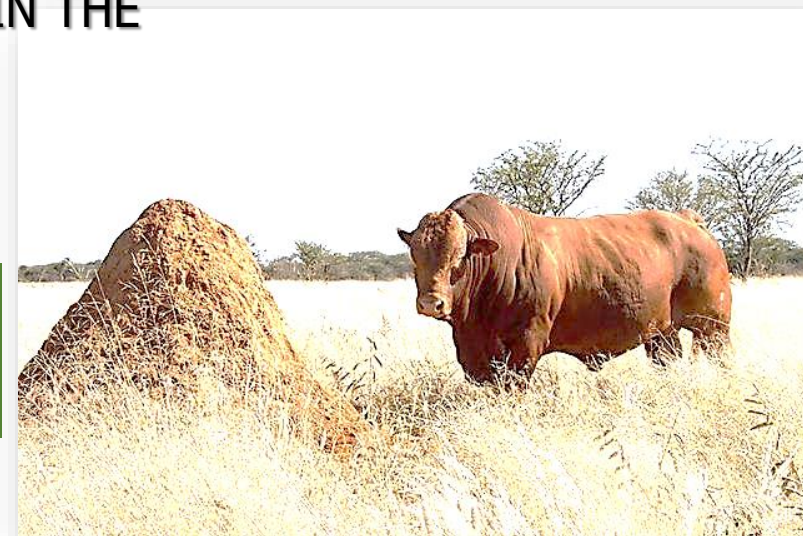
NORTHWEST PROVINCE

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**25 August 2021**

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



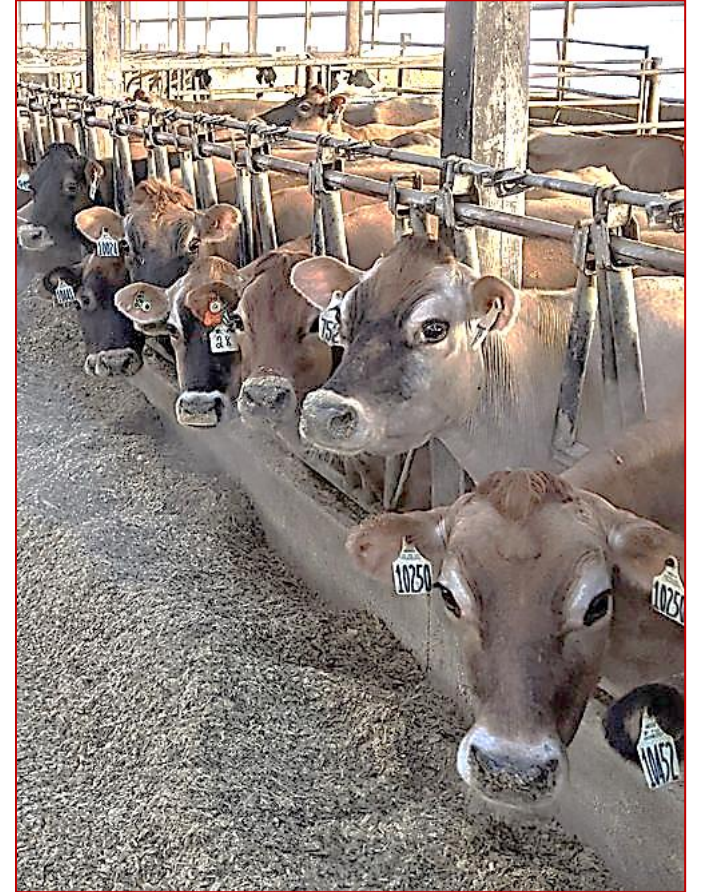
# INTRODUCTION

- ❑ North West province most herds are managed under **extensive cow-calf production system**
- ❑ Minimum performance recording in the emerging sector



Selection programmes principal element → body measurements and performance traits

