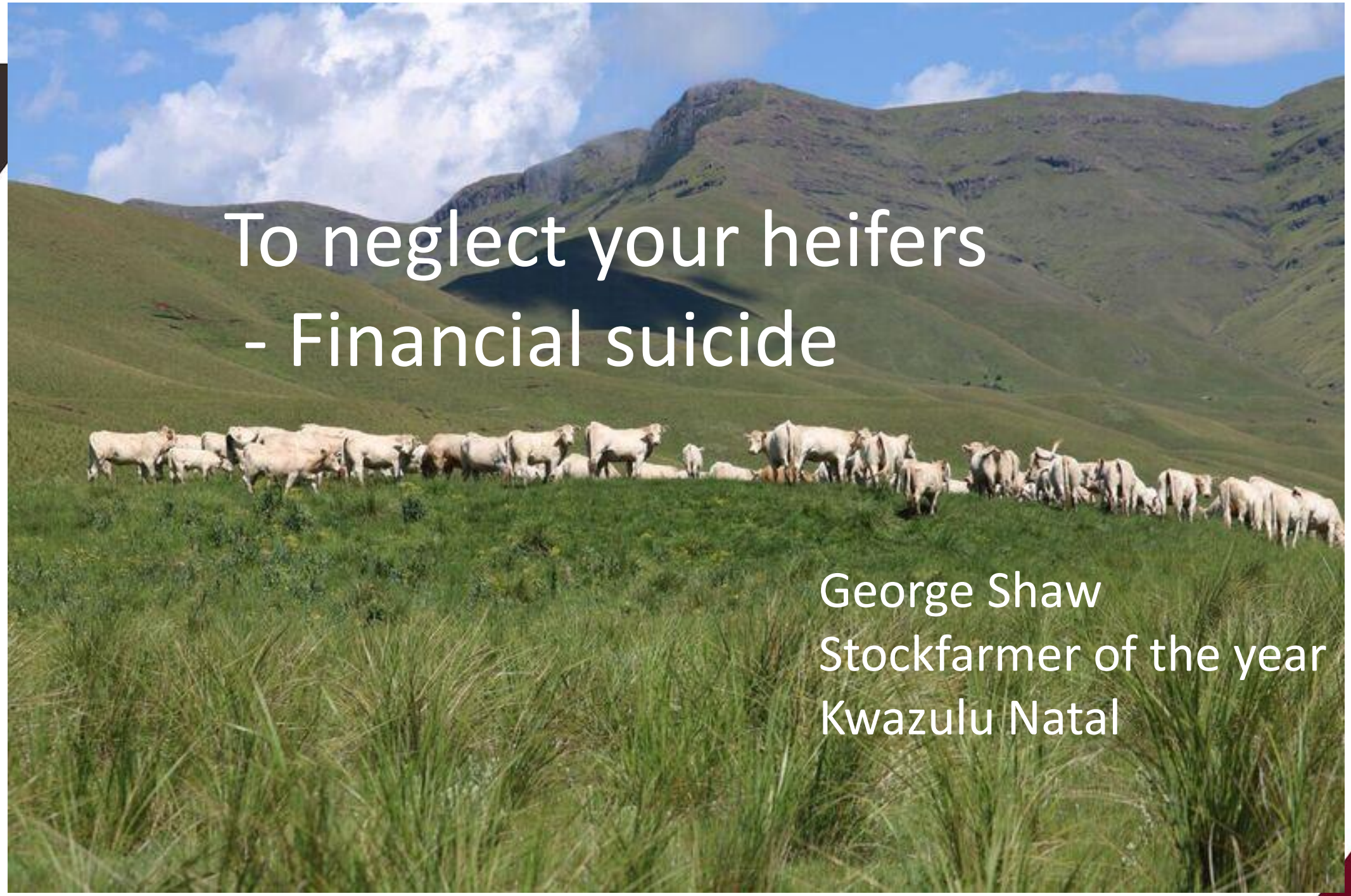
# Welcome

## HEIFER REARING



# To neglect your heifers - Financial suicide

George Shaw
Stockfarmer of the year
Kwazulu Natal

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# Growing out heifers

1. Reproduction rate of herd is key

| | | |
|---|---|---|
| Cows in herd | 100 | 100 |
| Replacement percentage | 15% | 15% |
| Weaning percentage | 65% | 85% |
| Females available for selection | 16 | 21 |
| Females neccesary to keep herd numbers | 15 | 15 |
| Percentage animals utlized out of those available | 92% | 71% |

