A business without a path to **PROFIT** isn't a business, it's a hobby.

Jason Fried

ENVIRONMENT LIMITATION PRODUCTION CONSTRAINT

- Feed and supplementation is the biggest expense in livestock production systems.
- Planning fodder flow is to match the farms feed-producing capabilities to the needs of the animals to maximize profit margins.
- Match production cycle (calving seasons) to fodder and nutrition availability

SUSTAINABILITY

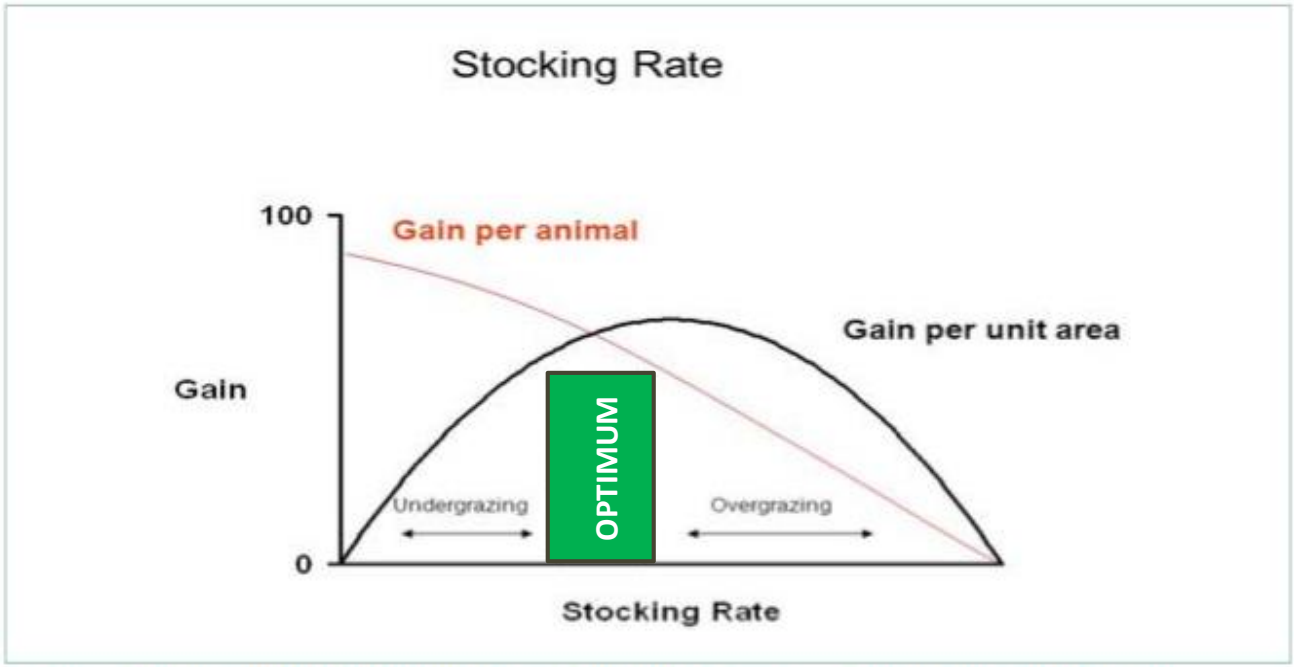

Figure 2 The theoretical relationship between stocking rate and average daily gain and between stocking rate and livemass gain per hectare.
Source: Edwards, 1981.

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If you don't know where you are going, any road will get you there.

