Increase your production and profitability with animal welfare

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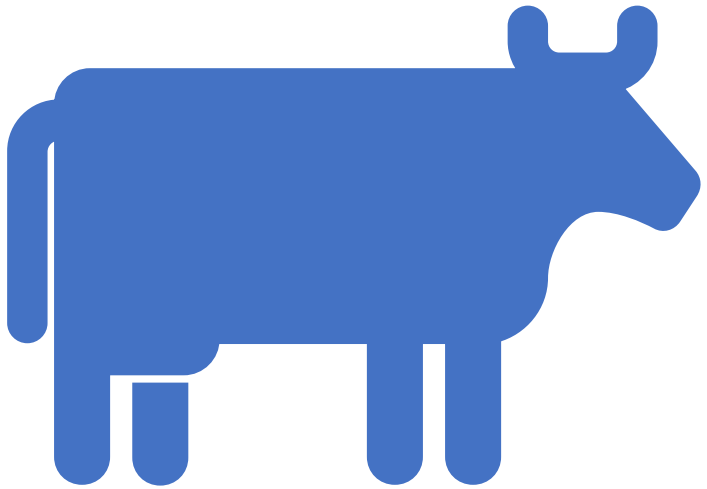

Why welfare?

- The best solutions are win-win, improving the lives of cattle and the people who work with them. The worst solutions are those that attempt to address one issue (such as a lack of pasture access) by creating another (exposing the cows to heat stress).
- Good welfare involves:
  - Good health and productivity
  - Pleasure and lack of pain
  - Naturalness, such as access to pasture
- Be careful of statistics
- Most of welfare involves common sense & painkillers.

Citizen vs. Consumer

- We all have 2 personalities
    - When confronted with a questionnaire in the street we are model **citizens** and give the right answer as a model citizen.
    - When we walk into the store with our hard-earned cash we turn into **consumers** and buy the cheapest product.
    - *We say that we are willing to pay more for a product that is ethically produced, yet we buy the cheapest product on the shelf.*

Who pays?

- Most welfare issues center around handling, housing and transport.
- Modern farming systems evolved for a reason.
  - Easier management and less labour intensive
  - Higher production
  - Cheaper production
- Farmers have no intention of mistreating their animals.
- We assume that good welfare is more expensive.
- Welfare does not have to cost money.
- Welfare can actually increase production and profitability.

Painkillers vs Anti-inflammatory drugs

- Painkillers kill the nerve's transmission of pain signals
- Anti-inflammatories suppress inflammation
  - Less redness
  - Less swelling
  - Less inflammation
  - Less pain
  - Less fever
  - Do not use for longer than 5 days – stomach ulcers

Aspirin at calving [Salicylic acid derivatives - Acetylsalicylic acid or Sodium salicylate]

- Given a single dose at birth
  - Average 2kg more milk per day. Or 700-900kg more milk per 305 day lactation
  - @R7/liter = R4,900 to R6,300 additional income per cow per year = R490,000 to R630,000 per 100 cows per year!!!!
  - Remember this is average. Some do not respond at all
- With dystocia cases it increases to almost 4kg/cow/day
- Aspirin only has a 1 day withdrawal for milk and meat
- Dosed orally at 100mg/kg twice daily
- Approx R15 – R30 per dose.
- Give twice a day for up to 2 days in dystocia cases
- Cows in their 3rd lactation or greater that received Sodium Salicylate produced up to 21% more milk over a 305 day lactation!

Lameness

- Increased lying times
- Increases the risk of developing mastitis.
- Cows will lay down at the cost of other activities such as eating or moving around to find better grazing. This in turn leads to weight loss, lack of weight gain and negative energy balance.
- The reduction in dry matter intake results in a reduction of milk production
- Can be as much as a 20% reduction in severely lame individuals
- Cows less willing to stand and be mounted
- Pain causes cortisol level increase and influences the hormonal cycles
    - Delayed oestrus cycling, Anoestrus, Increased incidence of cystic ovaries, Failure to conceive
- Extended calving to first service interval
- Extended calving to conception interval - conception rate is lower in lame cows at first service, with a lame cow taking on average 28 days longer to become pregnant.