Low reproduction rate

=

Little room for genetic improvement

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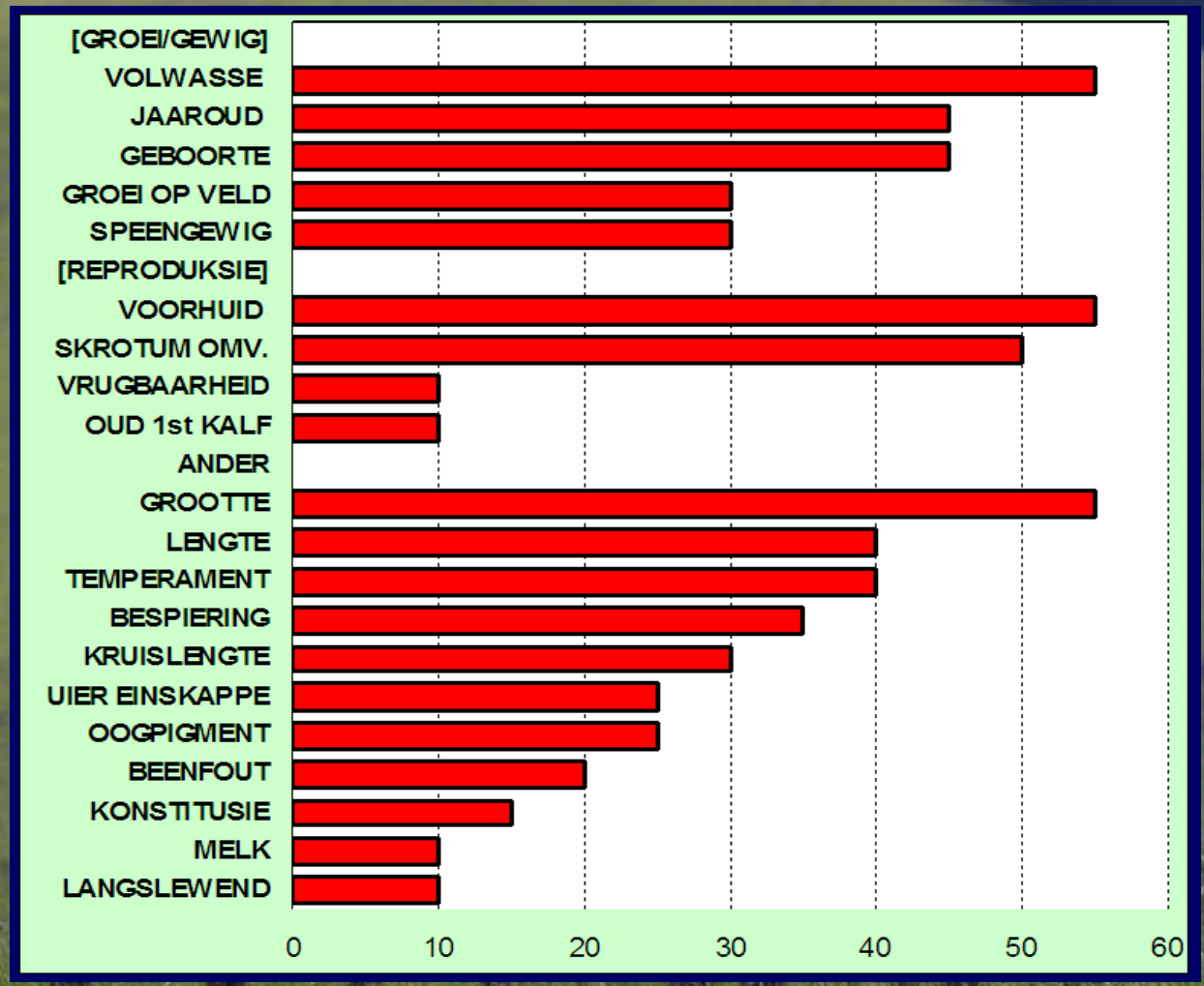
# Genetic effect vs. environment