-Cheshire Cat (Alice in Wonderland)

BREEDING OBJECTIVES

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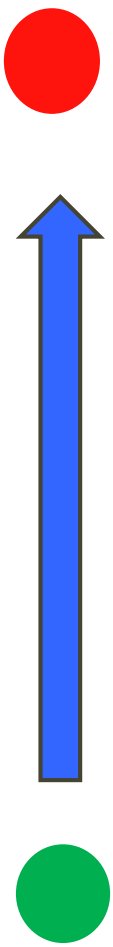

Where you want to be!
Breeding objective

Genetic route

You are here !
Current herd performance

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Setting your BREEDING OBJECTIVE

1. Benchmark you performance
2. Traits to Accelerate your performance
3. Your Breeding Objective

BREEDING OBJECTIVES

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FERTILITY

- Fertility is one of the most economically important traits
  - ✓ *If there is no calf, there is no product to sell*

- Fertility is a lowly heritable trait, thus greatly influenced by the environment and management

- There is however a genetic component involved. And therefore it **is possible to improve the genetics** of your herd with regards to fertility

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IMPORTANCE OF REPRODUCTION

SCALE of IMPORTANCE

- Reproduction / Fertility = 10
- Production (Growth) = 2
- Product (Carcass) = 1

CP Massmann, General Manager Simmentaler/Simbra Cattle Breeders Society of Southern Africa, July 2003

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REPRODUCTIVE PERFORMANCE

Controlled calving seasons

1. A controlled calving season is a 60 - 90 day period in which calves are born
2. A controlled calving period ensures ease of management due to animal similarity during the year.
3. Research shows that calving seasons are more profitable

Item	Own Herd	Industry Target
Cow:Bull Ratio	1 : _____	25 *
Length of calving period	_____ days	63 – 84 days
% pregnant 42 days after bull out	_____ %	93%

* Increase bull ratios for young bulls and/or shorter calving periods

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REPRODUCTIVE PERFORMANCE

Calving Distribution

Distribution (%)	Own Herd	Industry Target
Calves born day 1 - 21	____ %	60%
Calves born day 22 - 42	____ %	25%
Calves born day 43 - 63	____ %	10%
Calves born day 64 +	____ %	5%

BREEDING OBJECTIVES

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REPRODUCTIVE PERFORMANCE

Calf survival

CALF SURVIVAL (%)	Own Herd	Industry Target
Pregnancy loss %	____ %	Below 2%
Calf death loss, due to calving incidents %	____ %	3%
Calf survival rate % [Calves weaned/ Live calves born]	____ %	95%
Weaning rate % [Calves weaned/ Cows exposed]	____ %	85%

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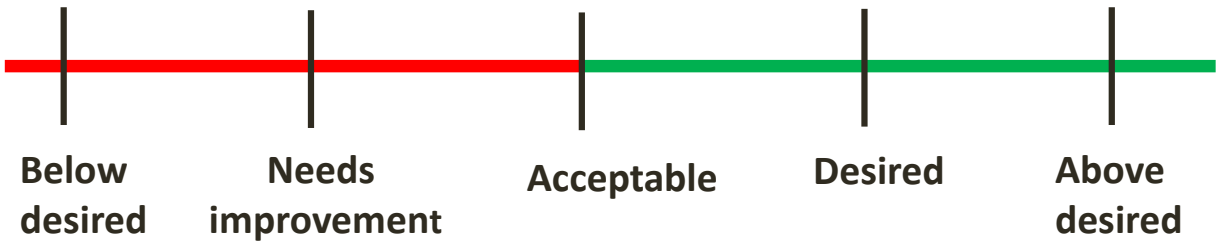
REPRODUCTIVE PERFORMANCE

Your herds performance in mating and calving (mark on line)



BREEDING OBJECTIVES

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REPRODUCTIVE PERFORMANCE

Heifers

Heifer mating	Own Herd	Industry Target
Do you expose your heifers to the bull, at least one cycle before the cows ?	Yes or No	Yes
Do you have a formal heifer development plan with mating target weights ?	Yes or No	Yes
Are you mating yearling heifers ?	Yes or No	Yes At 15 months

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Research results: AGE OF CALVING

