

Malt Extract

Liquid



Powder

Why should I use it ??

It supplies energetic **high-performance diversified soluble sugars**, with an **high fermentation rate**.

| Sugars | N° Units | % |
|------------------|----------|------|
| Glucose | 1 | 9,5 |
| Fructose | 1 | 1,5 |
| Maltose | 2 | 55,0 |
| Maltotriose | 3 | 15,0 |
| Maltotetraose | 4 | 7,5 |
| Oligosaccharides | >5 | 11,5 |

Malt Extract composition

Maltose (55% of total sugars), among natural sugars, is the one with the **highest glicemic index** (highest capacity to increase glucose and insulin rates in blood)

| | Glicemic Index |
|----------------|----------------|
| Maltose | 105 |
| Glucose | 99 |
| Saccharose | 68 |
| Lactose | 46 |
| Fructose | 19 |

It has a **probiotic effect in the rumen**, it **increase** indeed **the growth rate of bacteria that demolish lactic acid** (*S. ruminantium* e *M. elsdenii*). In this way it can reduce the incidence of ruminal and metabolic acidosis.

Malt Extract **stimulates also** other bacteria, among these the most important is **B. fibrisolvens**, whose main feature is to **demolish fiber**; the result is a higher food efficiency in digestion of fibrous part of the ration.

| | Stimulate the growth of |
|---------|-------------------------------------------------|
| Maltose | B. fibrisolvens S. ruminantium |
| Glucose | M. elsdenii B. fibrisolvens B. ruminicola |

Russell & Baldwin (Appl. and Env. Microbiology, 1979)

It favours the rumen adaptation to lactation diet. It increase the ruminal production of butyric acid that represents the first and principal energy source used by the rumen wall; the result is a **rapider growth rate of rumen papillae**.

| Rumen Papillae (mm) | Control | Soluble Sugars |
|-------------------------|---------|----------------|
| Atrio - lenght | 4,13 | 6,21 |
| Sacco ventrale - lenght | 2,31 | 3,27 |

Shen Z. et al., The Journal of Nutrition; 2004

MALT EXTRACT = PROBIOTIC ENERGY

Malt Extract

Liquid



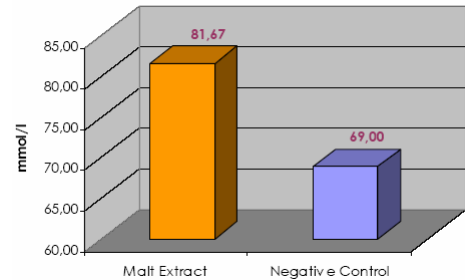
Powder

Why should I use it ??

Scientific Trial

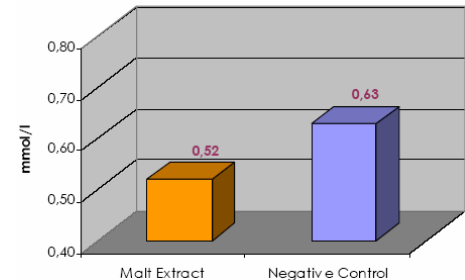
Way of use: 1 kg/head/day for 4 times starting the day of calving

Malt Extract **increases blood glucose**
(glycemia measured after the first administration)



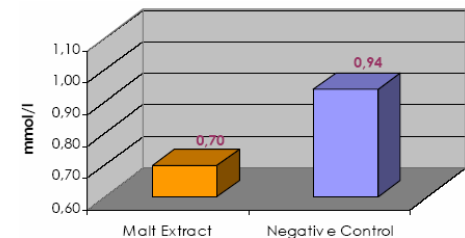
Blood Glucose (mmol/l)

Malt Extract **reduces blood NEFA**
(values are the average of 4 weekly measures)



Blood NEFA (mmol/l)

Malt Extract **reduces blood BHBA**
(values are the average of 4 weekly measures)



Blood BHBA (mmol/l)

The trial shows also **better milk production parameters** (average amount of first 40 days trial after calving):

- **More milk** (+5,25 kg/day; 43,23 lt/day vs 37,98 lt/day)
- **More milk fat** (+300 gr/day; 1640 gr/head/day vs 1340 gr/head/day)
- **More milk proteins** (+170 gr/day; 1230 gr/head/day vs 1060 gr/head/day)

Way of use

1 kg/head/day for 4 days
Starting the day of calving



150-200 gr/head/day for 40-60 days
Starting 2 weeks before calving