Total Production = 25 % Genetic + 75 % Environment

Environment you Control directly

Animal side

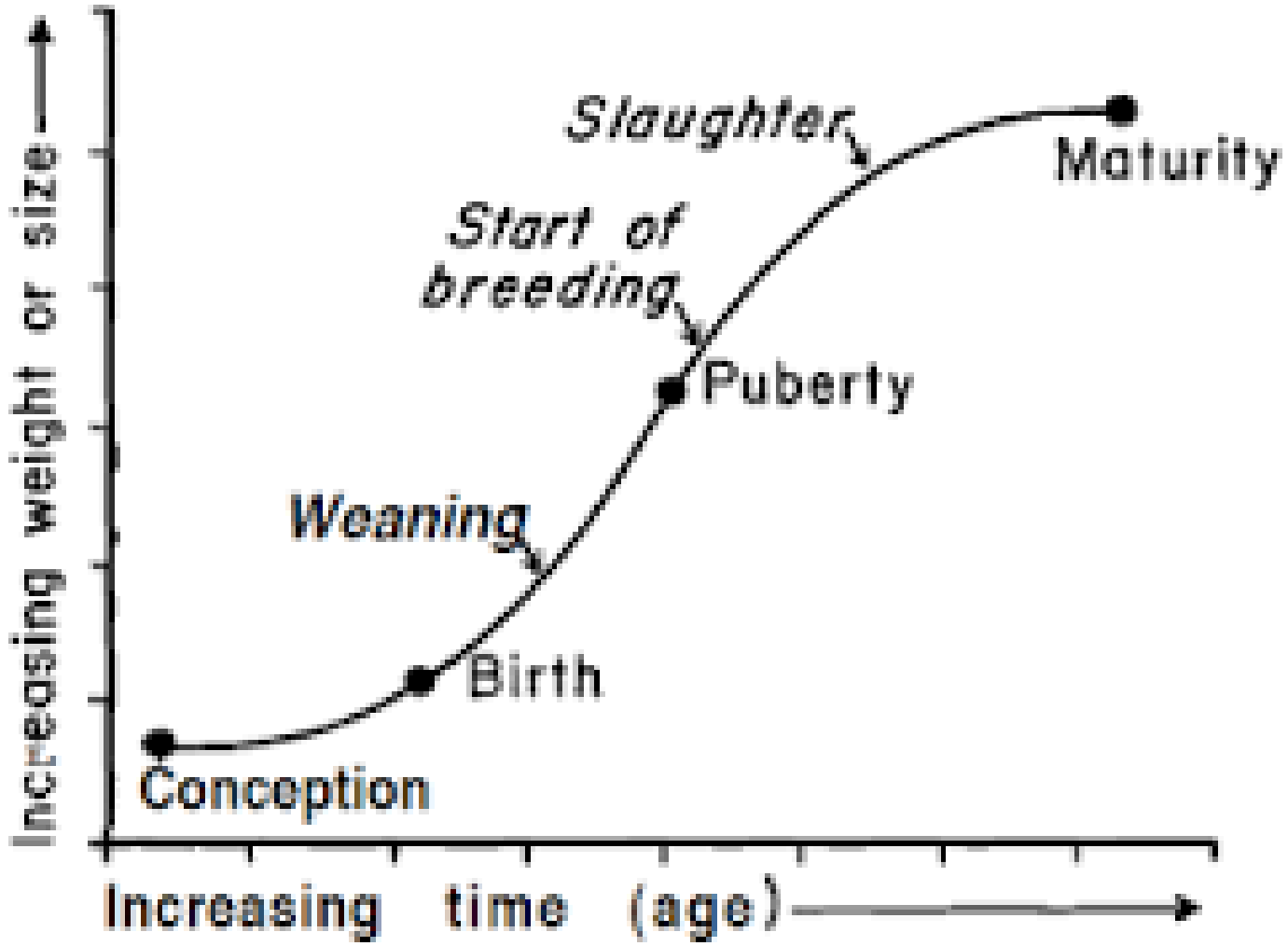



*Fig. 2* Simplified growth curve

# Growing out heifers – Low – High (winter) feeding strategies

| | High | Meduim | Low |
|---|---|---|---|
| Weaning weight Kg | 190 | 190 | 190 |
| Winter ADG (gram/day) | 0,500 | 0,364 | 0,250 |
| Summer ADG (gram/day) | 0,682 | 0,727 | 0,773 |
| Weight with mating Kg | 267 | 252 | 242 |
| Weight Pre calving Kg | 374 | 371 | 365 |
| % conceived in 21 days of breeding | 55 | 20 | 18 |
| % conceived in 50 days of breeding | 90 | 55 | 63 |
| Calf Mortality 1 week % | 6.5 | 10.7 | 12.5 |
| Weaning weight Kg | 200 | 198 | 189 |
| Reconception % | 91 | 93 | 88 |
| Kg weaned / 454 kg mated | 201 | 105 | 120 |
| Average ADG | 0,591 | 0,545 | 0,511 |

