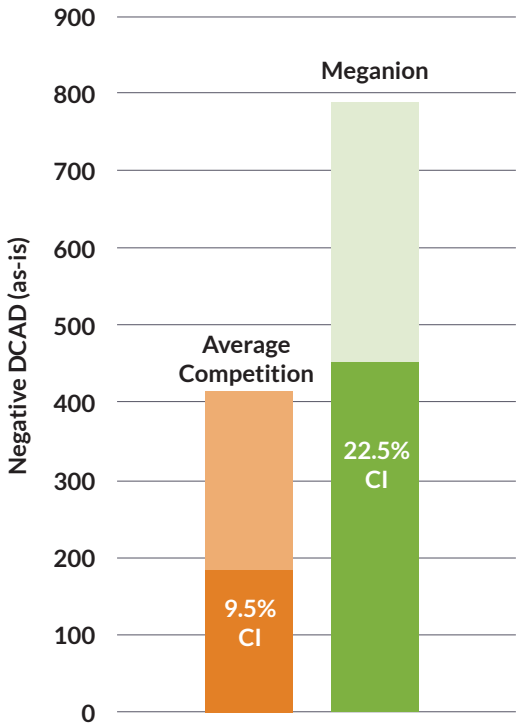
High Chloride Anion Supplement for Close-up Dry Cows

Anion supplements are proven tools for reducing ration cation-anion balance (DCAD) in close-up dry cow rations to lower urine pH and reduce milk fever risk. Meganion is a low-inclusion supplement, delivering very high DCAD, available magnesium, and metabolizable protein. The extruded soy mini pellet assures easy handling, consistent nutrient delivery, and excellent consumption.

The Power of Chloride



Features and Benefits:

- Highly palatable toasted soy matrix suitable for mixing or top-dress
- Chloride Rich (22.5%) with proven ability to reduce urine pH
- Intelligent design for low inclusion and excellent value in key nutrients

1.0 mm mini pellet

Easy to use… Easy to consume

Specifications

Ingredients:
Plant Protein Products, Ammonium Chloride, Magnesium Sulfate, Hydrochloric Acid

Packaging:
50-lb poly bags
2000-lb totes
Bulk

Physical Properties:
Retained on 1.0 mm screen – 90%
Bulk density – 34 lbs/cu ft

Nutrient Specifications:

Guaranteed Analysis	Typical as-fed	Typical 100% Dry Matter
Crude protein, %	77.7 (77.5 Min)	81.50
EQV protein from NPN, %	51.0 (54.5 Max)	53.50
Chloride, %	22.6 (22.5 Min)	23.69
Magnesium, %	2.39 (2.25 Min)	2.50
Sulfur, %	2.94 (2.75 Min)	3.08
Calcium, %	0.25	0.26
Phosphorus, %	0.47	0.49
Potassium, %	1.10	1.15
Sodium, %	0.07	0.07
Cation/Anion Diff., Eq/100 g	-788.5	-827.5
Dry Matter, %	95.3	
Moisture, %	4.70%	

Usage Guidelines

General Recommendations

- **The typical feeding rate for Meganion** will be 0.5 to 1.0 lbs (227 to 454 grams) per cow daily.
- **Feed for 2 to 3 weeks** in typical close-up feeding arrangements to assure adequate acidification of all cows.
- **Meganion may be top-dressed** but it is best to introduce the product gradually and hand-mix into the bunk until the cows have fully adjusted.
- **Negative DCAD rations must be balanced** for key nutrients by a trained nutritionist.
- **Urine pH must be monitored** to assure the DCAD program is working properly. Urine pH readings can be highly variable, however, verify that urine pH is below 6.5 for most cows and higher than 5.5 for all cows.

Ration Formulation Suggestions

- **The target DCAD** for a fully acidified feeding program will be -10 to -15 mEq/100 g of DM (computed by Oetzel-1997 four-mineral equation using sulfur x .60).
- **Target at least 0.4% magnesium** in total diet DM, using quality Mg sources.
- **Keep ration phosphorus at 0.4%** or lower, as high P may interfere with bone calcium release.
- **Ration calcium should be at least 1.5%** for a fully acidified ration. Higher Ca consumes ration space and reduces total ration negative DCAD.
- **Closely monitor forage potassium.** Although the nutritionist will balance for incoming forage K (a cationic mineral), variable forage K is a key factor in causing unsatisfactory urine pH results.