Lameness

- Best practice
  - Trim claws
  - Hoof-block on healthy claw
  - Anti-inflammatory drug
  - Only give antibiotics if infected
- Improve access roads
- Reduce standing times waiting times to milk or do PD’s
- Footbaths – use regularly
- Keep in drier camps if very wet

Mastitis

- Treatment protocol including antibiotics and anti-inflammatory drugs is recommended
- Anti-inflammatory drugs can be considered as drugs of choice for this purpose
- Mind the milk withdrawal times
- The use of anti-inflammatories has been shown to
  - decreases signs of udder inflammation and pain
  - maintains rumen motility
  - decreases rectal temperature
  - improves feed intake and milk yield
  - reduce heart and respiratory rate
  - SCC is reduced
  - culling rate
  - earlier recovery from illness
  - Less permanent scar tissue

Heat stress

- Higher yielding cows are more challenged by heat stress than lower yielding animals
- Up to 30% decrease in oestrus detection as it reduces both the duration and intensity of oestrous expression
- Conception rates at 60 d decline between 15% and 21% when rectal temperature is greater than 39.1°C during AI
- Increases their standing time - heat stress is considered a major risk factor for lameness

Temperature Humidity Index (THI) Relative Humidity %									
C	20	30	40	50	60	70	80	90	100
22	66	66	67	68	69	69	70	71	72
24	68	69	70	70	71	72	73	74	75
26	70	71	72	73	74	75	77	78	79
28	72	73	74	76	77	78	80	81	82
30	74	75	77	78	80	81	83	84	86
32	76	77	79	81	83	84	86	88	90
34	78	80	82	84	85	87	89	91	93
36	80	82	84	86	88	90	93	95	97
38	82	84	86	89	91	93	96	98	100
40	84	86	89	91	94	96	99	101	104

No heat stress
Moderate heat stress
Severe heat stress
Dead cows

Heat stress

- 24- to 48-h delay between elevated environmental temperatures and decreased milk production
- A problem above 24°C.
- Temp humidity index.
- Shade, shade, shade!
- Don’t believe me? Take chair and umbrella to pasture and test it!
- Trees on perimeter fencing.
- Trees die if too much manure and urine.
- Shade cloth for sick cows.
- Valleys with trees or hills with breeze?
- Mitigating measures in waiting areas?

Transport, Pneumonia and Fever

- Transport is stressful
- Keep journeys as sort as possible
- Enough ventilation but must not be cold
- Give anti-inflammatory before transport to reduce disease
- Pneumonia - anti-inflammatories to reduce permanent lung damage
- Anti-inflammatory drugs break the fever
    - Animal more likely to eat and drink
    - Recover quicker

Painful procedures

- Dehorning
  - Must be done before 8w old otherwise must use local anaesthetic
  - Burning vs dehorning paste
- Castration
  - Must be done before 8 weeks old otherwise must use local anaesthetic
  - Best to use burdizzo (not elastic bands or surgery)
- Calves given an anti-inflammatory drug at dehorning/castration gained weight in the 1st 10 days.
- Needed less treatment for pneumonia
- Best practice for castration and disbudding
  - Sedative
  - Local anaesthetic
  - Anti-inflammatory drug

Diarrhoea

- Responsible for more than 50% of pre-weaning losses
- Food malabsorption increases the LCT (Lower Critical Temperature), and they are thus more susceptible to cold temperatures
- Normal LCT = 10°C
- Long-term consequences of diarrhoea have been described in replacement heifers:
- increase in the age at first calving
- decrease in milk production during the first lactation
- treated calves grow faster and can be weaned earlier
- Painful & Cramps
- Give painkillers/anti-inflammatories – if older than 7 days
- Anti-cramp drugs
    - Buscopan

Diarrhoea in calves

- The administration of meloxicam at the onset of diarrhoea improved the recovery of the animals through:
  - Increased general activity
  - Increased milk, water and feed intake,
  - reduced pain,
  - improved hydration status and faecal consistency
  - a reduction in rectal temperature
  - reduced need for repeated treatment with antibiotic or oral electrolytes.

Twin or Group-housing

- Better weight gain
- Better feed intake
- Wean with less weight loss
- Less vocalisation
- Better adjusted to change/stress
- Less pneumonia
- Reduced age at first breeding

Calf feeding

- Give 20% of body weight per day.
- 10% is minimum, not the target!
- Use teats not buckets – supply dry teats to satisfy suckling behaviour
- Benefits
  - Increased weight gain
  - Wean earlier
  - Less vocalisation
  - Less likely to show abnormal suckling behaviour

Conclusion

- If any of the above are implemented, you will make more profit
- It does not have to cost money
- As regards animal welfare - Public perception is everything. If we do not do it, consider the consequences.

Anti-inflammatory drug dosages
[please consult your veterinarian]

- Aspirin – 100mg/kg bid per mouth; Withdrawal = Meat & Milk = 1 day
- Meloxicam (Metacam, Vetcam, Petcam, Inflacam) – 0,5mg/kg under the skin or intra-venous; Withdrawal = milk 5 days; meat 15 days. Calves dose per mouth straight into rumen on empty stomach (2hrs after milk feeding) not for calves younger than 1w.
- Carprofen (Rimadyl) – 1,4mg/kg intra-venous or intra-muscular
- Ketoprofen – 3mg/kg; Intramuscular for up to 3days
- Flunixin (Finadyne)
    - 2,2mg/kg Intra-Venous; Once daily for up to 5 days; Withdrawal periods = Meat 5days; Milk 36hrs