

Nutrition
EMEA

Carnitin 20% rumen protected



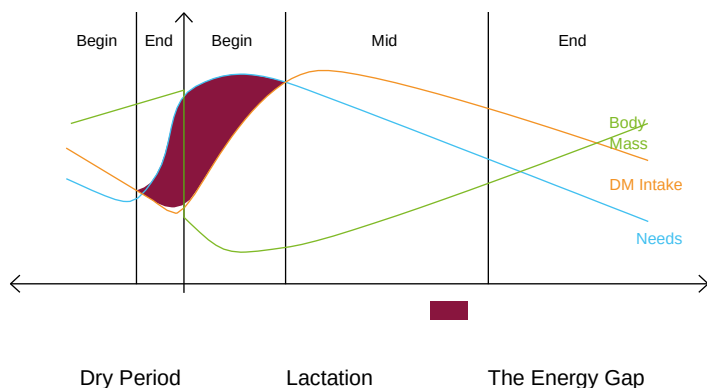
Significant loss of L-Carnitine occurs in periods of negative energy balance. Impaired energy metabolism of the high lactating dairy cow during transition and high lactation, can be compensated by supplementation of L- Carnitine. Critical metabolic situations can thus be prevented. Albors' coated L-carnitin is the trusted source of rumen protected pure L-Carnitine.

- Rumen protected pure L-Carnitine
- More efficient energy supply
- Improves liver function and reduces lipidosis
- Stabilizes energy metabolism during transition and early lactation
- Reduces risk of ketosis
- Improves reproductive performance

Managing the Transition Period

More often high performing dairy cows already go into negative energy balance in the last part of pregnancy by low appetite and decreased dry matter (DM) intake, which is enhanced by high milk yield at the onset of the milk production in early lactation.

Figure 1: Typical energy requirement and dietary energy provision in the transition period of dairy cows.¹

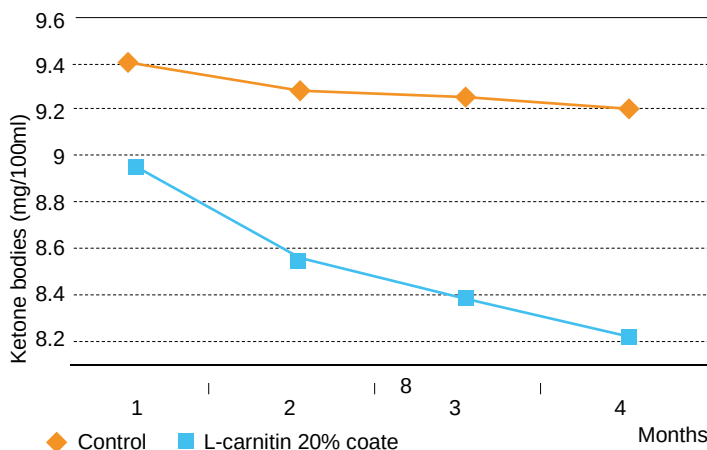


Whenever the cow shows a negative energy balance (NEB) and thus is mobilizing body reserves it is essential to support a healthy liver function and overall fat metabolism with compounds like L-Carnitine and niacin.

Reducing Risk of Ketosis

Sufficient supply of L-Carnitine during this critical period helps to minimize the incidence of many metabolic problems (e.g. fatty liver and ketosis). Less ketone bodies are released into the bloodstream with reduced non esterified fatty acids.

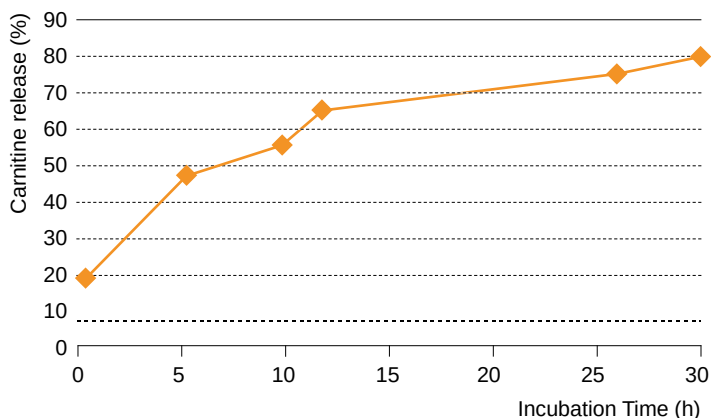
Figure 2: Effect of Carnitin 20% coated supplementation on ketone body formation during lactation.²



By-Pass Pure L-Carnitine

When adding L-Carnitine to a ruminant diet, it should be resistant to breakdown in the rumen. Carnitin 20% coated ingredient is developed to support the liver at the end of the dry period and during the start of lactation. Carnitin 20% coated ingredient contains 20% L-Carnitine in a rumen protected formula. L-Carnitine which is not protected will be degraded by rumen microbes and therefore not be available for the ruminant.

Figure 3: L-Carnitine release from Carnitin 20% coated. In situ rumen bypass test. Rumen bypass (37.2%) is estimated at assumed passage rate of 7%.³



State of the art coating technology offers a reliable source of rumen protected pure L-Carnitine for required supplementation of dairy cow diets.

Recommended L-Carnitine Dosages for Dairy Cows

Application	Period	(g/animal/
General benefit of the energy metabolism Reduce the risk of ketosis and impaired reproductive performance Metabolically related liver disorders	First 100 days of lactation	5
	Starting 3 wk a.p. and during high lactation	10
and fatty liver syndrome	Transition	25

References

- Hoffman et al., 2000
- Formitschev et al., 2008
- Albors internal 2014

Packing: Special bags, 25 kg net

Stability: guaranteed for 24 months after manufacture, if kept in original unopened packing and adequate storage conditions

Dosage: prior to calving and first phase of lactation, daily 5-10 g per cow (1-2 g L-carnitine)