Nutri-buff270

Composition: Nutri-Buff 270 contains scientifically formulated and **balanced** blend of sodium bicarbonate, acid buff, magnesium oxide, sodium chloride and calcium carbonate.

Feeding Method:
Suitable for inclusion into feed or sprinkled on the daily ration

Feeding Rate / Inclusion Rate

	Per head per day
Lactating Dairy Cows	90 gms
Intensive Beef Cattle	35 gms

Fed at 8kgs per day	Inclusion/tonne
Lactating Dairy Cows	11.25 kgs
Intensive Beef Cattle	4.375 kgs

Fed at 4kg / hd / day	Inclusion/tonne
Lactating Dairy Cows	22.5 kgs
Intensive Beef Cattle	8.75 kgs

For further details please contact your local Nutribio Representative:

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Unique to Nutribuff-270: DCAD

- The cow in early lactation is like a high performance athlete, partitioning energy into performance rather than rebuilding her body reserves.
- This leads to a build up of acids in the blood which like lactic acid with the athlete can reduce performance.
- Balancing the DCAD (dietary cation anion difference) which with the early lactation cow is ensuring adequate potassium and sodium in the total diet, buffers the blood to maximise performance.
- There are different DCAD optimum figures of the diet required for different quadrants of the animals life cycle. The optimum DCAD will enable the animal maximise intake of feed.
- The DCAD of the diet for the cow pre-calving should be in the range of 0 to 120 meq/kg DM.
- The DCAD of the diet for the cow in early lactation should be in the range of 270 – 400
- Balanced DCAD has the potential to reduce blood urea levels through increased nitrogen utilisation.

Nutribio
Precision Nutrition

Nutri-Buff 270

Premium Buffer Solution to achieve optimum performance from winter diets

Rumen Function

The objective in feeding the rumen is to maintain a balanced pH through stimulating saliva flow (which for a 630 kg cow can be 150 litres per day). This aids buffering the rumen ensuring rumen turnover, increase of fibrolytic bacteria to digest fibre and release the energy from the fibre as VFA's for milk production, reduce mycotoxin bypass and recycling of phosphorous, sodium and sulphur.

Milk production with the introduction of concentrates is ***acidogenic***, which will reduce rumen Ph leading to reduced fibre digestion resulting in reduced saliva flow causing impaired **rumen function.** The level of acid depends on the following:-

- Level of **fermentable carbohydrates** in the diet (cereals, fodder beet and concentrates).
- How finely chopped the forages are.
- Over mixed TMR's – resulting in reduced particle size.
- Grass silage with a high PAL (potential acid load) reading – potential acid loading.

BUFFERING THE BLOOD

A quantity of this acid also gets absorbed into the **blood** requiring the **blood** as well as the rumen to be buffered. This absorption of acid is referred to as **metabolic acidosis**. It has equal importance to rumen acidosis in maximising performance this is where the DCAD (dietary cation anion difference) balancing of the Nutri-Buff formulation is **unique.**

Effects of Ruminal & Metabolic Acidosis

Lactating Dairy Cow

Prolonged low rumen pH leads to reduced rumen motility resulting in

1. Drop in dry matter intake
   - drop in milk yield 2 to 3 litres
   - Butter fat 0.15kg
   - Abomasal displacement

2. Negative energy balance
   - Ketosis
   - Immunity suppression
   - Mastitis
   - Infertility
   - Lameness

Beef Cattle

As long as cattle are finished on grain based diets acidosis will always be an issue effecting performance and profitability due to the following

- Reduced feed intake
- Rumenitis,
- Liver abscesses,
- Malabsorption,

Cow signals

Solution Nutri-Buff270

- **B**uffers the diet
- **O**ptimises the DCAD of the overall diet. (Studies show that adjusting the DCAD from 190 to 270 in the first 200 days of lactation will lead to 13% increase in dry matter intakes)
- **I**ncreased productivity and feed efficiency.
- **l**ow release Ph balancing (longer lasting com pared to Sodium Bicarbonate (4 hrs))
- **L**ower feeding rate required compared to other buffers
- **H**elps improve pelleting of compound feed
- **M**ore palatable than other buffers

= Maximising Intake
= Maximising Productivity
= Maximising Profit

Cost Benefit Dairy Cow Autumn

10:1 return on investment

Increased milk yield by 2.3 litres per day.
Increased buffer fat by 0.15kg.
(Apper-Bossard *et al* 2006). Benefit (€0.45 to €0.90) – Cost (€0.045 to €0.09).

Cost Benefit Beef Cattle

15:1 return on investment

20—30% increased in DLG (daily live weight gain)