- ❑ Reproduction & growth performance → **Indicator of adaptation**
- ❑ Biological and economical efficiencies of cow-calf production systems are largely dependent on successful reproduction rate
- ❑ Improvements in reproductive performance can improve end-product traits in a conventional cow-calf operation selling market calves at weaning





**GENETIC IMPROVEMENT**



- ❑ Bulls represent 50% of the genetic makeup of calf
- ❑ 90% of the cow herd genetic change for farmers who retain their own heifers
- ❑ Significance within **herd**, within **breed** and among breeds variation on **performance** and **production traits**

# SIRE SUBSIDY SCHEME

- ❑ Youth and Female farmers around the North West Province
- ❑ **Bonsmara breeding** sires were distributed

Aim to aid in improvement of **management practices, age at first calving & reproductive rate**



# JUSTIFICATION

- ❑ In the past 5 years the North West DARD has distributed over 150 beef cattle breeding sires to emerging farmers around the North West Province.
- ❑ There is satisfactory records of the beneficiaries, however, with lack of pre- and post-intervention data on reproductive and growth performance of the beneficiary herds.
- ❑ Department remains in the dark on the impact of the livestock improvement programs in the Province.

# MAIN OBJECTIVE

To evaluate Livestock Improvement as measured by reproductive and growth performance of beef cattle herds participating in the Sire Subsidy Scheme in the North West Province

## **Specific objective**

- To measure the reproductive and growth performance of beneficiary herds
- To determine the adoption rate of beef cattle management principles for livestock improvement



# METHODOLOGY

## Data Collection and Recording

- ❑ The first farm visit will be initiated for purposes of **introducing** the project to the beneficiary farmer and for establishing the geographical **location** as well as the **farm profile**
- ❑ Conducted by responsible researcher or his delegate in the company of the area specific agricultural advisor
- ❑ **Supporting team:** Animal Sciences, Pasture Sciences and Veterinary Services



## Breeding herd management

- ❑ All breeding animals under study will be classified according to **Age**
- ❑ Identification will include branding of the **year figure and sequence number**
- ❑ Calves will be **ear notched** (within **3 days**) at birth and **year figure branded** at weaning

## Reproductive and Growth rate

- ❑ Records of all **calves born** and **weaned**
- ❑ **Birth weight** and date at birth (within **72 hours**) & **weaning weight**
- ❑ At the least two calving seasons (**summer** and **winter**)

# METHODOLOGY

- ❑ In instances where excess breeding animals are available, breeding animals **not running** with the SSS bull will also be included for data collection as a control observational unit.
- ❑ **Controlled breeding season** will be strongly advised, herds that cannot adopt a controlled breeding season will not be excluded from the trial
- ❑ Standard region specific **Beef Cattle Management programme** will be advised for all participating herds.

- ❑ For all other **age categories**, **body mass measurements** will be collected by at least two members of the research team.
- ❑ This would be achieved by use of **mobile electronic weighing scales**.

## **Pedigree Data**

- ❑ Animal identification number, sire and dam identification numbers and the sex of the subject animal.

# Research Project Monitoring and Evaluation

- Assigned Agricultural Advisor or his/her delegate
- Assigned Researcher or his/her delegate
- State Veterinarian or his/her delegate

**Bi-annual basis**



# SUMMARY

**Table 1:** Data to be collected from SSS beneficiaries

<b>REPRODUCTION</b>	<b>GROWTH PERFORMANCE</b>
<ul style="list-style-type: none"><li>• Pregnancy rate</li><li>• Calves born</li><li>• Calves weaned</li></ul>	<ul style="list-style-type: none"><li>• Birth weight (<b>with 72 hours</b>)</li><li>• Weaning weight</li><li>• 12 and 18 months</li></ul>

- ✓ Weight data of herd before introduction sire
- ✓ Weight data of herd after introduction of sire



# SUMMARY

## Table 2: Requirements from farmers

- Handling facility
- Calf weighing scale (hanging scale)
- Crush pen (with concrete floor 3 meters long)





# Thank You!

