

ReaShure®-XC

Precision Release Choline

Nutritional support for the transition cow

The way in which dairy cows are managed during the transition period is crucial for herd health, performance, and subsequent profitability. This is because the dairy cow undergoes a huge change in energy requirement between the non-lactating/pregnant to the lactating/non-pregnant state.

"The problem isn't the change in requirement but actually the cow's ability to consume enough feed to meet the additional energy requirement for milk production," explains Ms Barnes, AB Vista's Ruminant Technical Manager.

During pregnancy, the rumen volume is restricted to make space for the growing calf, resulting in the cow's appetite being suppressed and the rumen temporarily shrinking.

"After calving it takes time for the rumen to expand to its full capacity," adds Ms Barnes. "It is not until 10-12 weeks post-calving that the cow's appetite reaches its full potential."

As a result, the cow mobilises body reserves (back fat) to the liver to help overcome the energy deficit in early lactation. Whilst being a useful mechanism in overcoming the energy deficit, this alternative energy pathway can result in multiple health issues for the cow. For example, in early lactation the surge of fat delivered to the liver can be overwhelming, meaning that it is less able to transform the fat (non-esterified fatty acids or NEFA) into a useable form (very-low-density lipoprotein VLDL) and instead the fat is stored in the liver.

"It isn't surprising that up to 60% of fresh cows experience moderate to severe fatty liver disease," Ms Barnes adds.

Fatty liver disease reduces the livers' ability to make glucose, detoxify urea and respond to hormones whilst also increasing the risk of ketosis. When a cow experiences ketosis the risk of contracting other transition-related diseases increases. For example, they are two times more likely to develop mastitis, three times more likely to contract metritis and can experience up to a 3kg/day milk yield drop at the first milk test. This equates to a daily loss of £81 per 100 cows in milk yield alone (based on 28ppl).

"With approximately 50% of the total lactation yield being produced in the first 100 days post-calving, it is critical that transition issues are mitigated to optimise lactation yield and herd profitability," states Ms Barnes.

As every dairy cow will experience some degree of fat mobilisation during the transition period (independent of body condition), it is important to provide the cow with the nutritional tools to help convert the stored fat into a useable form.

Nutritional solution: Choline

Choline is essential for the growth and health of all animals and it is required to help the liver process and metabolise fat. A healthy and properly functioning liver can help cows transition more smoothly, creating a faster and more productive start to their lactation whilst also reducing the risk of transition related diseases.

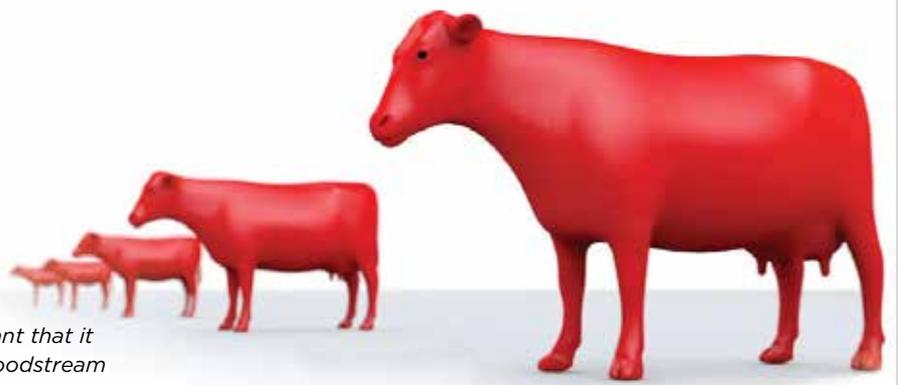
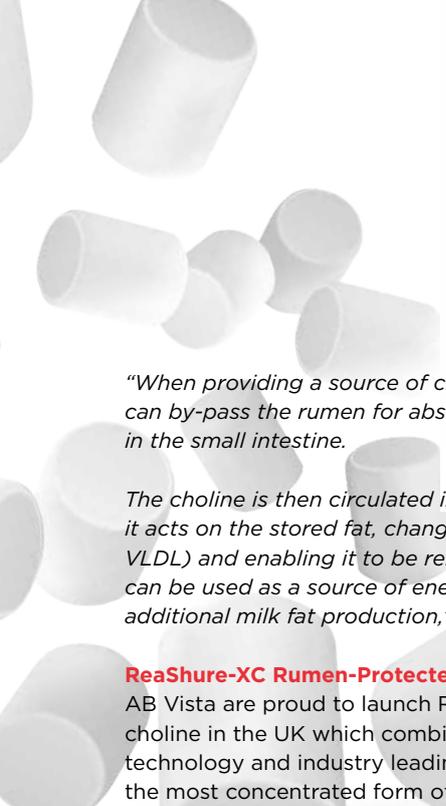


However, most dairy cows are deficient in choline at transition because a large amount of the dietary choline is degraded by the rumen microorganisms, and her body can't make enough to meet the requirement throughout transition.



www.abvista.com

For all enquiries visit: www.abvista.com/contactus



“When providing a source of choline, it is important that it can by-pass the rumen for absorption into the bloodstream in the small intestine.

