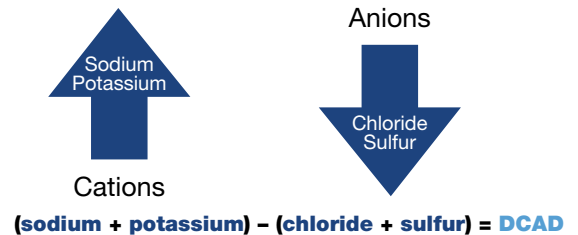


# DCAD Plus® – The Plus Forage Needs

Forages do not provide enough potassium to help cows maintain positive Dietary Cation-Anion Difference (DCAD) during lactation, and supplemental potassium is the most efficient way cows reach positive DCAD levels to maintain high milk and protein production.

## DCAD made simple

DCAD is the difference between positively charged cations, sodium and potassium, and negatively charged anions, chloride and sulfur.

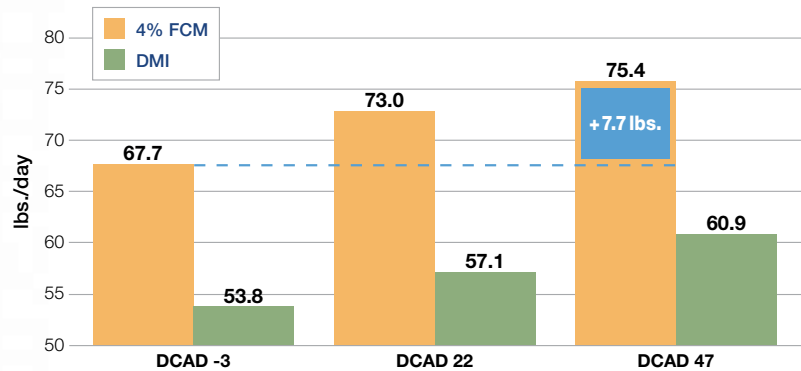


## DCAD Plus: The solution for increasing DCAD levels

Newly published **DCAD Plus** Feed Grade Potassium Carbonate research<sup>1</sup> proves increasing DCAD levels during lactation:

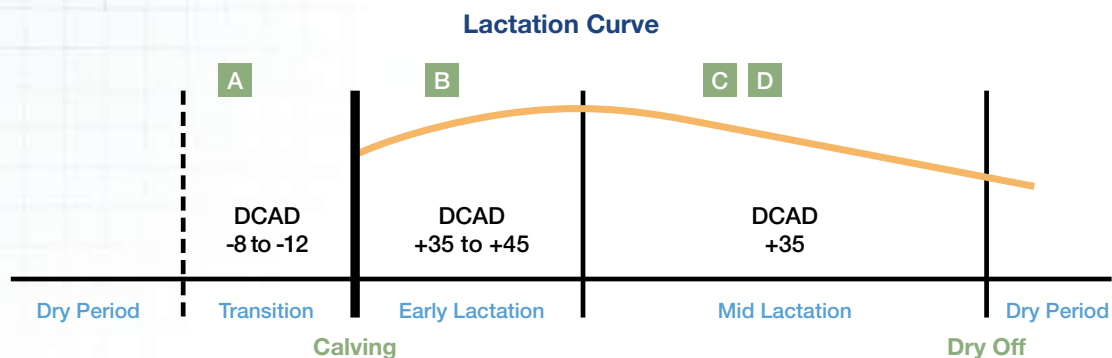
- Increases DMI
- Improves components
- Boosts 4% FCM

### DMI and FCM Response to Increasing DCAD



Hu, Murphy, et al. 2007.

## Monitor DCAD throughout all phases of production



- A** A negative DCAD prior to calving mobilizes the transfer of calcium from bones to the bloodstream for a successful subsequent lactation.
- B** At calving, however, DCAD levels should switch from negative to positive because milk production depletes cation levels, and blood needs additional buffers supplied by positive DCAD to combat the high acid load of peak milk production.
- C** A positive DCAD during lactation buffers blood to create a stable environment inside the cow.
- D** Sufficient DCAD levels cannot be achieved with forage alone; additional cations provided by DCAD Plus are required.

## The safest source of potassium

High-producing cows lose potassium through the normal, everyday function of producing milk, and their potassium reserves can be depleted at an even more rapid pace during the hot months of summer heat stress. **DCAD Plus** is manufactured using a unique, patented process formulated to be less reactive than commodity potassium carbonate when exposed to moisture or high temperatures. There are no counterproductive effects of chloride and sulfur, ensuring increased DCAD levels for increased production and profits.

### DCAD Plus and heat stress – it's like Gatorade® for your cows

Cows are more prone to potassium deficiencies when under heat-stress conditions.

- Heat causes cows to perspire and urinate potassium more quickly
- Metabolic acid load increases while buffering capacity decreases
- Heat lowers feed intake, rumination and salivary production

## DCAD Plus

**DCAD Plus** helps ensure cows achieve positive DCAD levels critical for optimal production performance throughout lactation.

	DCAD Plus	Potassium Chloride
Increases positive DCAD levels	✓	
No chloride or sulfate components	✓	
Increases dry matter intake—year 'round	✓	
Improves milk production—year 'round	✓	
Increases profitability—year 'round	✓	
Helps minimize heat-stress losses	✓	

## Feeding rate

- Include .25 lbs. per cow per day
- Work with your nutritionist to determine additional **DCAD Plus** needs

## Monitor DCAD levels

- Optimum DCAD levels for high-producing cows range from +35 to +45 meq/100g of dry matter
- During heat stress, positive DCAD levels are especially beneficial because cations are depleted more quickly
- Accurate feed analysis is necessary to properly balance for DCAD
- Work with your nutritionist or feed-testing laboratory for a macromineral analysis of sodium, potassium, chloride and sulfur

For improved DMI, milk and component production, and herd profitability, contact your Arm & Hammer representative, your nutritionist, visit [www.dcadbalance.com](http://www.dcadbalance.com) or call 1-800-526-3563.

**DCAD Plus**  
The Plus Forage Needs

1 Hu W, Murphy MR, Constable PD, Block E. Dietary cation-anion difference and dietary protein effects on performance and acid-base status of dairy cows in early lactation. *J Dairy Sci* 2007;90:3355-3366.

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Animal Nutrition