

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

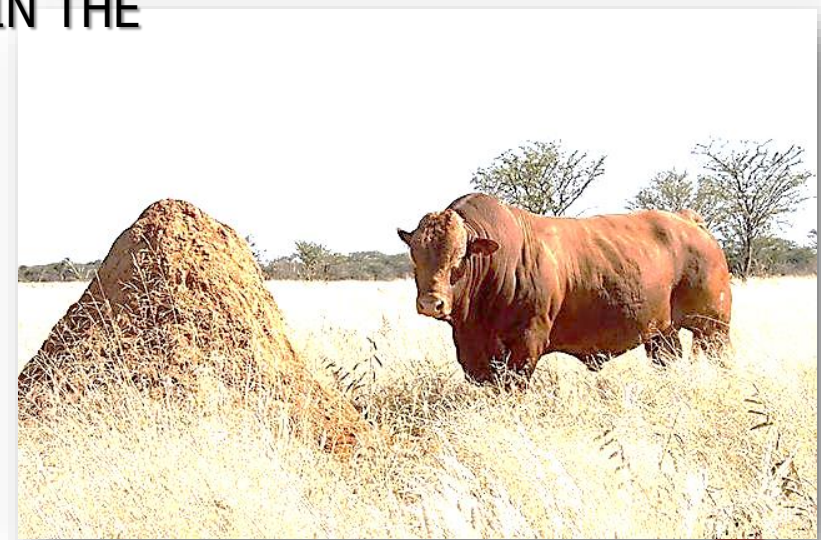
NORTHWEST PROVINCE

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



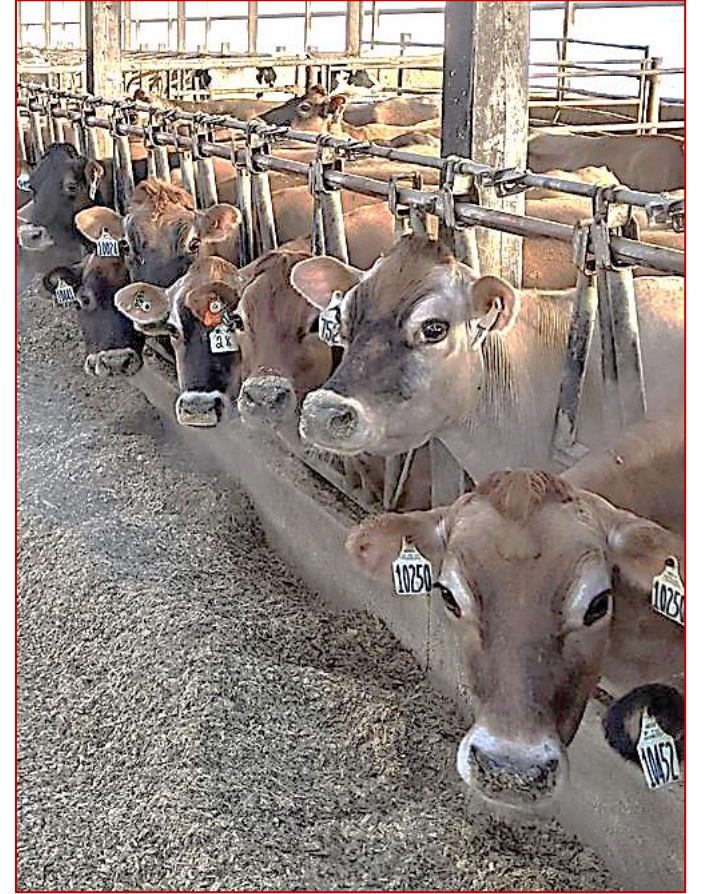
INTRODUCTION

- ❑ 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

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

- ✓ 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!