- Poor feeding = Poor performance
- Constant good feeding

M. B. Warner
*Journal of Animal Science*, Volume 62, Issue 2, 1 February 1986, Pages 300–306,

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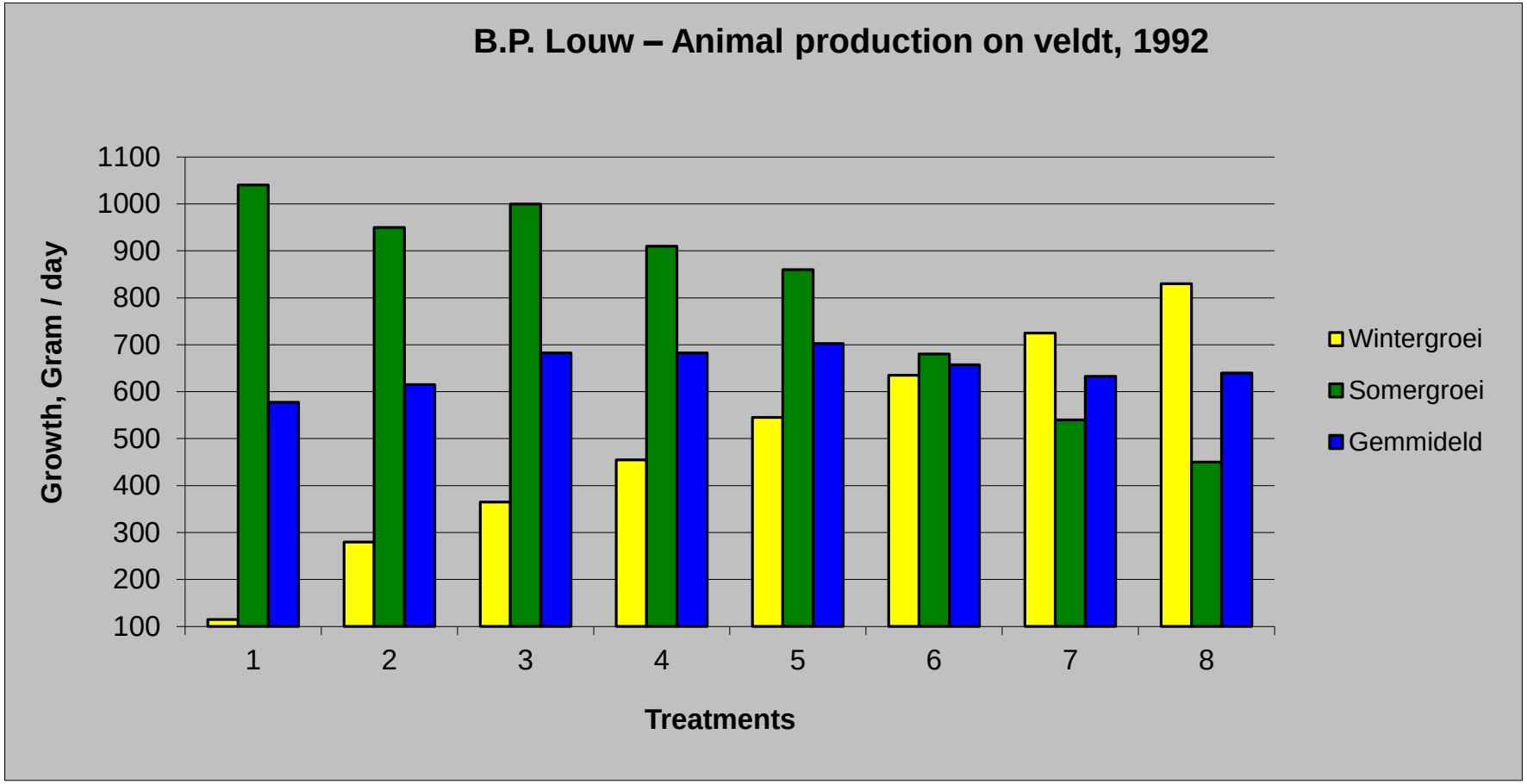
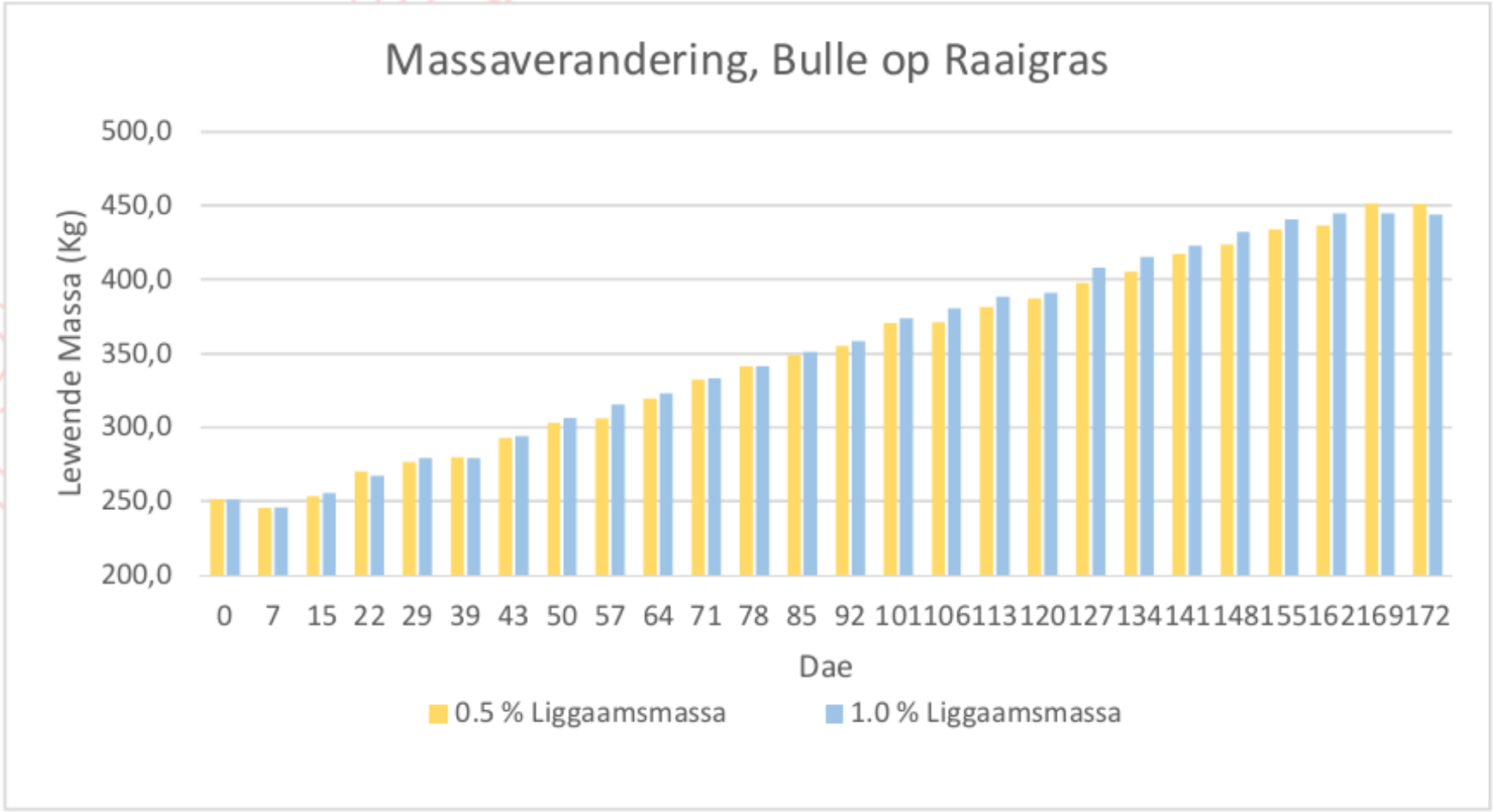
# Animal side


