Setting breeding objectives

Understand the playing field

Understand your business (farming operation) and industry

Understand what is within your control

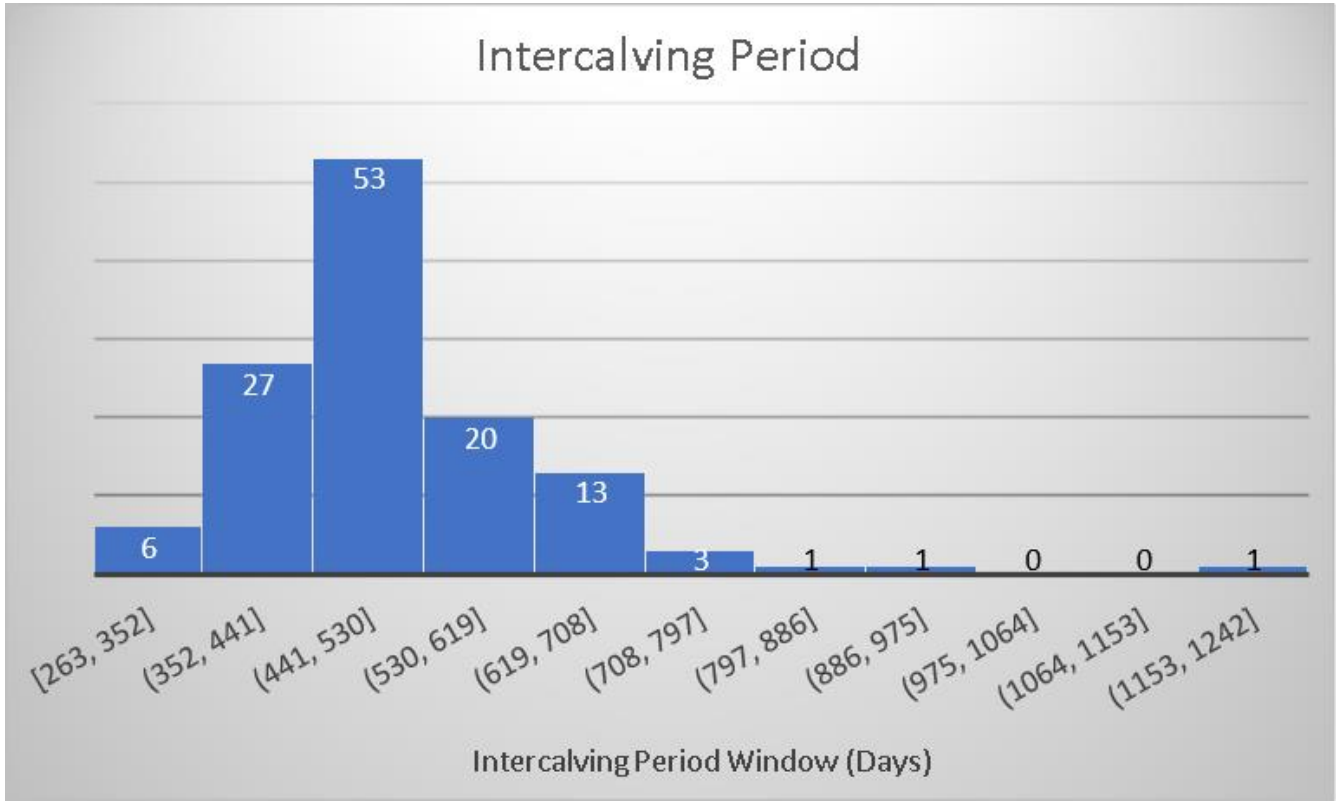
Understand the interaction of the factors outside of your control

Important considerations- Breeding requires a long-term approach

- **What are you aiming at ? Always have the end user in mind.**
- **Am I sufficiently diversified?**
- **What alternatives do I have in my strategy?**

What influences my success?

