MAXXimise performance

Support Calving Success

HIGH SUGAR, PALATABLE DEHYDRATED MOLASSED LICK

Formulated for dalry and beef cows to support calving success and ease

Low calcium & high magnesium helps reduce risk of metabolic issues around calving

Includes selenium and vitamin E to support cow immune function

RUMENCO

THE FINAL 6 WEEKS OF PREGNANCY ARE CRITICAL

We need to aim to

- Optimise milk and colostrum production
- Produce healthy, viable calves
- Ensure cows are healthy
- Ensure cows can get back in calf quickly

Cows are under significant metabolic stress

- Udder preparing for lactation
- Colostrum production begins
- Calf is growing rapidly

Highest risk of metabolic problems within the first two weeks of lactation

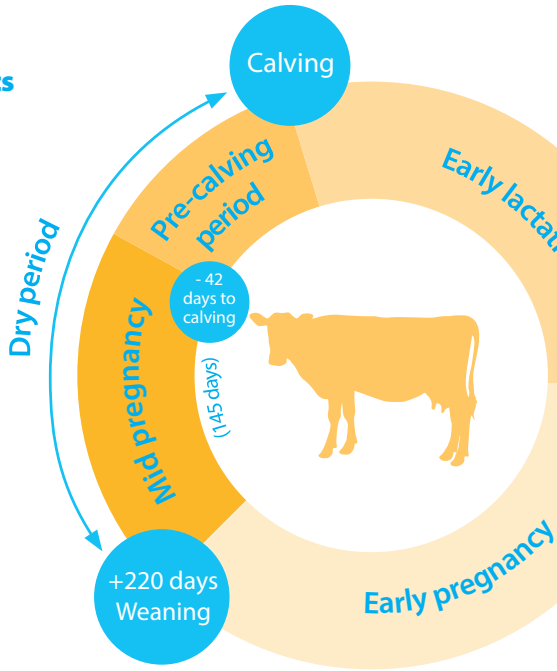
- Milk fever & grass staggers
- Ketosis
- Dystocia (difficult calving)
- Retained placenta
- Mastitis, and more!

Pre-calving cows have specific mineral & vitamin requirements

- Balance calcium & magnesium levels
- High requirements for:
  Selenium, vitamin E, copper and iodine

Problems!

- **Ketosis**
- **Milk fever**
- **Grass staggers**
- **Lameness**
- **Retained placenta**
- **Displaced abosmasm**
- **Calving difficulties**



MAGNESIUM

IS CRITICAL FOR CALVING COWS AT GRASS

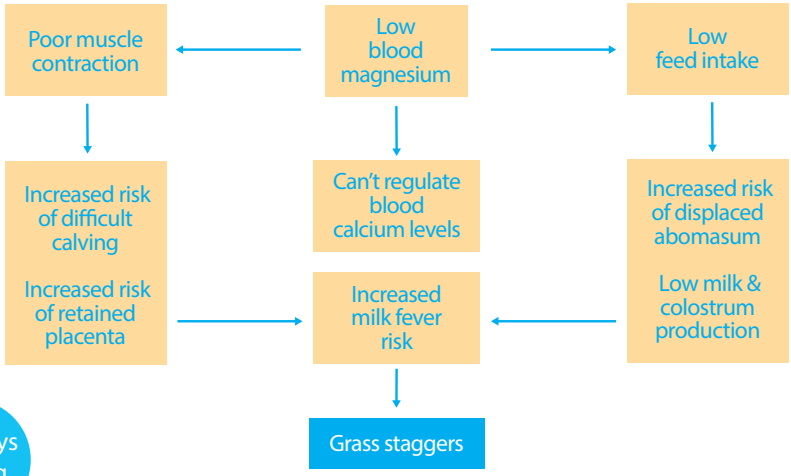
Required for

- Muscle contraction
- Nervous system function
- Maintaining blood calcium levels
- Growth
- Milk/colostrum production

Rapidly growing grass low in magnesium

Further exacerbated by;

- High water content
- High protein levels
- High potassium levels (fertiliser)
- Low magnesium availability



+80 days Bulling

High level of magnesium required in run-up to calving

CALVERMAXX = 8% magnesium

CALCIUM

DEMANDS INCREASE EXPONENTIALLY AT CALVING

- Calcium required for: muscle contraction, nerve signaling, milk & colostrum production
- Blood calcium levels are tightly regulated to meet demands by mobilising bone calcium reserves
- Huge increase in demand around calving for milk & colostrum production
- Need to prepare the cow by 'priming' calcium mobilisation mechanisms

If not primed.....