B.P. Louw – Animal production on veldt, 1992
Growth, Gram / day
1100
1000
900
800
700
600
500
400
300
200
100
1
2
3
4
5
6
7
8
Treatments
Wintergroei
Somergroei
Gemmideld

# Ideal growth for heifer -




Only the best pasture for the heifers

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# Effect of heifer body weight on conception %

| | N (%) | Average weight at mating |
|---|---|---|
| Heifers | 98 | 341 kg |
| Pregnant | 63 (64%) | 350 kg(70%) |
| Non pregnant | 35 (36%) | 327 kg(66%) |

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Condition/weight vs. fat

| | N (%) | Average BCS |
|---|---|---|
| Heifers | 98 | 3.2 ± 0.1 |
| Pregnant | 63 (64%) | 3.2 ± 0.1 |
| Non pregnant | 35 (36%) | 3.3 ± 0.1 |

# Feeding requirements
## 200kg calf growing @ 500 gram / day

Dm intake (g/day) 5800

| | Requirement | Summerveldt | % |
|---|---|---|---|
| Prot (g/day) | 518 | 464 | -10% |
| MJ Me / day | 50,6 | 43,5 | -14% |
| Ca (g/day) | 19 | 17,4 | -8% |
| Phosphorus ( g/day) | 11 | 5,8 | -47% |

| | Requirement | Winterveldt | % |
|---|---|---|---|
| Prot (g/day) | 518 | 261 | -50% |
| MJ Me / day | 50,6 | 39,15 | -23% |
| Ca (g/day) | 19 | 13,92 | -27% |
| Phosphorus ( g/day) | 11 | 3,48 | -68% |

Scientific facts without the bank manager involved

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# Don’t think if the requirement is small the effect is small

15 g P

# What is happening in practice ?

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# Dundee – 2010-11 – Veldt Finishing trail

**4 May 2010**

**1 June 2010**

| Winter | Early summer | Late Summer |
|---|---|---|
| Protein lick | Phosphate | Phosphate |
| Production lick | Phosphate | Production lick |
| Production lick | Production lick | Production lick |