- Farming for profit – not turnover
- Long term sustainability
- Be practical, realistic and in touch



4 Basic steps

Benchmark current performance

Evaluate critical traits and decide which to:

- Maintain
- Accelerate

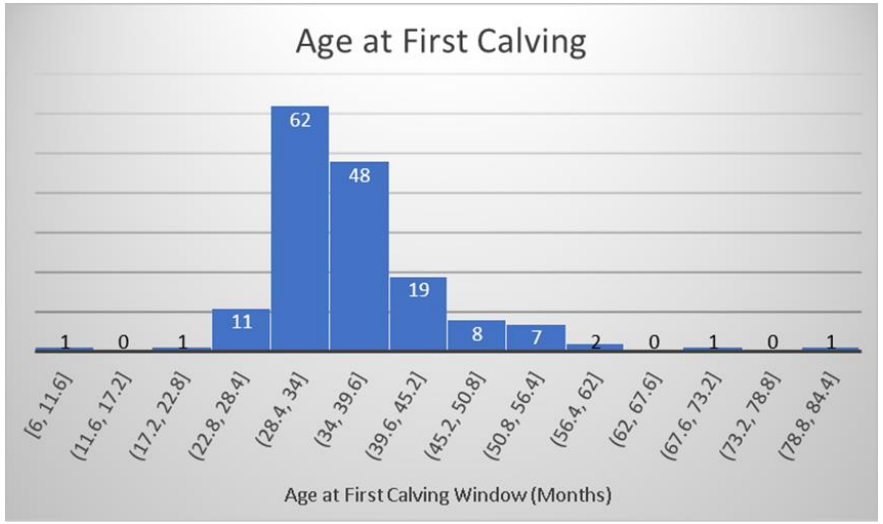
Establish breeding objectives and goals

Manage your breeding plan

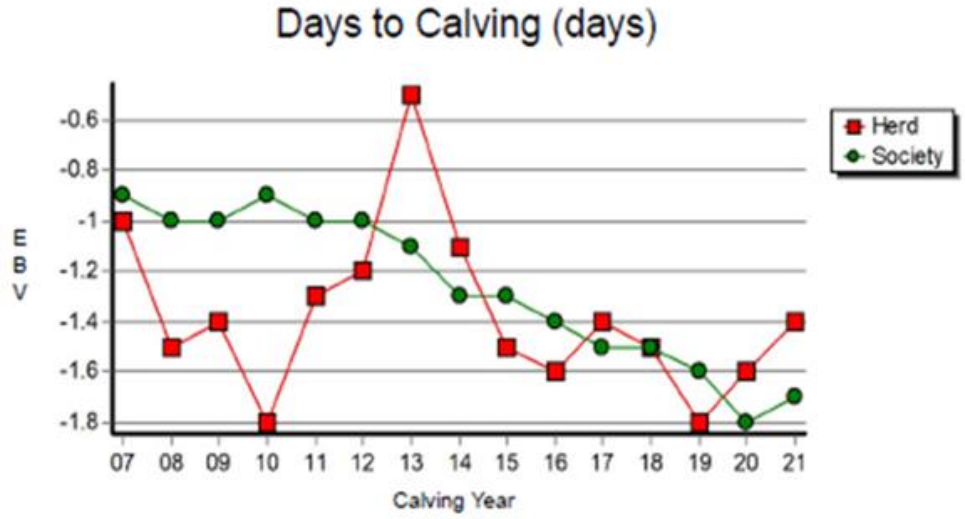
(Always linked to a time-line)

How to benchmark yourself

- Reproduction – crucial
  - Average conception % in 63 day mating season
  - % conceived in first 21 days
  - AFC

