Ca-P Bol[™]





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Dietary bolus of calcium and phosphorus for the reduction of the risk of milk fever







Introduction to Milk Fever

- Up to 5-10% of dairy cows develop clinical dairy fever
- Up to 50% of mature dairy cows develop subclinical milk fever
- Prevalence increases with age and yield
- Milk fever occurs most frequently within 48 hours of delivery
- Subclinical milk fever is a very good cost of production

Milk fever is a preventable disorder



Clinical milk fever - The tip of the iceberg



Prevalence of clinical milk fever



Prevalence of subclinical milk fever

50 % of mature dairy cows



Incidence of milk fever



- Plasma calcium content < 8.5 mg per dl
- (Or < 2.1 mmol/L) Subclinical milk fever
- German research, where blood is sampled from 1380 cows recently calved from 115 farms

Cows calving no.	Lactation 1	Lactation 2	Lactation 3	Lactation ≥ 4
No. of cows with treshold < 2.1	32/228 a	158/355b	211/332c	331/456 d
Cows with subcl. milk fever	14.0 %	44.5 %	63.6 %	75.6 %
Cows with clinical milk fever	0 %	1.4%	5.7%	16.1 %

a-d Diversi apici all'interno della riga differiscono in modo significativo, P< 0,05 Fonte: Venjakob et al. 2017

Prevention is better than cure



Fabbisogno di calcio dopo il parto







Function of calcium in the body



- Plasma calcium content < 8.0 mg per dl
- (Or < 2 mmol/L) Subclinical milk fever
- Recent research has found that dairy cows with a blood calcium level < 8.5 mg/dl (2.1 mmol/l) had subclinical milk fever = several cows with calcium deficiency than previously assumed
- Calcium is essential for optimal muscle and nerve function
- Calcium is important for optimal immune function



Milk Fever and risk at calving



< 2.1 mmol/L (or < 8.5 mg per dl) \rightarrow Subclinical milk fever





Calcium mobilization at calving





Consequences of calcium deficiency







- Each bolus contains 40 grams of easily absorbed calcium and 6 grams of phosphorusCloruro di calcio (Quickly available)
- Calcium propionate and monocalcium phosphate (available for several hours)
- Magnesium increases calcium absorption/mobilization





Mode of action - Sources of calcium





Reference: 1993. J.P Goff & R.L. Horst. "Oral Administration of Calcium Salts for Treatment of Hypocalcaemia in Cattle" USDA Agriculture Research Service.





Treatment time	Bolo Ca-P Bol – 165 g					
Preventive treatment						
Immediately after calving	Х					
10-14 hours after calving	X					
Additional treatment for high-risk cows						
12-24 hours before calving	X					
24 hours after calving	Х					
After calcium infusion against acute milk fever						
After 2 hours	Х					
After 12 hours	Х					

Packaging: 4 boluses of 165 grams per bag with zip closure

- 20 boluses per box



How to useCa-P Bol – bolus applicator







Minimum 53 cm The length of the applicator arm is important











- Quick-release bolus 25 minutes
- Quickly optimizes blood level of Ca and P
- Available for several hours
- Magnesium stimulates calcium absorption/mobilization
- Easy to administer with a bolus applicator
- Reduce the risk of dairy fever and the prevalence of depressed cows





Number of cows	Milk fever level	Cows affected annually	Estimated cost /Incidence	Total cost
100	Clinica	5 %	€ 670	€ 3.350
100	Subclinica	50 %*	€ 268	€ 8.710

References: Alvaro Garcia, feedtstuff no 10, 2005, DK Knowledge center for Agriculture

*50 % Annual incidence of subclinical milky fever in 3rd calving and above

(assuming 65% of the herd)

The costs of subclinical milk fever are more than twice as much as clinical milk fever











PERFECT SOLUTIONS

Ca-P Bol[™]

Reduces the risk of milk fever and phosphorus deficiency after calving