Barentz • 1802 Wooddale Drive, Suite 200 • Woodbury, MN 55125 • United States
T 800-625-6079

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Innovation Insight

Transition Cow Performance Improved When Large South American Dairy Switches to MegAnion™

Transition cow background: The South American Holstein free-stall dairy was well-managed and has averaged over 90 lbs./cow in milk. Being in a region where high K forages are common, the dairy has long used commercial anionic salt products as part of a DCAD close-up program. To evaluate the performance of the transition program, the dairy routinely sampled a portion of fresh cows (50 head) within 6 hrs. after calving and then tested blood samples for ionized Ca. Ionized Ca at 1.0 mmol/dl or higher is considered *normal to adequate Ca* and ionized Ca below 0.85 mmol/dl is considered *low Ca* and shows high correlations to clinical hypocalcemia and other health issues on this dairy.

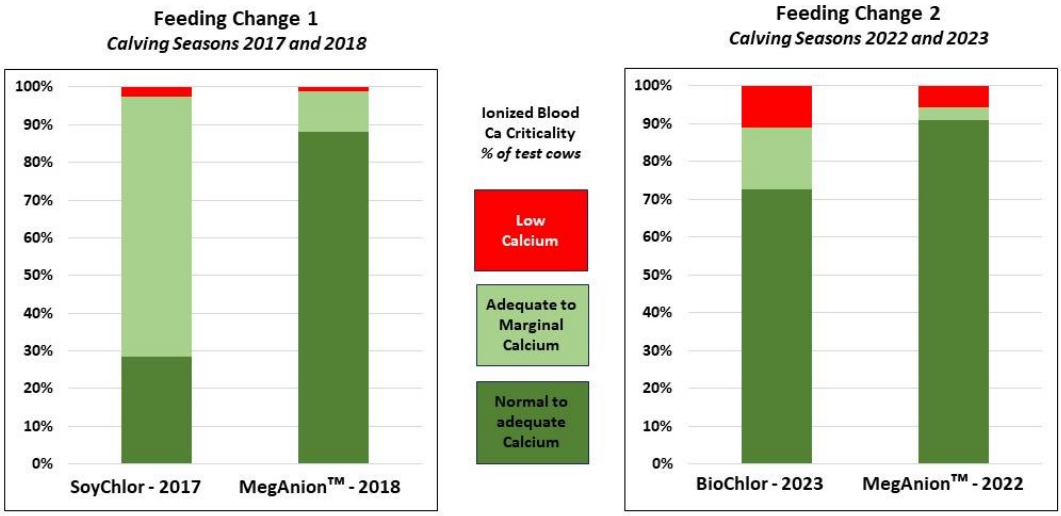
The dairy switches to MegAnion™ - Feeding Change 1: In the Fall calving season of 2017 (Spring in U.S.), the dairy makes a change from SoyChlor to MegAnion™ in their close-up program. At the time, close-up rations were formulated for 25 lbs. of DM intake with a target urine pH of about 5.7 units. Figure 1 shows the seasonal blood calcium response between 2017 (SoyChlor) and 2018 (MegAnion™). In the next 3,800 parturitions, after switching to MegAnion™, there were only two clinical milk fever cases, reductions in all other transition health challenges, and evidence of improved reproduction. The dairy has used MegAnion™ for the last 5 years. Over that time, the dairy steadily increased target urine pH to 6.0 units and has observed that the DM intake of the close-up groups has increased to above 30 lbs.

The dairy evaluates a MegAnion™ competitor - Feeding Change 2: The dairy had purchased an inventory of Biochlor as a stop-gap measure related to potential supply-chain issues. In the Summer/Fall calving season of 2023 (Spring in U.S.), the dairy used this inventory by switching from MegAnion™ to BioChlor for a period of time. Figure 1 shows the seasonal blood Ca response between 2022 (MegAnion™) and 2023 (BioChlor). The herd has since returned to full usage of MegAnion™.

Key findings:

- MegAnion™ was a very effective component of a closely monitored transition cow program.
- The palatability of MegAnion™ was key to the consistency of urine pH observed in the close-up cows.
- Moving target pH from 5.7 to above 6.0 units allows for lower cost close-up feeding and increased DM intake for both close-up and fresh cows.

FIGURE 1:



Barentz - 1802 Wooddale Drive, Suite 200 - Woodbury, MN 55125 - USA - **Tel** 800-625-6079
Website www.barentz-na.com