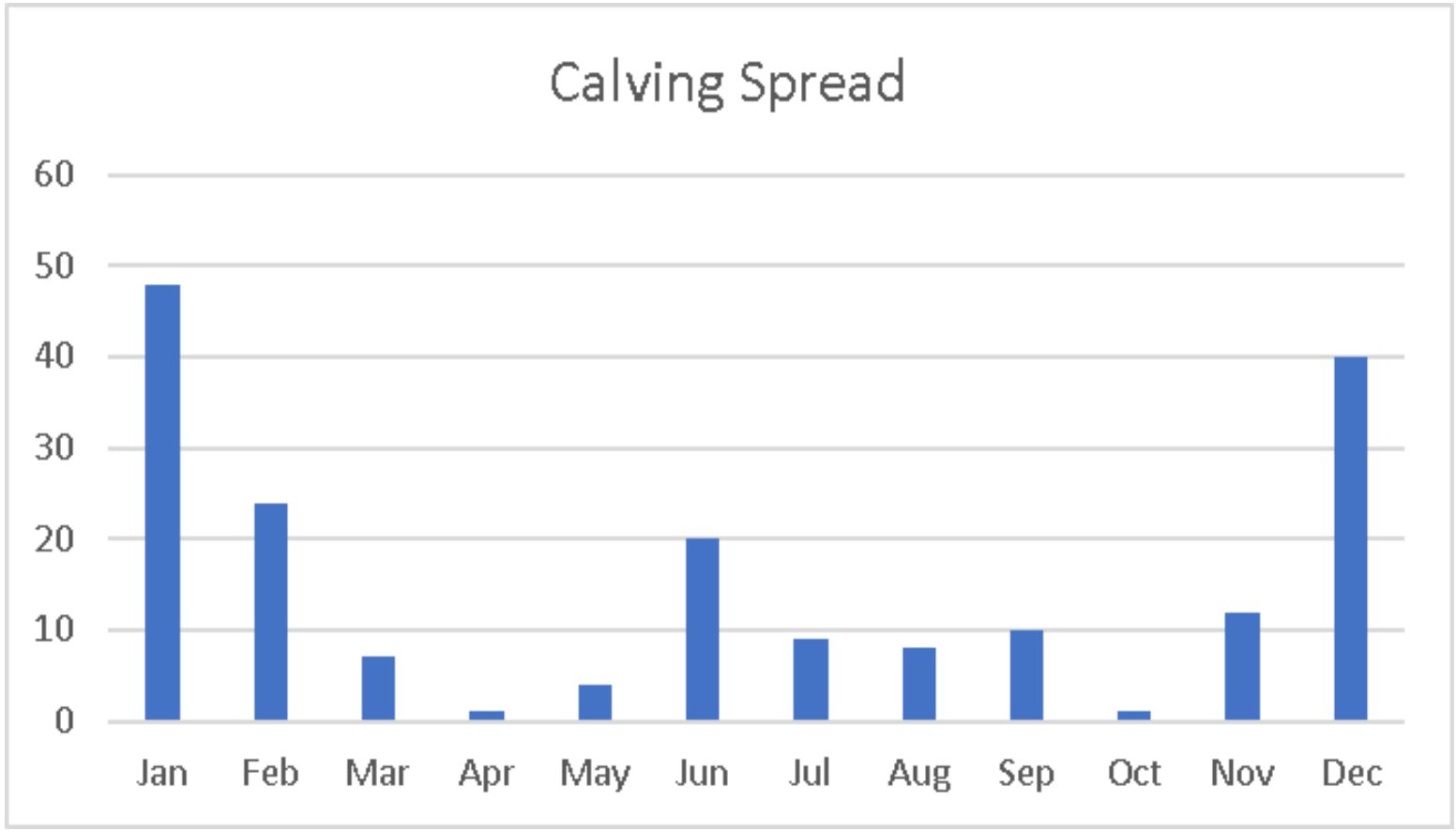


- Status of EBV's
  - Days to Calving
  - Scrotal Circumference
  - Rib fat



Weaning percentage

- Calves born alive: Calves weaned
- Assisted births
  - Among first calvers
  - Among cows
- Calving spread
- EBV's
  - BW
  - CED
  - CEDtrs
  - GL

