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**BTC**  
Chemical Distribution

# Endulac<sup>®</sup> CLA

Enduring performance in dairy cows



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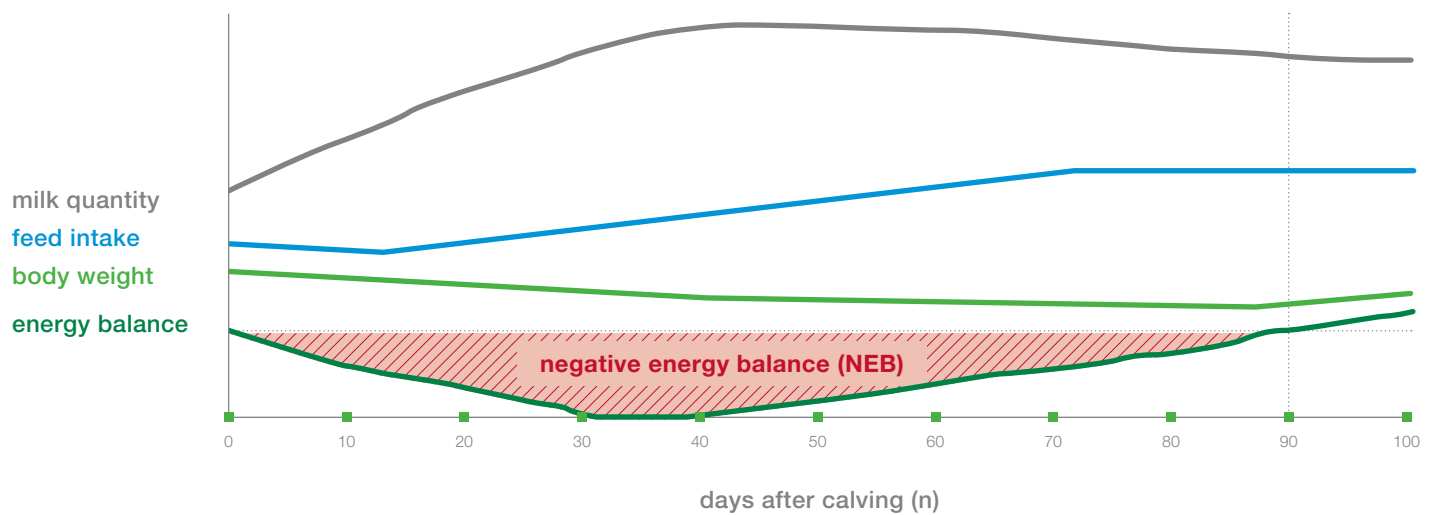
# Endulac<sup>®</sup> CLA

## supports dairy cows during transition period

After calving the cows often get into an energy gap. This is caused by too low dry matter intakes in the beginning of lactation and an increase of the milk yield at the same time. The energy level of the feed intake is not sufficient for the produced milk volume, therefore the energy balance is negative and the cow needs to mobilize body fat.

### The transition period

The decisive phase for cows and farmers



In succession of the negative energy balance numerous health problems like retained fetal membrane, metabolic disorders and fatty liver can occur. This can lead to difficulties at the onset of lactation and fertility problems.

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## Functions

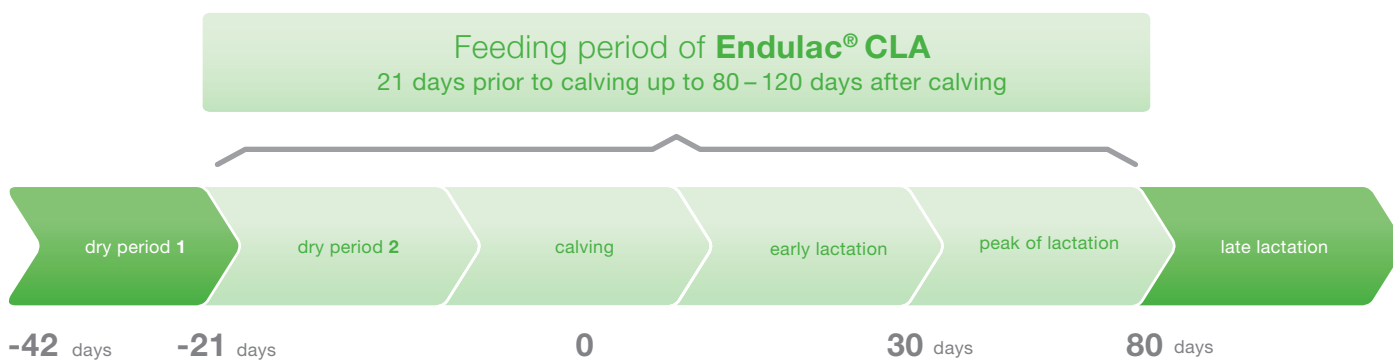
**Endulac® CLA** is a feed supplement that lowers the milk fat content during the supplementing phase in a dose-dependent manner. The milk fat is the most energetic component in milk. A reduced milk fat content requires less blood glucose per kilogram of milk. The blood glucose level rises, the cow mobilizes less body fat and the metabolism is relieved. **Endulac® CLA** helps the dairy cow to overcome the state of negative energy balance (NEB).



