



**For smoother calving
and less disorders.**



**ANIMALS FIRST.
PRODUCTIVITY ALWAYS.**

At Arm & Hammer Animal Nutrition we use science

to unlock the power of nature to create solutions that are designed to optimize animal productivity.

Our expert team can help troubleshoot challenges and translate science into an action plan, always remaining focused on **Animals First. Productivity Always.**

Less disease, smoother calving.

BIO-CHLOR™ is the only consistently formulated, palatable anion source that drives bacterial growth to support rumen function and produce metabolizable protein (MP). BIO-CHLOR delivers the negative DCAD required to consistently acidify cows and help prevent metabolic disorders.

Monitor urine pH to help prevent metabolic disorders.

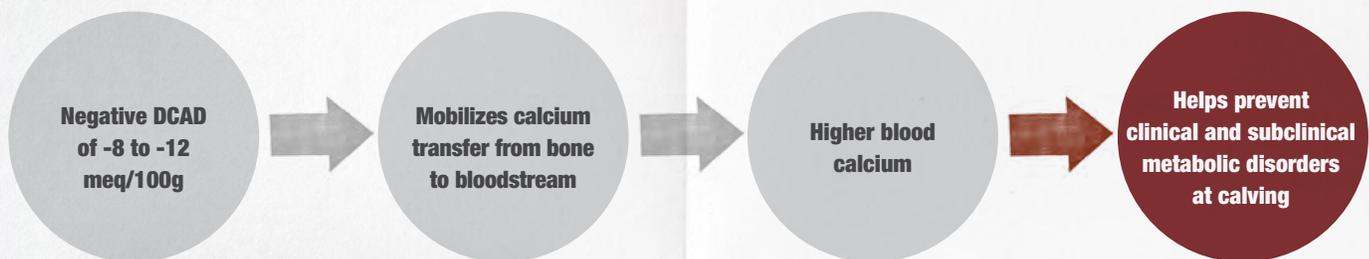
- Measuring urine pH is a tool to verify that cows are consistently consuming the negative DCAD diet that was formulated and delivered to the bunk
- The lower the ration DCAD the lower the urine pH

NOTE: See our How-To Sheet on monitoring urine pH.

The BIO-CHLOR advantage:

- 1 Supports dry matter intake (DMI) prepartum leading to less time diagnosing off-feed issues postpartum
- 2 Smoother calvings with fewer metabolic disorders
- 3 Fewer resources needed to diagnose and treat subclinical/clinical issues

BIO-CHLOR helps stop milk fever before it starts.



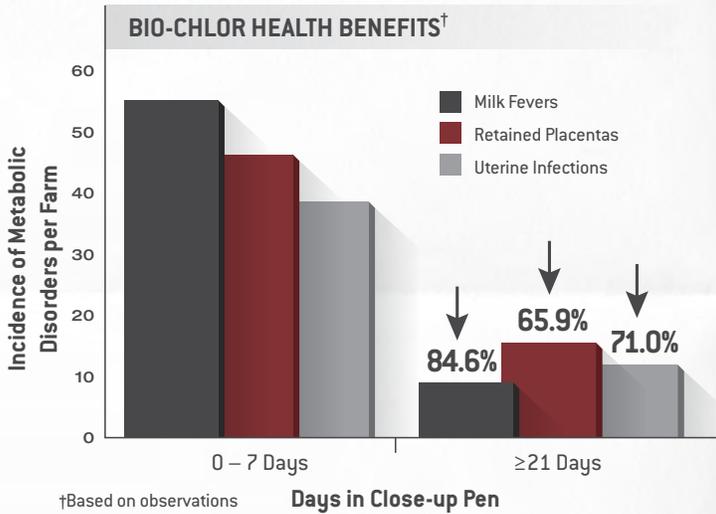
DCAD balancing: proven.

The close-up ration helps set the stage for optimal performance in the upcoming lactation. One proven

nutritional tool during transition is dietary cation-anion difference (DCAD) balancing.



Spend less time dealing with disorders.



A healthier herd with BIO-CHLOR.