Based on age at first calving

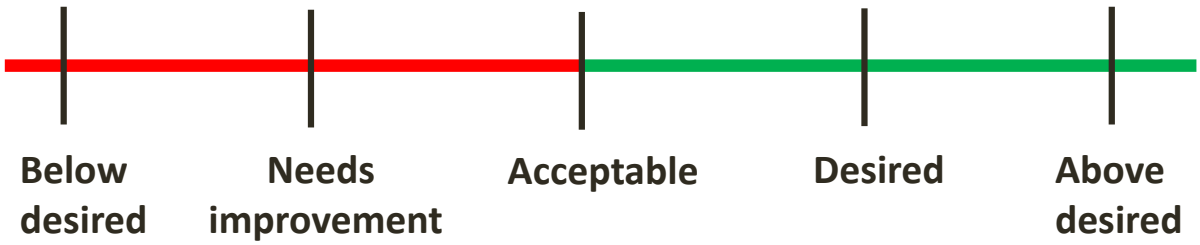
	Two years	Three years
No. females started in experiment, 1948	59	60
No. remaining in 1962	23	22
Average mature bodyweight in 1956, kg	521	534
Total No. calves weaned	533	482
Average weaning weight of calves (corrected for calf sex) kg	216	220

Two year calves: Increase in mass weaned (No calves x wean weight) **10.85%**

BREEDING OBJECTIVES

REPRODUCTIVE PERFORMANCE

Your herds performance in heifer reproduction (mark on line)



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REPRODUCTIVE PERFORMANCE

TRAITS (EBV's) TO ACCELERATE REPRODUCTION

- **Days to calving (DTC)** – a measure of calving interval. Cows that get in-calf early are more fertile and reproductive efficient. They also wean older, larger calves.
- **Rib fat (Rib fat)** – related to increased heifer conception in that heifers with more rib fat at mating have an increased likelihood of conception. Like Scrotal size, it is a measure of heifer puberty and sexual maturity.
- **Scrotal size (SS)** – indicates bull maturity and is positively correlated to female fertility.

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REPRODUCTIVE PERFORMANCE

Calving performance

Distribution (%)	Own Herd	Industry Target
Average percentage assisted births in mixed age cows ?	____ %	Below 1%
Average percentage assisted births in two year Heifers?	____ %	Below 3%

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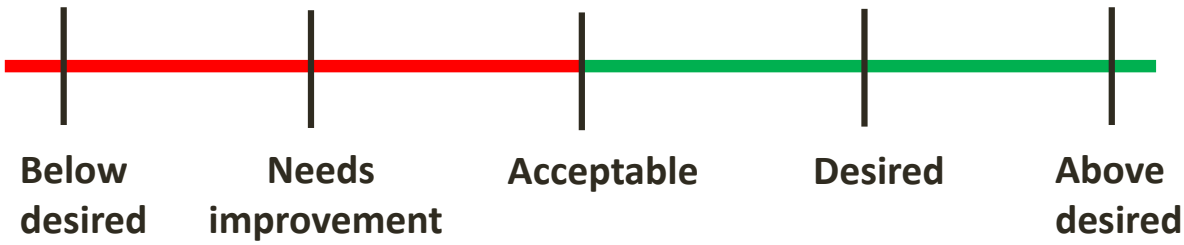
REPRODUCTIVE PERFORMANCE

Your herds performance in reproduction (mark on line)