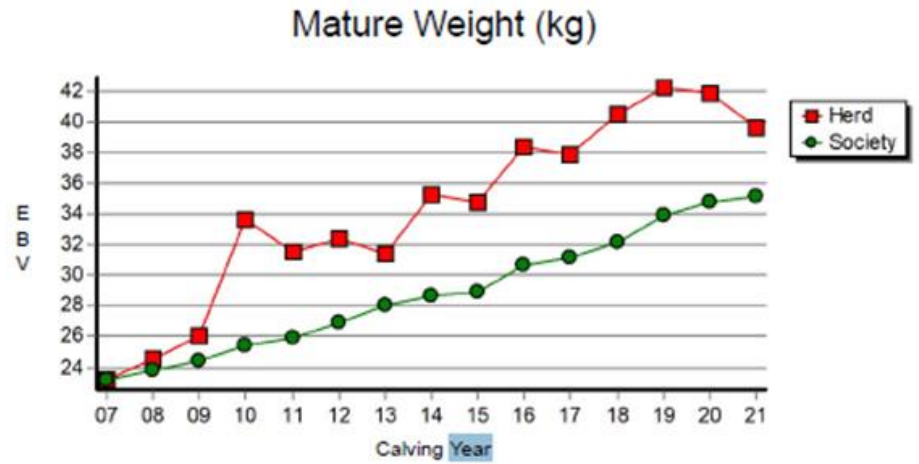


Milk production (and mothering ability)

- Easy suckling calves
- Strong unassisted – extensive conditions
- Weaning weights
- EBV's
  - Milk
    - BCS
    - Re-conception

Cow size

- Focused on efficiency
  - Cow size
    - Hip height
    - Weight
    - Production efficiency
  - Longevity
    - Udder and teats
    - Legs hooves
    - Teeth
- EBV's
  - 600 Days
  - MCW



Production traits

- Growth
  - 200d
    - Weaning weight of calves (Cow : calf ratio)
    - Biomass of breeding herd: Biomass weaned
      - NB: Breeding herd – includes sub-adults to be incorporated in breeding herd
  - 400d
    - Growth until 400 days