1. Blood calcium levels DECREASE

2. Not enough calcium for muscle and nerve function

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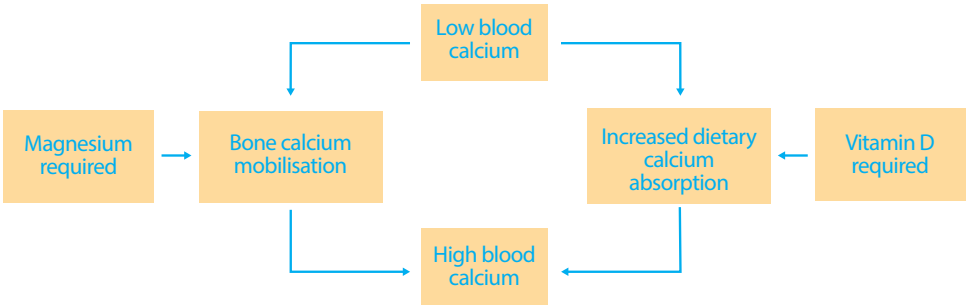
Milk fever & increased risk of difficult calving, retained placenta & ketosis



Low level of calcium 'primes' the cow to use bone calcium reserves

CALVERMAXX = 1% calcium

Magnesium & vitamin D required to utilise calcium reserves

CALVERMAXX = 8% magnesium & 60,000 iu/kg vitamin D

SELENIUM & VITAMIN E

ARE ESSENTIAL FOR THE PRE-CALVING COW

Working together to support the immune system

In late pregnancy & early lactation, cows are under significant metabolic stress. This stress increases inflammation within the body and increases the production of free radicals, unstable compounds which cause cell damage. This places stress on the immune system and increases the risk of infectious diseases e.g. mastitis. Selenium and vitamin E work together as antioxidants to help reduce inflammation and cell damage, helping to prevent infectious disease.

Working together to support fertility

- Deficiencies increase risk of retained placenta and metritis and decrease likelyhood of subsequent fertility

Selenium also supports calf vigour and immunity

- Transferred across the placenta to the calf
- Supports calf vigour (get up and go)
- Helps to prevent infectious diseases
- Prevents hypothermia

Vitamin E boosts colostrum quality

- Colostrum is the sole source of vitamin E for the calf
- Vitamin E supplementation pre-calving boosts vitamin E levels in colostrum
- Supports calf health and vigour
- Pre-calving mineral supplements should contain at least **2000iu/kg vitamin E**

Increased amounts of selenium & vitamin E required in the run-up to calving

CalverMAXX = 25mg/kg selenium (including a protected source)

CalverMAXX = 3,000 iu/kg vitamin E

COPPER

SUPPORTS FERTILITY POST-CALVING

Required for

- Energy generation in all tissues
  - Growth
  - Fertility
  - Performance
- Synthesis of reproductive tissues
- Pigmentation of hair

Copper requirements increase in late pregnancy

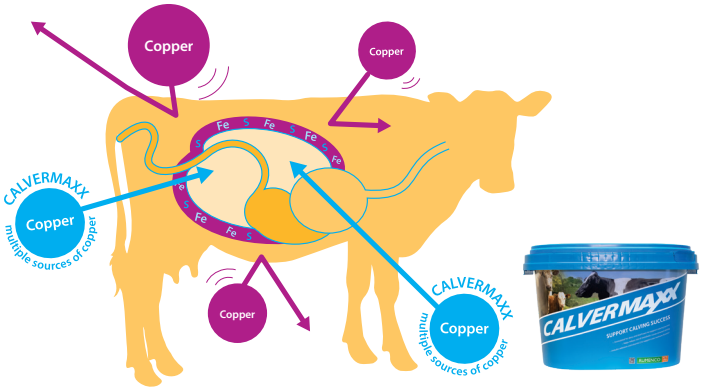
- Energy demand for calf growth and colostrum production

Copper deficiency pre-calving decrease fertility post-calving

- Increases return to oestrus
- Reduces conception rates
- Major impact on farm profitability

Copper in forage often 'locked-up', by other minerals

- High levels of molybdenum, iron & sulphur low copper availability in the rumen
- Multiple copper sources in supplements help to overcome these effects



Correct amounts of copper pre-calving are essential to meet fertility targets

CALVERMAXX = 1200mg/kg copper
Multiple copper sources,
(including a protected source)

IODINE

IS CRITICAL FOR CALF VIABILITY

Required for

- Foetal development
- Energy metabolism
- Metabolic rate
- Immune system function
- Fertility

Pre-calving cows are at risk of iodine deficiency

- Requirements are high for calf development
- UK forages contain low levels of iodine
- Iodine is not stored in the body; correct levels in the diet are essential
- High risk for cattle grazing brassica crops; contain compounds called goitrogens which decrease iodine availability

Iodine deficiencies = reproductive problems

- Abortions & stillbirths
- Weak calves
- Calves born hairless or with bald patches
- Cows slow to get back in calf

Essential to meet iodine requirements in late pregnancy and counteract forage deficiencies

CALVERMAXX = 300mg/kg Iodine

FULL PRODUCT SPECIFICATION

Crude protein	%	3.5
Crude fat	%	3
Crude ash	%	36
Energy	MJ/kg DM	10
Typical sugars (as sucrose)	%	35
Calcium	%	1
Phosphorus	%	1
Magnesium	%	8
Sodium	%	3
Selenium	mg/kg	25
Cobalt	mg/kg	25
Iodine	mg/kg	300
Manganese	mg/kg	2,000
Zinc	mg/kg	3,500
Copper	mg/kg	1,200
Vitamin A	iu/kg	300,000
Vitamin D_3	iu/kg	60,000
Vitamin E	iu/kg	3,000

CALVERMAXX

The nutritional solution for cattle in mid to late pregnancy

RUMENCO

Freephone: 0800 833 675 | info@rumenco.co.uk | www.rumenco.co.uk