BREEDING OBJECTIVES

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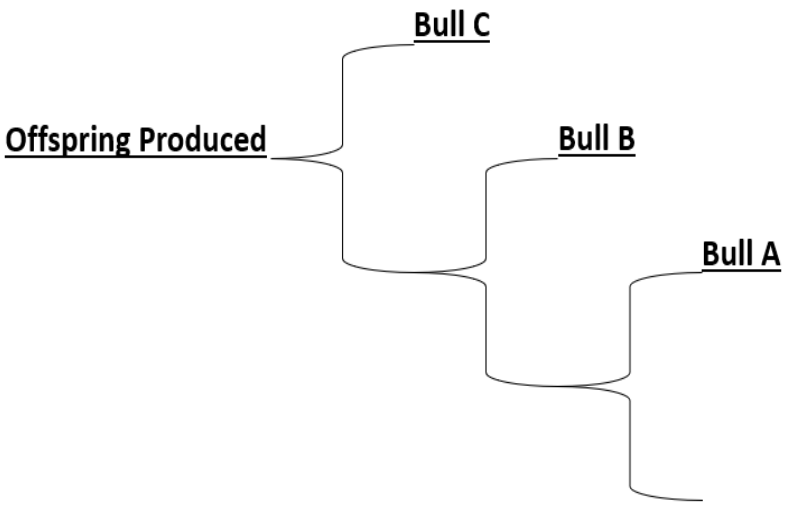
REPRODUCTIVE PERFORMANCE

TRAITS (EBV's) TO ACCELERATE CALVING EASE

- **Calving ease direct (CED)** – is the ability of a sire's calves to be born unassisted.
- **Calving ease daughters (CED)** – the ability of a sires daughters to calve at two years without assistance.
- **Gestation length (GL)** – the length of time from conception to calving. Longer GL's result in larger calves that may have calving difficulties.
- **Birth weight (BW)** – the weight of the calf at birth. Heavy calves have an Increased incidence of calving difficulties.

REPRODUCTIVE PERFORMANCE

Importance of selection the right BULL genetics



Bull	% Genes Contributed to Offspring Produced
A	12 ½
B	25
C	50
Total:	87 ½ %

Source: Colorado State University

BREEDING OBJECTIVES

COST OF PRODUCTION

DOES COW SIZE MATTER?

Different environments and management systems can successfully support a variance of cow sizes (weights)

BUT IF

Cow size impacts on profit, size matters



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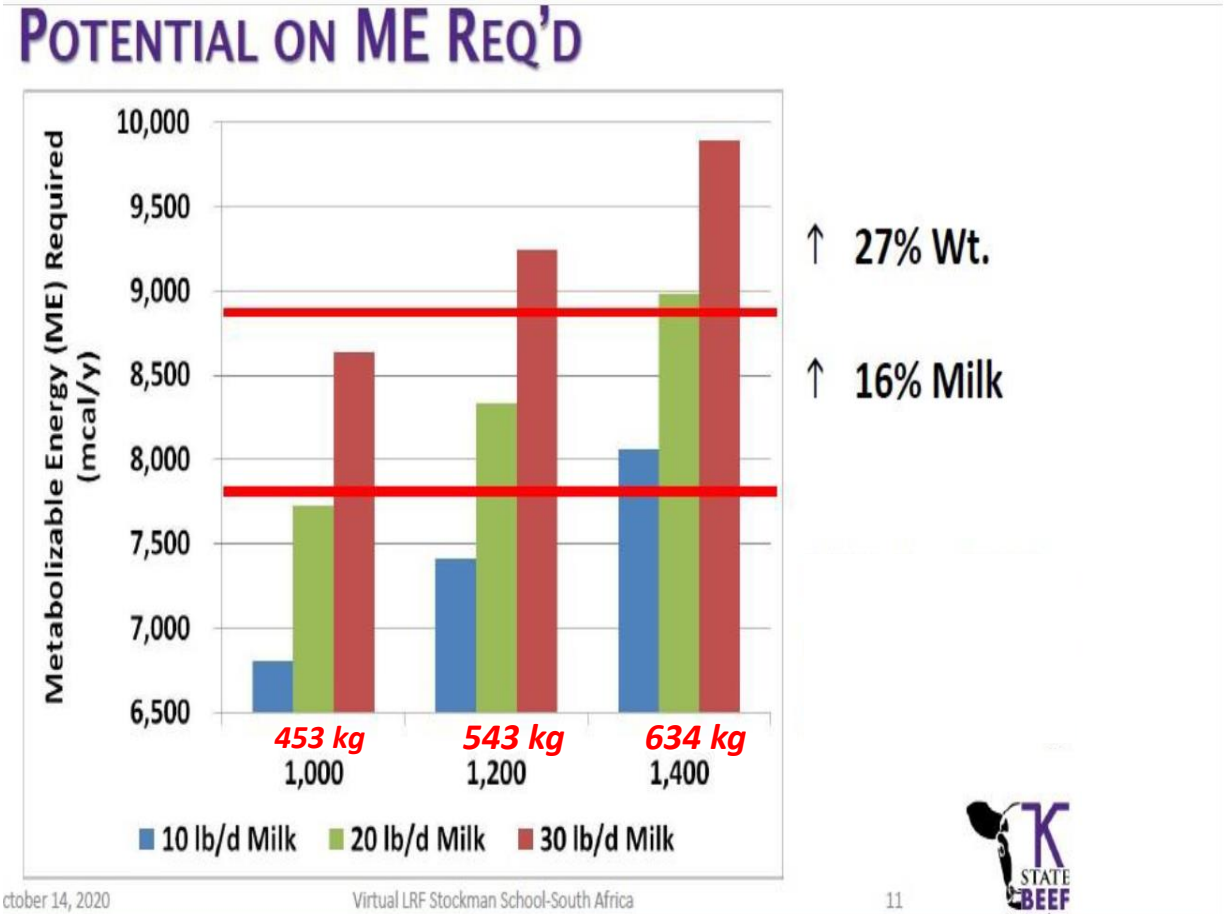
BREEDING OBJECTIVES