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## Dosage recommendation

We recommend a dosage of 70 g per cow per day of **Endulac® CLA**, commencing on day 21 before calving to at least day 80 of lactation.



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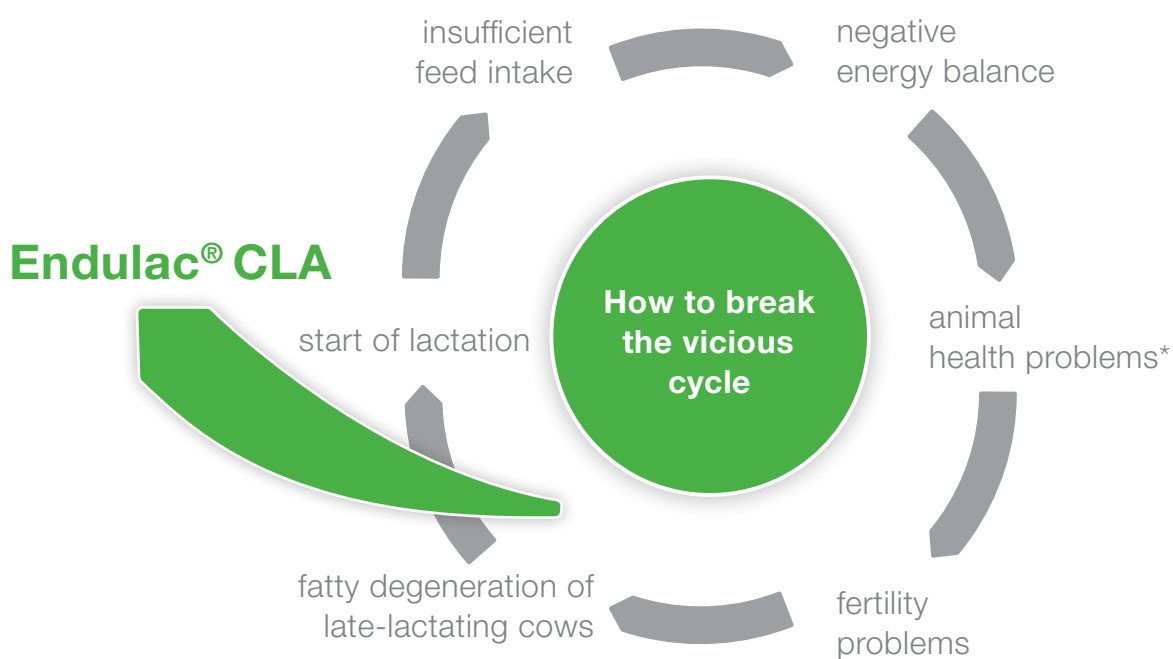
By temporarily reducing the milk fat in a controlled manner, **Endulac® CLA** contributes to a relief of the energy balance in the stage of early lactation. Subsequently the metabolic situation stabilizes and the dairy cow's lifetime performance as well as the longevity improve.