Beef production system

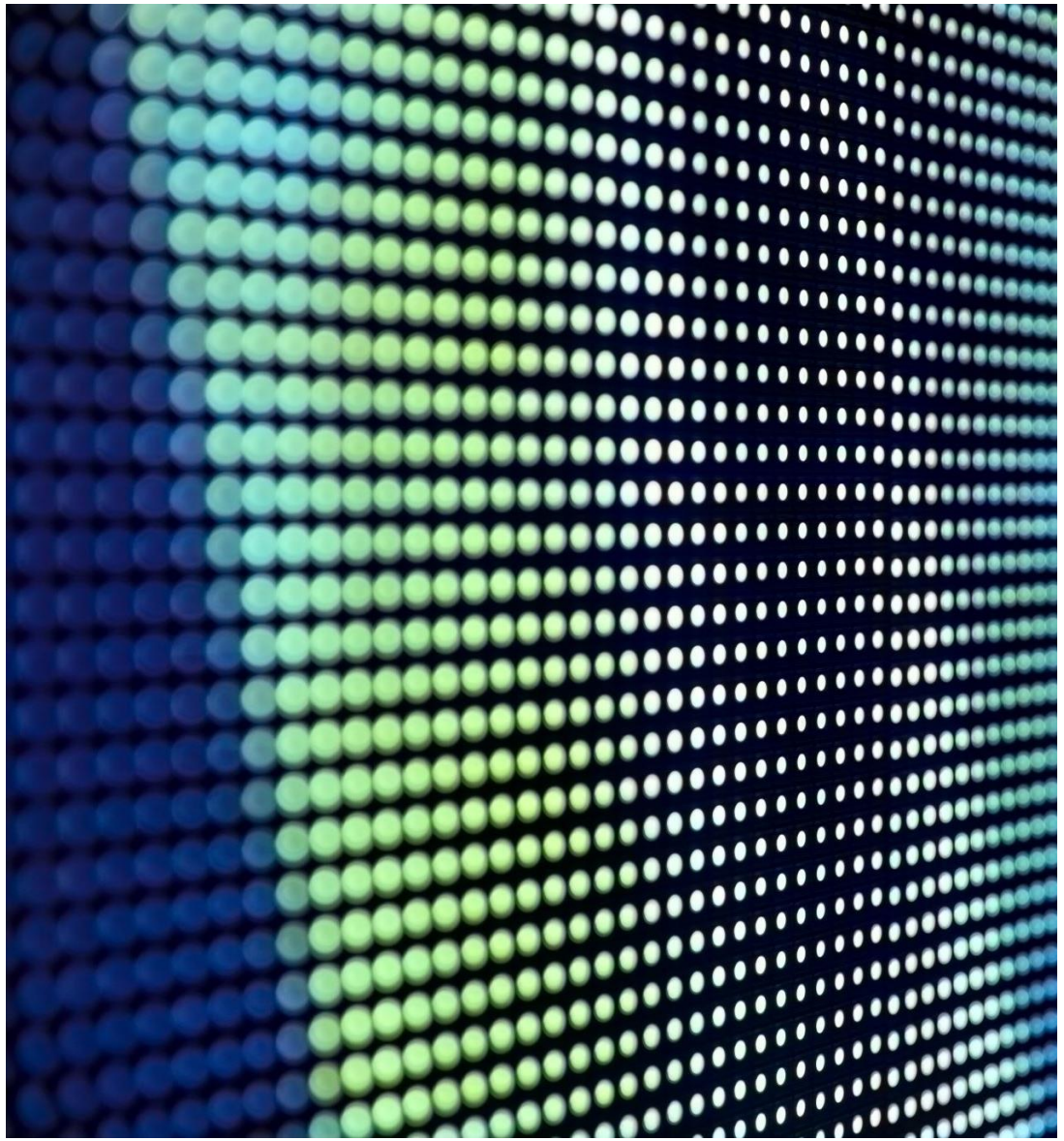
- Oxen or feedlot
  - Age of turn-off
  - Weight
  - Fattening score
  - Conformation – Dress out %
  - Beef Yield
- Carcass quality
- Meat quality
- EBV's:
  - CW
  - EMA
  - RBY
  - Rib &rump fat
  - Marbling

Single trait selection too challenging

Antagonists

Solution:

- Selection indexes

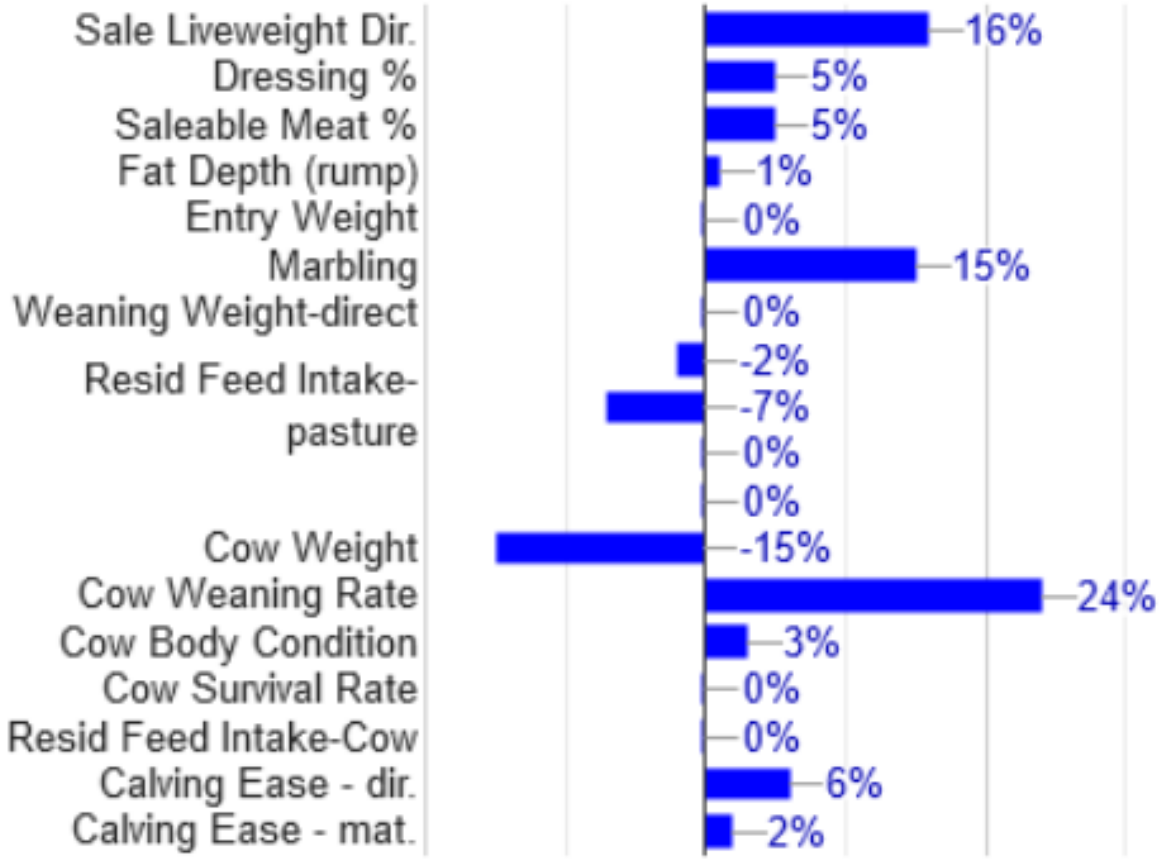


Grassfed Index

- Estimates the genetic differences between animals in net profitability per cow joined for a herd that keeps replacement females and requires a moderate emphasis on calving ease. Progeny age at turn off is 23 months off pasture. Steers are around 500kg liveweight (260kg carcass). Emphasis was placed on carcass quality.
- Traits of economic importance / relevance.
- Combination of EBV's required(contributing) for profit.
- Expected change (response) in the herd if a top 10 % bull is used.

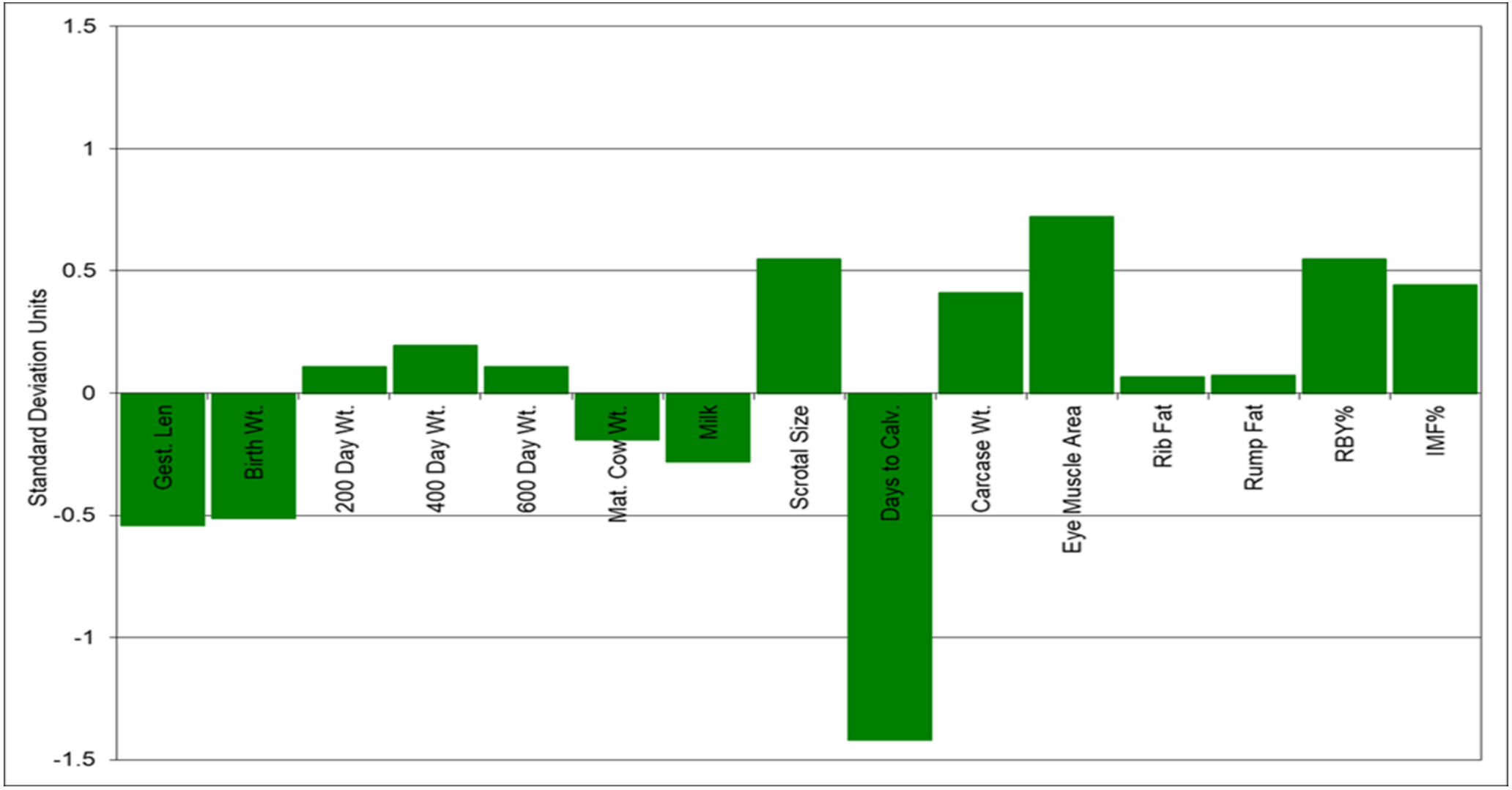
Economic consideration and EBV's driving it