COST OF PRODUCTION

COW MAINTENANCE REQUIREMENTS



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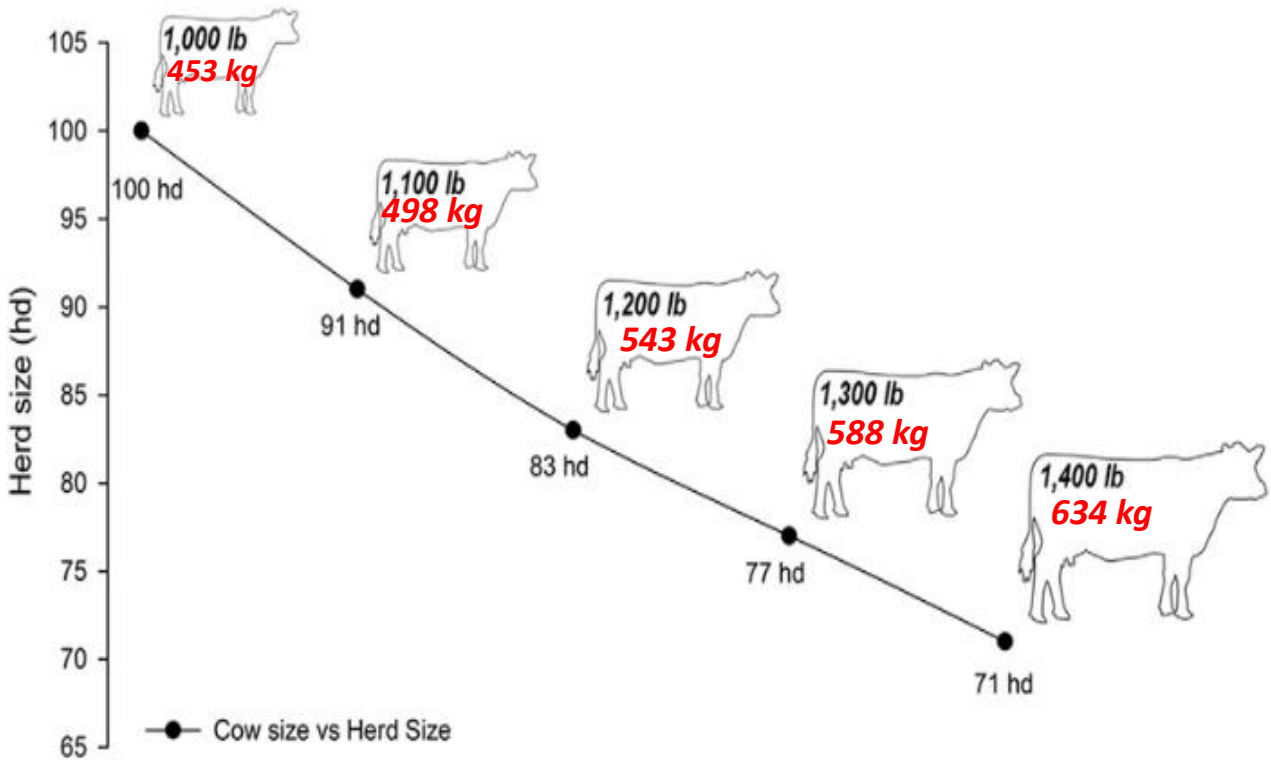
COST OF PRODUCTION

