



















The formulation of a correct ration for the close-up phase is the priority objective. Within the various nutrients, it is particularly important to provide the right amount of minerals.

The mineral that often creates problems is certainly potassium due to the considerable variability.

Granda Team specialists' experience has demonstrated how specific aluminosilicate molecules are capable of "chelating" food cations.

Available literature provides information on how some aluminosilicates can chelate calcium, yet to date there are few indications concerning potassium.

Physiology of potassium K

"Absorption occurs at the level of the rumen and duodenum with high absorption rates (90-95%) apparently unaltered by nutritional interference" (*McDowell, 2003*).

"In other words, excess potassium requires an efficient excretory system in order to maintain haematic K+ content constant **(3.9-5.0 mmol/l)** as the portion of K+ ejected via the fecal route is very low (2.2 gr per Kg s.s.)" (*Pasquay et al., 1969*).

"Renal excretion of K+ is the priority mechanism involved in electrolyte homeostasis, with the possibility of expelling up to 90-95% of ingested potassium". (*The Renal System Explained, 2009*).





CATION

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CATION REM by GRANDA TEAM

Has the ability to render a portion of potassium unabsorbable

San Rocco company (June-July 2019): determination of the amount of ingested potassium (control group)

A pratical test Step 1

Ingestion of K in the first 4 weeks (test group): note the quantification difference on the basis of NIR vs wet chemistry



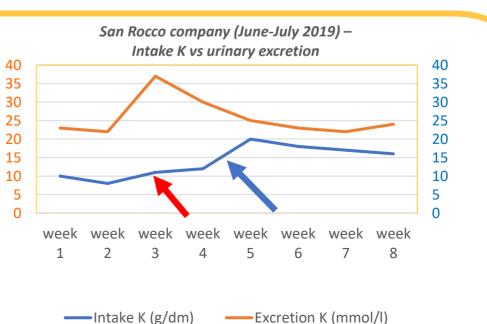
Intake K (wet chemistry)

— K NIR

A pratical test Step 2 General trend at week 8 (control group and Cation Rem group)

The red arrow indicates the start of feeding the new forage.

The blue arrow indicates the moment when Cation Rem is added to the ration.









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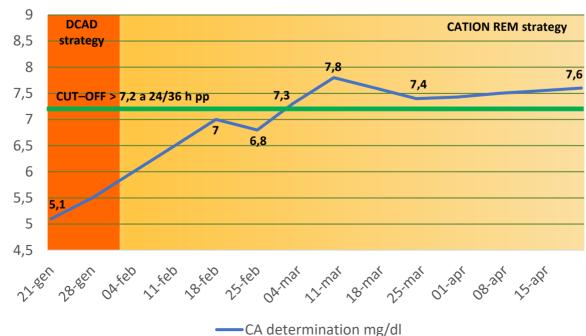


Strategic objectives obtained with Cation Rem:

- Maximizing standardization of the pre-partum strategy with regard to the combat against hypocalcemia
- Managing potassium variance in farm fodder and optimizing mineral balance in prepartum rations



Lembofarm company (IT) CA determination in the immediate postpartum



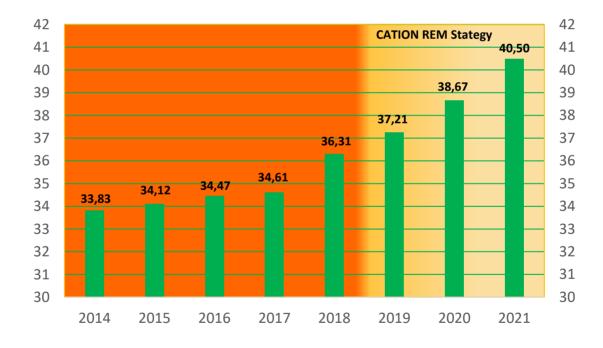




advanced farm monitoring



Lembofarm company (IT) Average production Kg/cow





Using CATION REM solution in the close up ration had drastically reduced the incidence of postpartum pathologies (hypocalcemia, placental retention, metritis, etc.) and increased cows' annual average milk production.





Tests have demonstrated that inserting



in close up rations 15 days before calving at a dosage of 350 g/ cow/day, allows 50% of potassium to be absorbed with respect to total ration intake.



SIMPLE AND EFFECTIVE

STANDARDIZED MONITORING VISIBLE RESULTS IN JUST 15-20 DAYS







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Results achieved by companies that decided to switch from an anionic strategy to a CATION REM strategy in the Close up phase

| Farms | | Anionic close up strategy | | | CATION REM close up strategy | | | |
|----------------|------------|------------------------------|--------------------------|---------------------------------------|------------------------------|--------------------------|---------------------------------------|--------------------------------|
| ltaly zones | n° cows | Hypocalcemia % on calvins | Metritis % on calvins | Placenta retention % on calvins | Hypocalcemia % on calvins | Metritis % on calvins | Placenta retention % on calvins | Increase Milk Production |
| BS | 160 | 5,10% | 6,70% | 3,80% | 1,89% | 2,48% | 1,41% | + 1,5 litri |
| BS | 250 | 6,42% | 2,10% | 2,80% | 2,38% | 0,78% | 1,04% | + 2 litri |
| PV | 400 | 5,60% | 5,20% | 3,65% | 2,07% | 1,92% | 1,35% | + 2 litri |
| PV | 400 | 5,90% | 2,58% | 2,94% | 2,18% | 0,95% | 1,09% | + 2 litri |
| CN | 400 | 5,40% | 7,22% | 7,70% | 3,20% | 1,60% | 4,50% | + 4 litri |
| VR | 170 | 3,10% | 4,63% | 3,85% | 2,63% | 2,82% | 2,16% | +2,5 litri |
| VR | 220 | 4,00% | 5,21% | 4,11% | 1,48% | 1,93% | 1,52% | +1,5 litri |
| то | 130 | 5,10% | 4,31% | 3,25% | 1,89% | 1,59% | 1,20% | +1,5 litri |



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