**BTC** – stands for expertise

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## Breaking the vicious cycle



\*retained fetal membrane, metabolic disorders, fatty liver

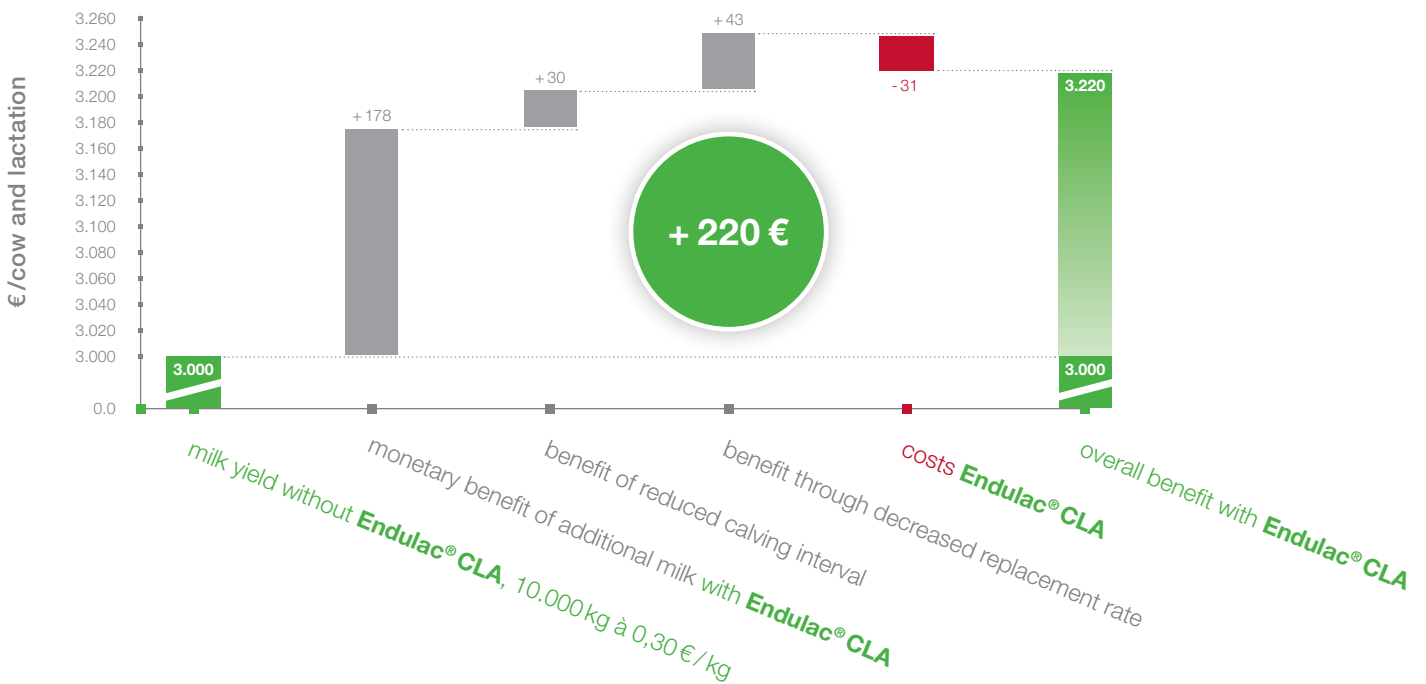
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## What effects can a negative energy balance have on dairy farms?

### Diseases and problems connected to NEB (negative energy balance)?

- Fertility problems
  - ovarian cysts
  - retained fetal membrane
  - metritis
  - delayed ovulation
  - poor conception rate
- Metabolic disorders
  - fatty liver disease
  - displaced abomasum
  - rumen acidosis
- Mastitis
- Claw and limb disorders
- Decrease in milk production
- Impaired animal welfare and economical disadvantages
  - negative impact on the welfare of dairy cows
  - off-farm movements of sick animals
  - loss of time because of caring for sick animals
  - additional stress and frustration for the farmer

## Economic benefit (€/cow / lactation) obtained by the use of Endulac® CLA based on quantity of milk and fertility



## Positive effects resulting from the use of CLA

- relieves the metabolism in early lactation
- decreased body fat mobilization
- improved fertility
- reduced calving interval
- improved longevity
- low replacement rate
- sustainable higher milk yield
- improved efficiency of milk production

## What are conjugated linoleic acids?

Linoleic acids (conjugated linoleic acid = CLA) are a group of polyunsaturated fatty acids. The highest biological activity of the dairy cow is assigned to the isomer trans-10,cis-12 configurations. By eating fresh grass conjugated linoleic acids are naturally produced in the rumen through the activities of the rumen flora. The conjugated linoleic acid in **Endulac® CLA** is based on natural sunflower oil.



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