size



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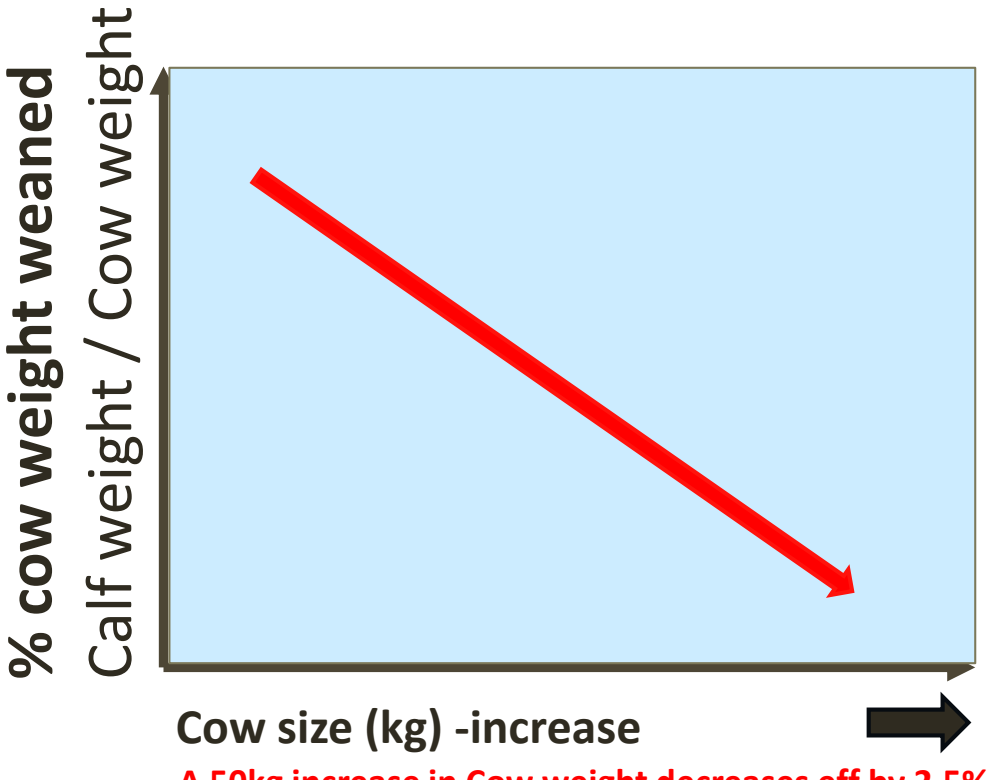
COST OF PRODUCTION