The choline is then circulated in the blood to the liver where it acts on the stored fat, changing the structure (NEFA to VLDL) and enabling it to be removed from the liver. Here it can be used as a source of energy, e.g contributing towards additional milk fat production,” Ms Barnes explains.

ReaShure-XC Rumen-Protected Choline

AB Vista are proud to launch ReaShure-XC rumen-protected choline in the UK which combines advancements in core technology and industry leading encapsulation to deliver the most concentrated form of rumen-protected choline to the market today. In comparison to ReaShure, the new ReaShure-XC has a lower feed rate (30g/head/day compared to 60g/head/day) whilst still delivering the same amount of rumen-protected choline to the cow, creating feed space in the ration for other feedstuffs and providing multiple feeding options to producers. At the recommended feed rate ReaShure-XC delivers more than the cows daily choline requirement, ensuring that the cow has enough available to mobilise fat away from the liver and optimise health.

Extensive research across 25 peer-reviewed published papers have shown that including either ReaShure or ReaShure-XC improves transition cow health, lactation yield whilst also providing in-utero benefits to the unborn calf.

For example, a published study carried out at the University of Florida showed that by providing ReaShure for 3 weeks pre and post-partum reduced the incidence of ketosis and an array of other transition related diseases (Figure 1).

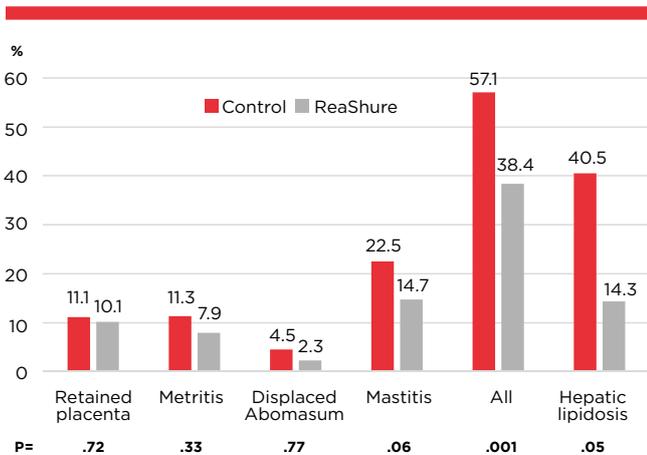
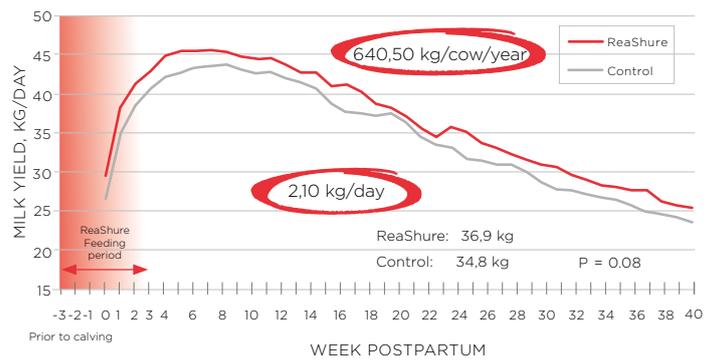


Figure 1: Feeding ReaShure reduced the incidence of retained placentas, metritis, displaced abomasums, mastitis and hepatic lipidosis. These reductions contributed to a significant improvement in cow health when compared to the control.

EFFECT OF FEEDING REASHURE®PRECISION RELEASE CHOLINE DURING TRANSITION ON MILK PRODUCTION OVER 40 WEEKS



Zenobi, et al. *J Dairy Sci.* 101:1088 (2018).

Figure 2: Feeding ReaShure 3 weeks pre and post-partum increased peak lactation and total lactation yield by an average of 2.1kg milk/cow/day over the whole lactation vs the control.

A further study showed that providing ReaShure during the transition period had a lasting positive effect on lactation performance. Figure 2 shows ReaShure boosted milk yield in both early and late lactation over the control group, resulting in an average improvement of 2.1kg/day across the whole lactation. This equates to an extra £61 per 100 cows per day (based on 28ppl), enhancing herd profitability.

“What is constant across studies is that helping the cow to meet her true lactation peak is critical in optimising total lactation yield. When the cow experiences poor health during transition she is less likely to meet her true lactation potential,” Ms Barnes adds.

One of the emerging areas of research is on the benefits of feeding ReaShure during the close-up dry period to the unborn calf. We have seen that when you feed ReaShure in the dry period alone you attain up to 80% of the benefits of feeding for the recommended 3 weeks pre and 3 weeks post-partum. However, the benefits on calf growth rates, immune response, and future lactation performance cannot be ignored.