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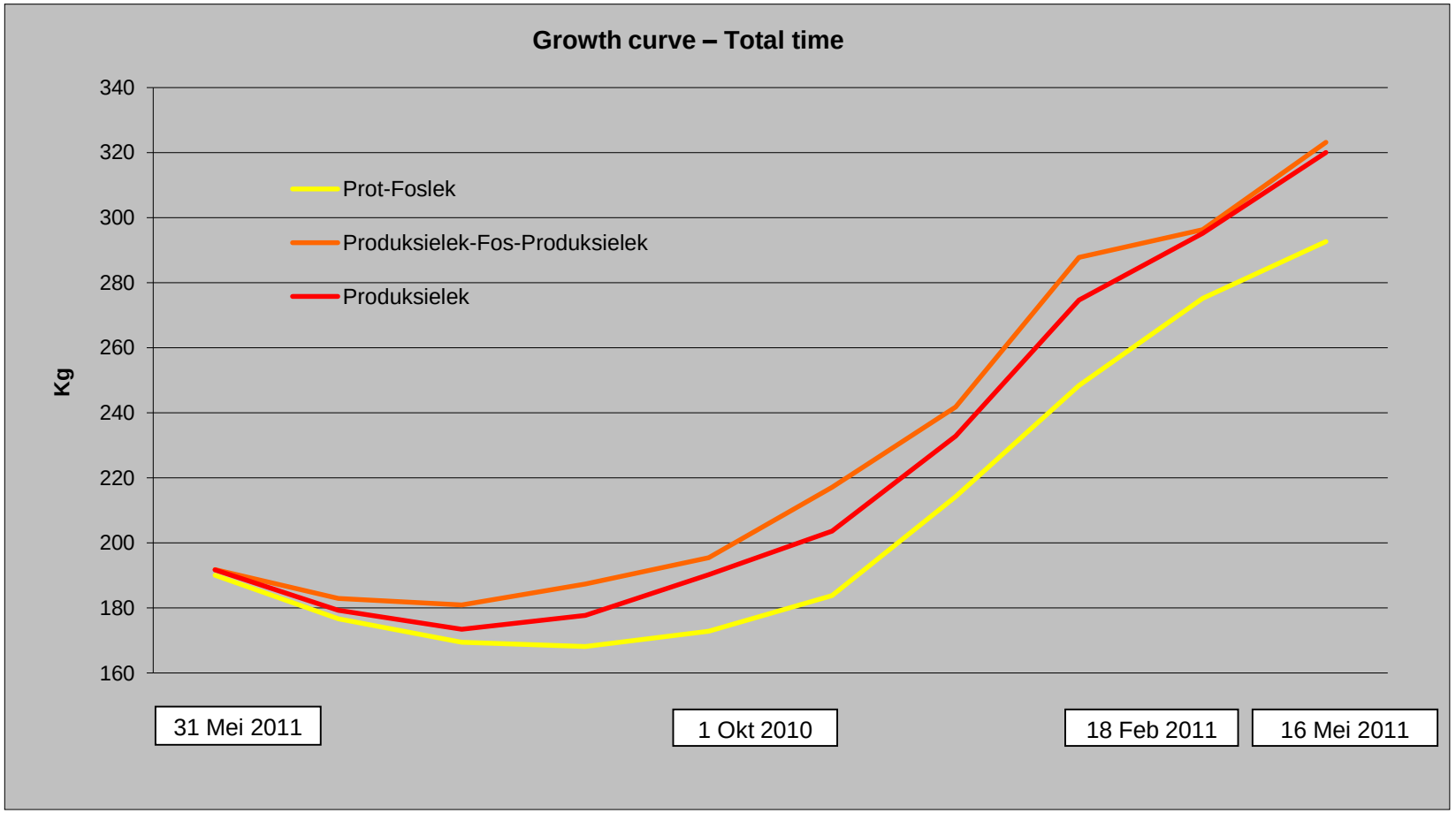
# Growth curve – total time

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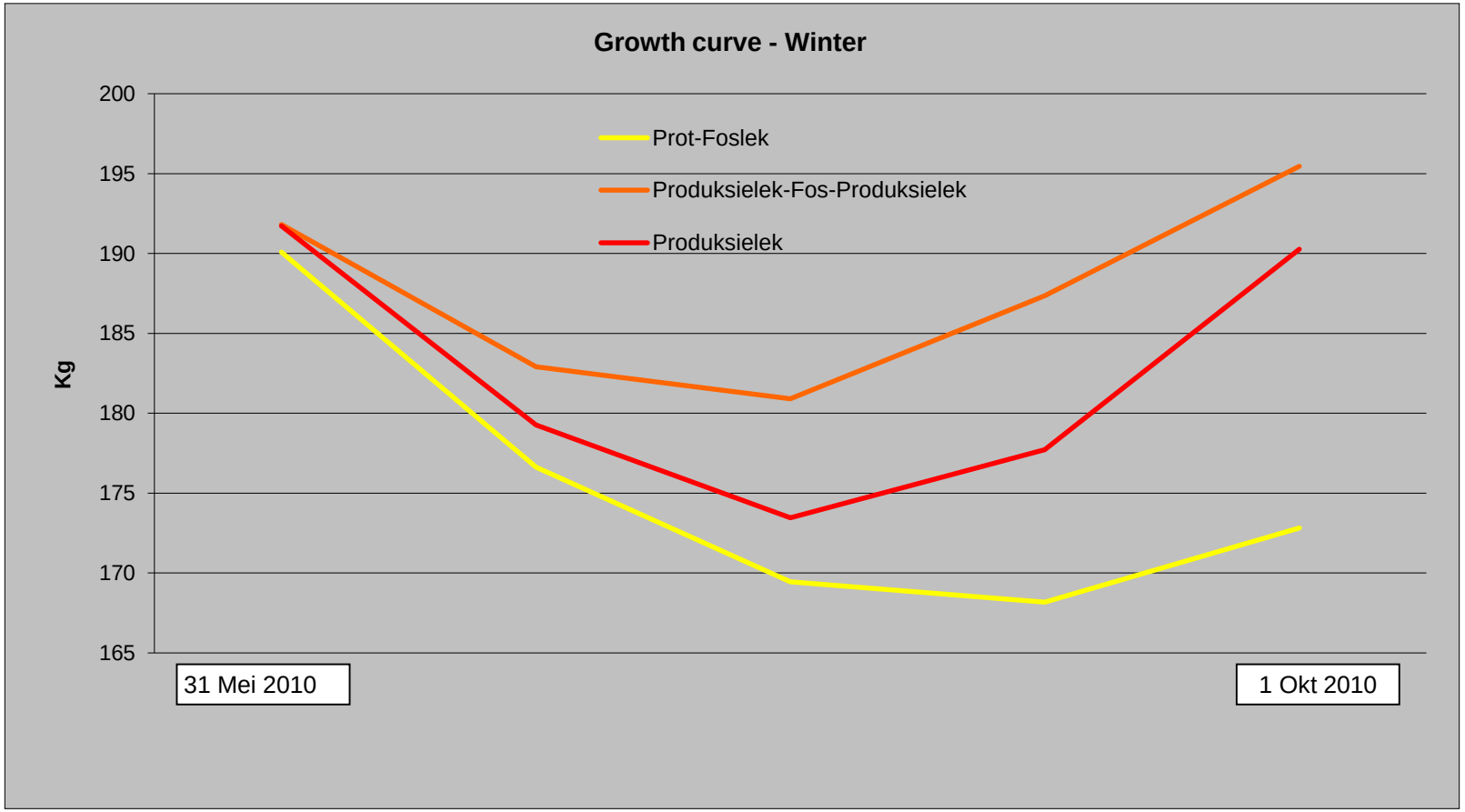
# Winter