COW EFFICIENCY



A 50kg increase in Cow weight decreases eff by 2.5%

Dr Shane Gadberry, Univ. Arkansas Ext Service 2008

BREEDING OBJECTIVES

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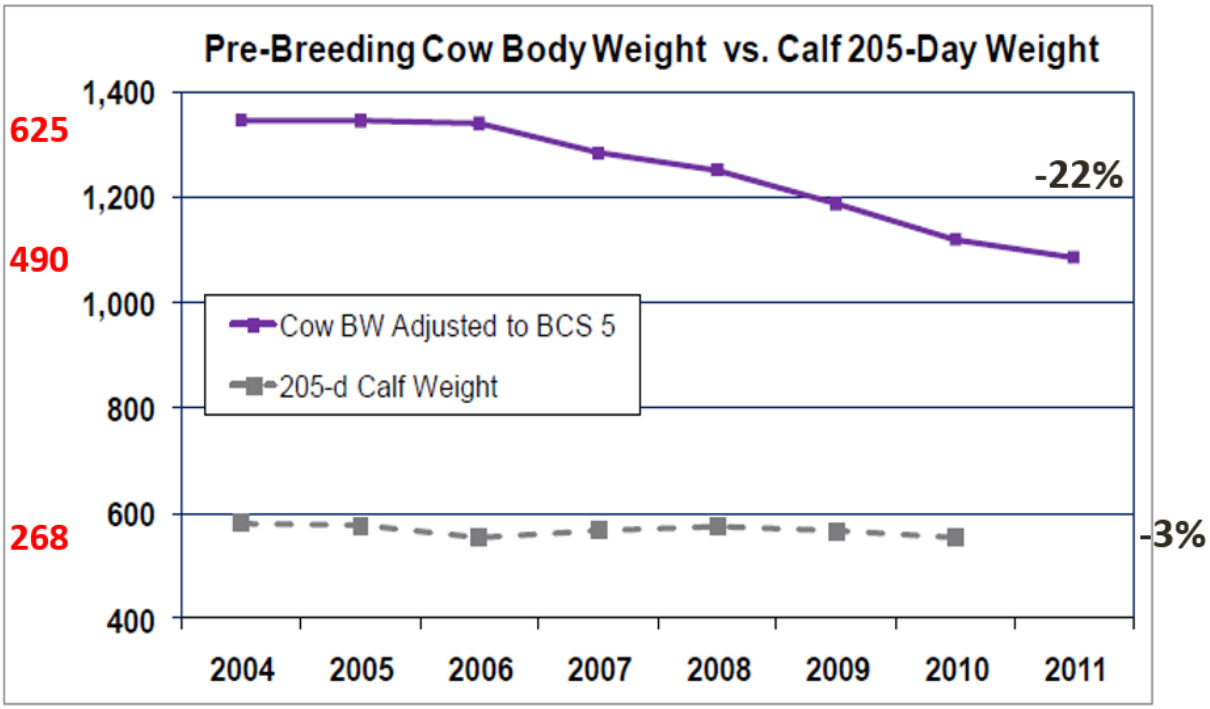
COST OF PRODUCTION



Olson et al., 2010

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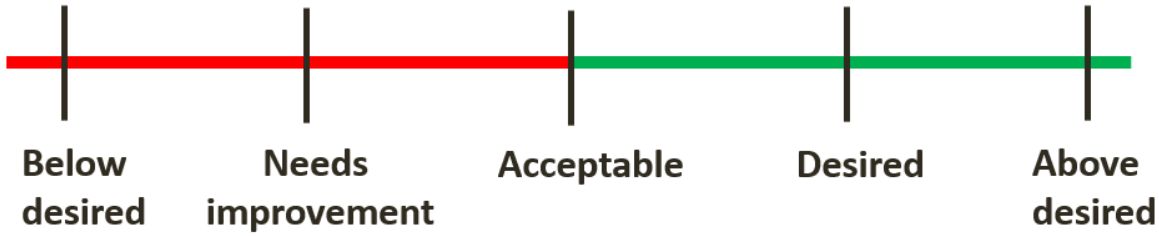
EFFICIENCY of PRODUCTION

COW SIZE

Cow weight (kg)	Own Herd	Industry Target
First calf heifers BCS at calving	____ [1 – 9]	BCS = 6
Average cow weight at weaning?	____ kg	520 kg

Your herds performance in cow size [Mark on line]



BREEDING OBJECTIVES

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EFFICIENCY of PRODUCTION

TRAITS (EBV's) TO ACCELERATE EFFICIENCY of PRODUCTION

- Mature cow weight (MCW) - weight of cow at three years or older.
- 600-day weight (600D) - weight at 18 months.

