





Choline is a Required Nutrient for Improving Colostrum Yield & Quality

Choline dramatically increased colostrum yield – an 85% increase in our study.

-Dr. Barry Bradford, Tri-State Dairy Nutrition Conference, 2023



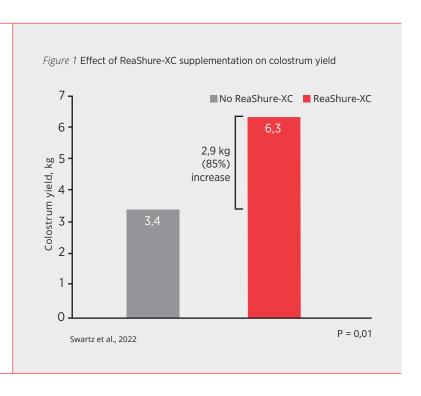


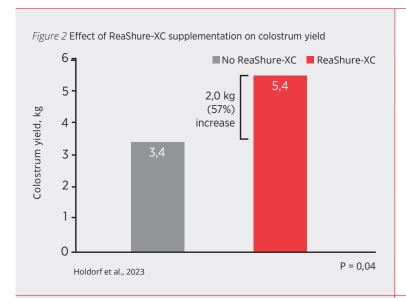


Colostrum is essential for survival and health of the newborn calf. The cow's placenta completely separates the dam and fetal blood, preventing immunoglobulin (Ig) transfer during gestation. Therefore, the newborn's immune protection relies primarily on colostral immunoglobulins absorbed in the intestine during the first few hours after birth.

Recent research from multiple universities suggests that supplementing cows with ReaShure® *Precision Release Choline* during the close-up period can increase colostrum production. Four recent studies represent the entire dataset measuring ReaShure's impact on colostrum quantity and quality when fed to pre-partum dry cows. Two of the trials showed a large and significant increase in colostrum volume (Swartz et al., 2022 and Holdorf et al., 2023), one exhibited a large and significant increase in IgG (Zenobi et al., 2018a), and one showed no response (Bollatti et al., 2020b).

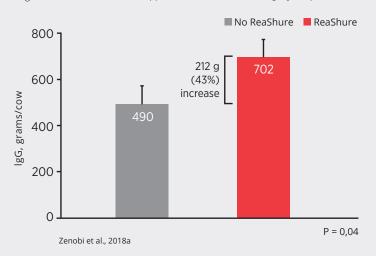
- ReaShure-XC fed 21 days prepartum
- 2,9 kg more colostrum from ReaShure-fed cows, an 85% increase (P = 0.01)
- Enhanced the yields of choline metabolites
- No dilution of solids
- · No dilution of IgG





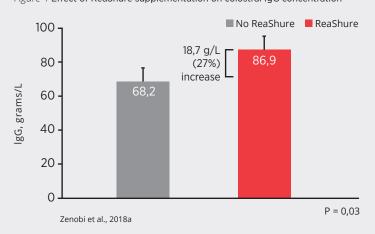
- ReaShure-XC fed 21 days prepartum
- 2,0 kg more colostrum for ReaShure-XC-fed cows, a 57% increase
- · No dilution of IgG

Figure 3 Effect of ReaShure supplementation on colostral IgG yield per cow



- ReaShure fed 21 days prepartum
- 212 g/cow (43%) more IgG yield for ReaShure-fed cows (P = 0,04)

Figure 4 Effect of ReaShure supplementation on colostral IgG concentration



- ReaShure fed 21 days prepartum
- 18,7 more g/L more IgG (27%) for ReaShure-fed cows (P = 0,03)

Dairy producers have known for decades that ReaShure can help support a healthy transition into lactation. New research now suggests it can also improve colostrum yield and quality, helping build a foundation for healthier calves. A short-term investment during the transition period can help ease your cow's transition into a healthy and productive lactation today while paving the way for significant returns in the future as your heifers enter the milking string.\*

Download the complete research summary featuring four studies by snapping the QR code at right.





### Milk Production

Zenobi et al., 2018a Arshad et al., 2020 Bollatti et al., 2020a Holdorf et al., 2023 Swartz et al., 2023

### Healthy Transition

Lima et al., 2012 Zenobi et al., 2018b Arshad et al., 2020 Arshad et al., 2022 Poindexter et al., 202

## Choline is a Required Nutrient for Essentially Every Cow

Zenobi et al., 2018a Zenobi et al., 2018b Arshad et al., 2020 Bollatti et al., 2020a Bollatti et al., 2020b Potts et al., 2020 Swartz et al., 2022 Holdorf et al., 2023 Swartz et al., 2023 Poindexter et al., 2023

### Calf Health & Growth

Zenobi et al., 2018a Zenobi et al., 2022 Holdorf et al., 2023

### Improved Colostrum Ouantity

Zenobi et al. 2018a Bollatti et al. 2020b Swartz et al. 2022 Holdorf et al. 2023



# ReaShure®-XC Precision Release Choline

This new science changes everything we thought we knew about choline's impact on the cow and her calf. ReaShure® *Precision Release Choline* is the original and most researched rumen-protected choline source, so you can be sure you're getting the benefits you expect. Trust ReaShure and Balchem to impact her for generations.

Visit Balchem.com/ReaShure-XC to learn more.



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