Cows fed BIO-CHLOR at least 21 days prepartum experienced:¹

- 84.6% fewer cases of milk fever
- 65.9% reduction in retained placentas
- 71.0% fewer uterine infections

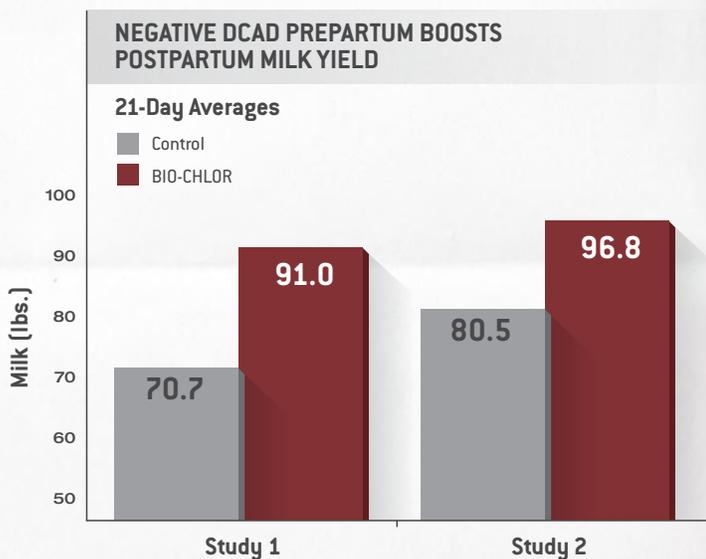
TIP #1

21 to 42 days.

If pen moves or grouping strategy don't easily allow for feeding a separate close-up ration, BIO-CHLOR is still your prepartum solution. Research² shows feeding BIO-CHLOR beginning as early as 42 days prepartum yields similar health and production benefits compared to feeding BIO-CHLOR 21 days prepartum without negative effects.

Boost milk yield.

In two different studies, cows fed BIO-CHLOR 21 days prepartum showed improved milk production compared to the control diet.^{3,4}



TIP #2

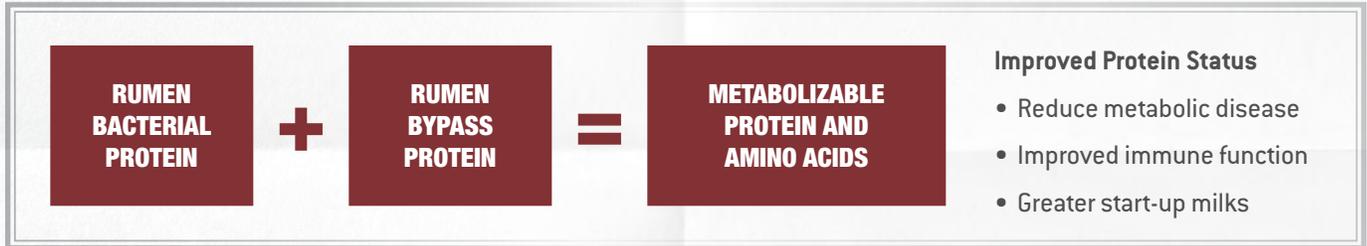
Unlike anionic salts or premixes ...

BIO-CHLOR helps keep cows eating during the toughest time in the life cycle. It's a palatable anion and protein source—delivering negative DCAD and MP—for increased DMI and improved rumen function and efficiency.

MP: the healthy way to achieve efficiency.

Deliver more MP with the ideal amino acid profile.

MP is the form of protein that's digested postruminally and supplies essential amino acids which are vital to dairy cow maintenance and productivity.



Recommended feeding rates.

Feeding rates will vary and are approximately 1.5 to 2.0 lbs. per cow per day.

- Obtain DCAD forage analysis by wet chemistry and test water supply to determine chloride, potassium, sodium and sulfur levels which can vary by water source and could affect DCAD levels
- Optimum DCAD range for prepartum cows is -8 to -12 meq/100g dry matter

- Feed BIO-CHLOR™ as a primary MP source in prepartum cow diets

NOTE: For more details on formulating ration DCAD, ask your Arm & Hammer Animal Nutrition representative about our How-To Sheets for balancing negative and positive DCAD diets.



We're a global, multi-species, animal nutrition team.

We use scientific research to unlock the power of nature to create products that focus on your **Animals First. Productivity Always.** To learn more about BIO-CHLOR contact your nutritionist, veterinarian or Arm & Hammer Animal Nutrition representative or visit AHanimalnutrition.com.

1 Robert Corbett. ARM & HAMMER™ Animal Nutrition, 2001. Data on file.
2 Weich W, Block E, Litherland, NB. Extended negative dietary cation-anion difference feeding does not negatively affect postpartum performance of multiparous dairy cows. *J Dairy Sci* 2013;96:5780-5792.

3 Hoover, Webster. Difference in feed intake pre- and postpartum, urine pH prepartum, and difference in production parameters postpartum for cows fed a control diet vs. a BIO-CHLOR containing diet (DCAD -10 meq/100 g DM) for 21 days pre-partum. ADSA Abstract, 1998.
4 DeGroot MA, Block E, French PD. Effect of prepartum anionic supplementation on periparturient feed intake, health, and milk production. *J Dairy Sci* 2010;93:5268–5279.