Growth curve - Winter
200
195
190
185
180
175
170
165
Kg
Prot-Foslek
Produksielek-Fos-Produksielek
Produksielek
31 Mei 2010
1 Okt 2010

# Economic effect

| Winter 123 day | | | | | |
|---|---|---|---|---|---|
| 31 May 10 - 1 Oct 10 | Mass change | Animal Value shift | Supplementation cost | Netto | Intake as % of bodymass |
| Prot sup. | -17,3 | -R 484 | R 256 | -R 740 | 0,2% |
| Production sup. | 3,6 | R 102 | R 477 | -R 375 | 0,4% |
| Production sup. | -1,5 | -R 41 | R 477 | -R 518 | 0,4% |


Heifer + Veldt cost – calf = - R 3200 (loosing money)

Heifer + Veldt cost + Production lick total year (1 kg/day) + calf = R 2000 (making money)

And she is pregnant again !

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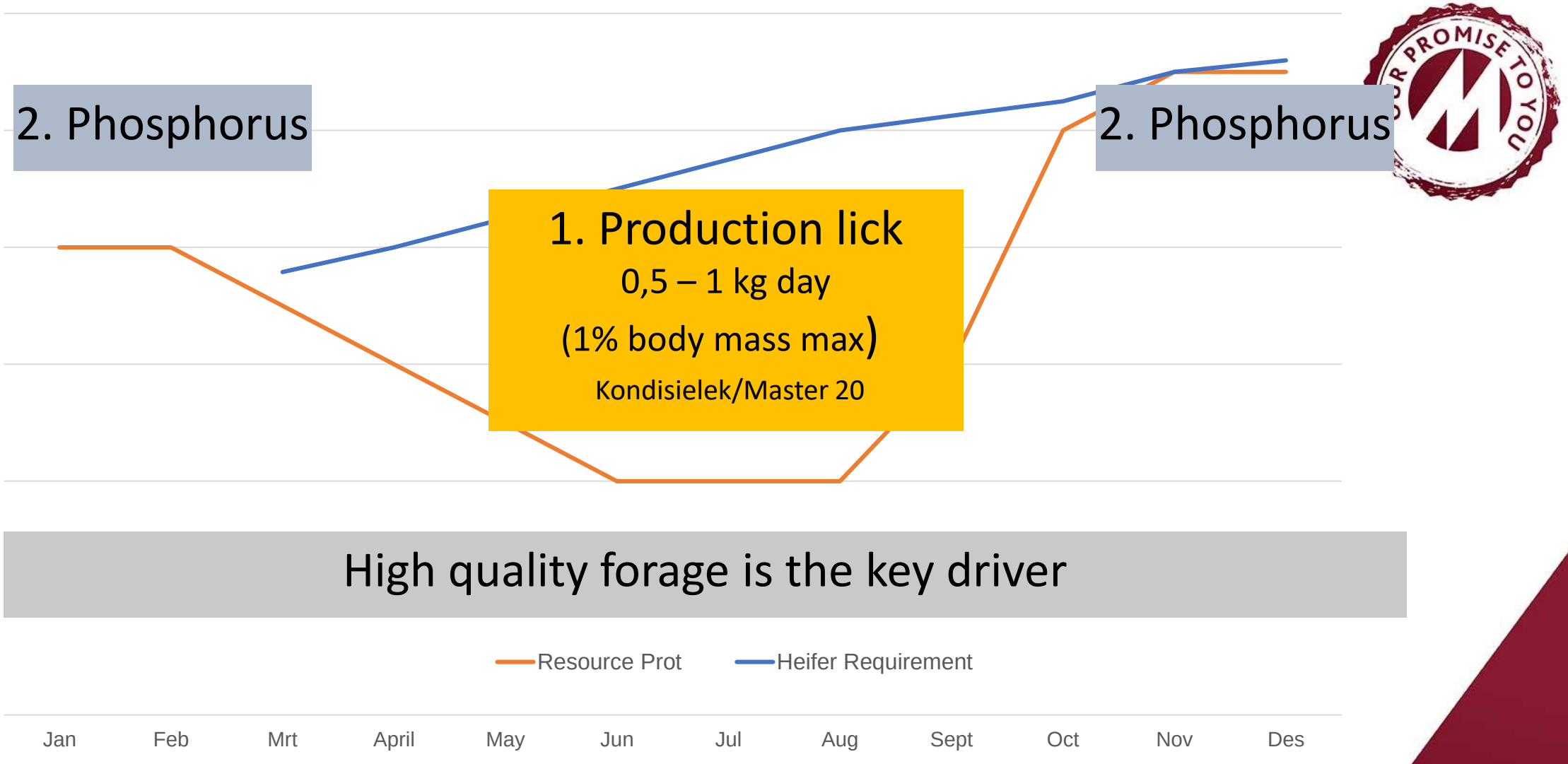
Heifer feeding requirement vs pasture




