

Cal-Boost

Hypocalcemia in today's dairy cows

High-production dairy operations challenge a cow's ability to maintain proper calcium blood levels during the critical post-parturition stage of lactation. During this time, her metabolism needs to adjust to the increase in calcium demand.

Clinical and subclinical hypocalcemia may result in increased incidence of:

- Retained placenta
- Displaced abomasum
- Mastitis
- Uterine prolapse
- DMI (Dry Matter Intake) reduction
- Ketosis
- Delayed cyclicity
- Reduced milk yield

Because of the high incidence of subclinical hypocalcemia, on a herd basis it is four times more costly than clinical milk fever.

The lowest concentration of blood calcium usually occurs within 12 to 24 hours of calving and generally returns to normal in healthy cows within 2 to 3 days post-calving. Cal-Boost delivers the calcium your cows need when they need it.

An extra layer of protection

The challenge is to create a protective coating against oesophageal irritation that delivers the calcium to the rumen but also breaks down quickly to make calcium available for absorption. To that end, Cal-Boost receives a double application of a waxy coating (acetylated triglyceride). The double layered protection means that the boluses are easy to swallow.

Rapidly absorbed calcium

The bolus has been formulated with calcium sources that break down quickly to deliver calcium to your cows. Boluses in a net were placed in the rumen of fistulated animals and were evaluated every 30 minutes to determine the time to dissolution. Cal-Boost was completely dissolved in 90 minutes.



Solvet's **Gheraldine Lopez** came to Solvet from the confectionary industry as a chocolatiere in Calgary. Like chocolates, all Cal-Boost boluses are manufactured in individual moulds. The entire process is overseen by Gheraldine to ensure each bolus is made properly and receives two layers of protection to allow for the safe and easy administration of Cal-Boost.



APPROVED
FOR ORGANIC
PRODUCTION

Ongoing research in Canada

Solvat is continuing to conduct research to develop the best protocols to optimize calcium supplementation to support the recommendation of veterinarians and nutritionists. An area of interest for future studies is the effect of calcium boluses to prevent chronic subclinical hypocalcemia and its negative effects on health. Some studies have shown that prolonged administration of calcium boluses may be beneficial.

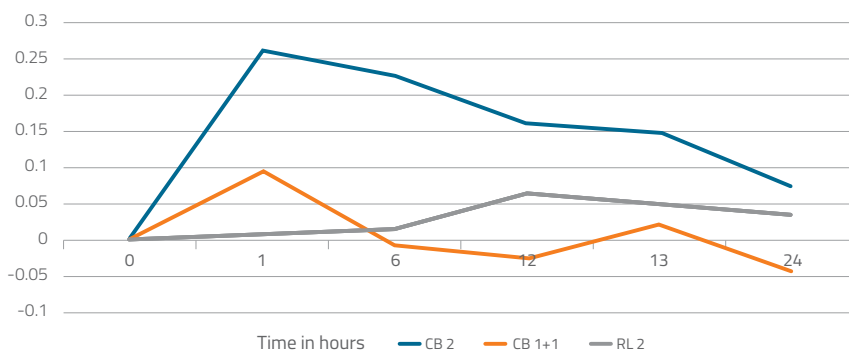
In a recent Canadian research study, different treatment protocols were evaluated as follows:

- **CB 2:** Two Cal-Boost boluses administered after calving (n=21)
- **CB 1+1:** One Cal-Boost administered after calving and a second bolus administered 12 hours later (n=9)
- **RL 2:** Two RumiLife® CAL24™ administered after calving (n=9)

It was hypothesized that the large amount of calcium carbonate in RumiLife® CAL24™ would have a negative impact on the absorption rate of calcium and that giving two Cal-Boost boluses at once would see a more dramatic increase in serum calcium as compared to the traditional regimen. Six blood samples were taken of each cow at pre-determined intervals.

	CAL-BOOST™	CAL-BOOST™	RumiLife® CAL24™
Study group	CB 2	CB 1+1	RL 2
Colour of graph	Blue	Orange	Grey
# boluses at calving	2	1	2
# boluses 12 hours after calving	0	1	0

Change in serum calcium after treatment (mmol/L)



Conclusion: Cal-Boost dissolves rapidly. Its calcium sources assure a fast uptake as illustrated above.

The increase and duration of the serum calcium suggest that giving two boluses at once is the preferred method of administration.

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 Innovation By Request

The Calcium Bolus Advantage YOU CAN SEE

Calcium Bolus Fistula Study¹⁻²



90 minutes after administering Cal-Boost, all that remains in the rumen is its protective coating

* Weight includes rumen fluid absorbed by the bolus

¹ Data is available on file

² Dairy Research and Extension Consortium of Alberta, October 2020