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PRODUCTION PERFORMANCE

GROWTH

WEIGHT (kg)	Your Herd	Your 5 year goal	Industry benchmark
What is your average weaning weight ?	_____kg	_____kg	235 kg (200 days)
What is your yearling heifer mating weight	_____kg	_____kg	60% of MCW
If progeny is marketed at 18 months what is the average weight?	_____kg	_____kg	
If progeny is marketed at 24 months what is the average weight?	_____kg	_____kg	

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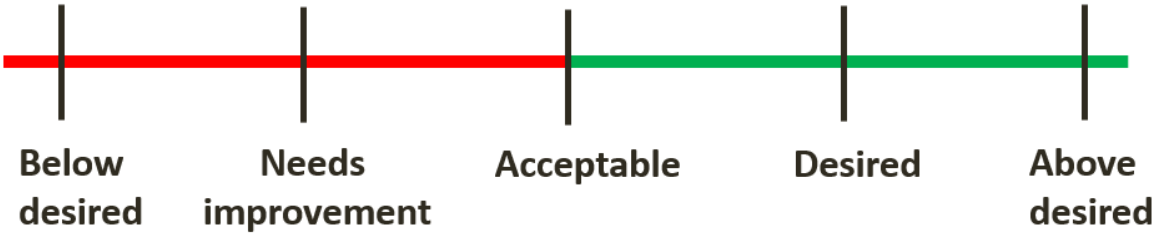
PRODUCTION PERFORMANCE

Your herds performance in growth [Mark on line]



TRAITS [EBV's] TO ACCELERATE GROWTH

- 200 day weight – for weaning weight
- 400 day weight – for yearling weight
- 600 day weight – for growth up to 24 months

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PRODUCTION PERFORMANCE

Your herds carcass merit

Carcass	Your Herd	Your 5 year goal	Industry benchmark
What is your average carcass dressing out %	_____%	_____%	55%
What is your average carcass fat cover	_____mm	_____mm	4 mm (A2)

TRAITS [EBV's] TO ACCELERATE CARCASS MERIT

- **Carcass weight (CW)** – improve heavier carcass relative to live weight
- **Retail beef yield (RBY)** – increased meat yield of carcass

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PRODUCTION PERFORMANCE

Your herds carcass quality

A meat grading system will unlock the economic value of carcass quality

TRAITS (EBV's) TO ACCELERATE CARCASS QUALITY

- **IMF** - to lift marbling score.
- **600 Day Weight (600D)** - to reduce age and or maturity at slaughter.
- **Docility** - quiet cattle at slaughter avoid dark cutting (colour)/low ultimate pH meat.
- **Eye muscle area (EMA)** - loin cuts are the most valuable and result in more high value meat on the animal.

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BTB GENETICS for PROFIT

BREEDPLAN COMPLETENESS

Simmentaler Society: Certificate of Appreciation - 2023
Certificate of Merit LRF: Outstanding Service to Industry - 2023
ARC National Beef Cattle Improvement Herd of the Year - 2022
Agripen: Farmer of the year – Northwest 2019
Breedplan : Stud breeder of the year – 2016
Breedplan : Cow group of the year – 2019, 2017, 2015
Simmentaler: Simdex herd – 2023,2022 ,2021, 2017,2016,2015
Simmentaler: Star cows – 2023,2017

Johan Styger
082 460 8443
johan@btbsimmentaler.co.za

ZHB

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