High quality forage is the key driver

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# Late pregnant heifers – be careful of high supplementation!

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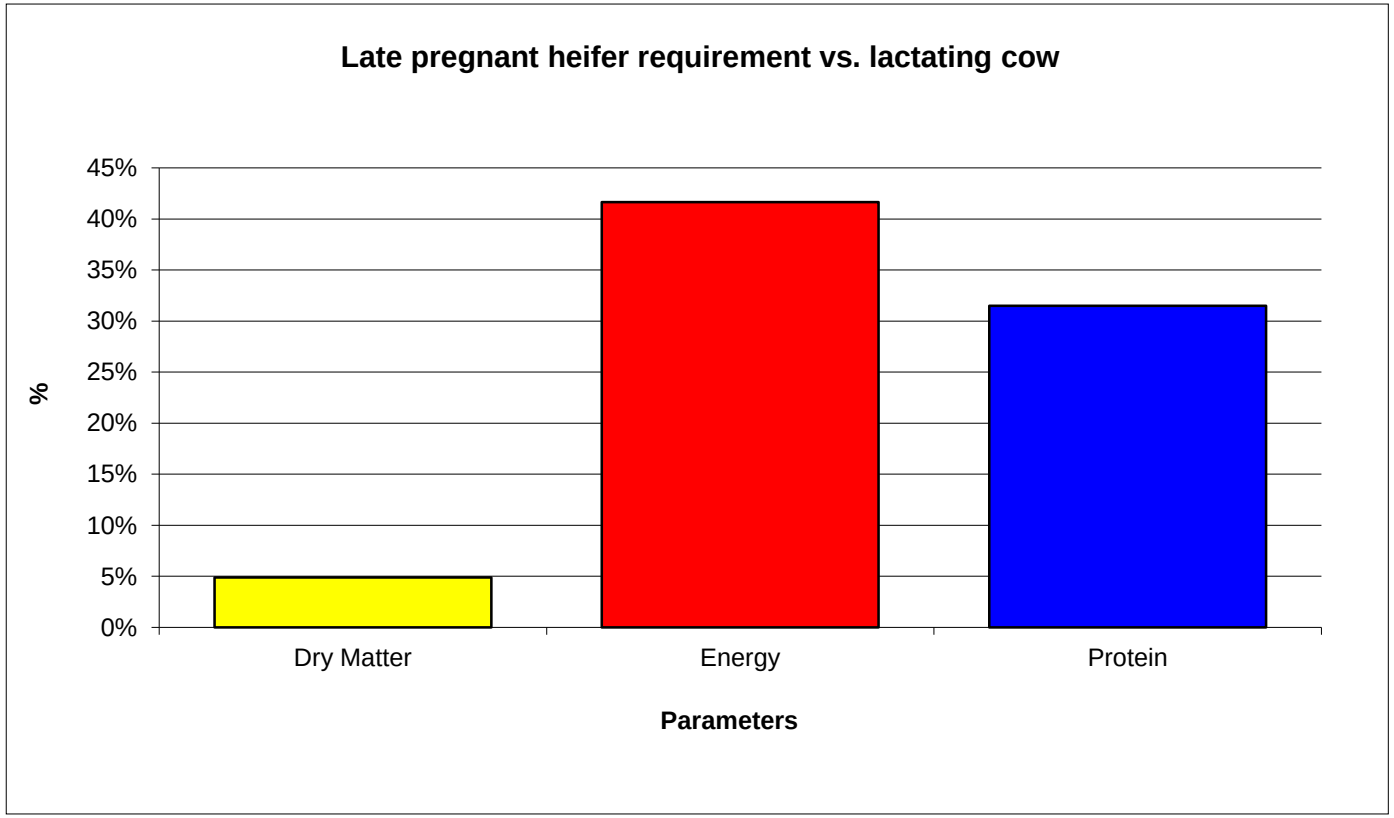
Production lick after calf 100%

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# Take home – heifer rearing

- Feed them
- Good quality feed
- Enough feed
- Feed them continuous
- But not too much…

- Hard times – production lick

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Thanks for your time,
enjoy your heifers!

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