Economical considerations



EBV's driving profit

Response graph



EBV's vs Rand Index Values

EBV's vs Rand Index Values

August 2023 South African Simbra BREEDPLAN																
	Gestation Length (days)	Birth Wt. (kg)	200 Day Wt (kg)	400 Day Wt (kg)	600 Day Wt (kg)	Mat Cow Wt (kg)	Milk (kg)	Scrotal Size (cm)	Days to Calving (days)	Carcase Wt (kg)	Eye Muscle Area (sq cm)	Rib Fat (mm)	Rump Fat (mm)	Retail Beef Yield (%)	IMF (%)	NFI-P
EBV	-0.4	+1.1	**+27**	**+35**	+42	+37	+8	+1.2	-2.1	**+24**	-0.4	-0.8	-1.1	+0.3	-0.1	+0.20
Accuracy	95%	97%	96%	95%	92%	86%	58%	91%	33%	82%	45%	53%	53%	44%	36%	46%
Breed Avg. EBVs for 2021 Born Calves Click for Percentiles																
EBV	-0.8	+1.2	+17	+25	+32	+34	+4	+0.7	-1.3	+18	+0.4	-0.3	-0.4	+0.2	+0.0	-0.03

Traits Analysed: BWT,200WT(x2),400WT(x2),600WT,SS,FAT,EMA,IMF,NFI-P

Statistics: Number of Herds: **14**, Progeny Analysed: **341**, Scan Progeny: **1**, Number of Dtrs: **19**

Selection Index Values (Rand)		
Market Target	**Index Value**	**Breed Average**
Self Replacing Feedlot Index (R)	+R 643	+R 364
Self Replacing Grassfed Index (R)	+R 314	+R 207
Self Replacing Weaner Index (R)	+R 460	+R 218

In Summary

- Determine your goals – End user in mind!
- Benchmark yourself.
- Manage what you can control.
- Be focused:
  - Outcome driven
  - Measure progress
  - Manage obstacles and challenges
- Value of Indexes vs EBV's.

Questions ?