



CALSEA

Powder

ADVANCE

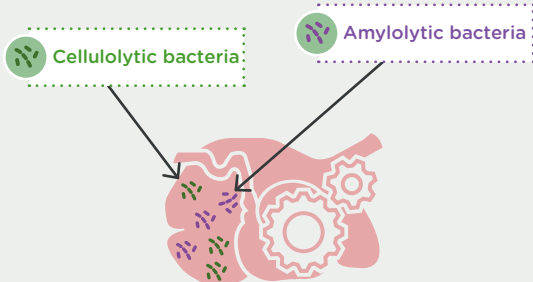
**Natural buffer solution based
on 100% marine red algae**

phosphea
LEADING AND FEEDING

What is subacute ruminal acidosis (SARA)?

Rumen is the most important organ in ruminant through which energy and proteins are provided for milk and meat production.

It is important to maintain pH balance between 6 to 6.4, for better productivity using **buffer solutions**.

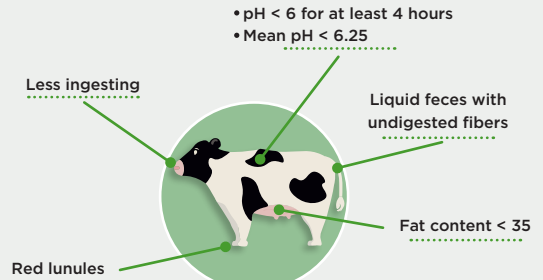


Important microflora in the rumen

Subacute ruminal acidosis is a common metabolic disorder in cattle due to several factors such as feed management or a diet composition too rich in energy.

This disorder causes a **decrease in feed intake** and **rumination** so, a **decrease in zootechnical performance** thus causing **economic losses**.

How to recognize SARA?



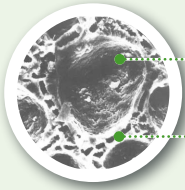
CALSEA Powder
ADVANCE

Natural Buffer solution that **controls ruminal pH** and contributes to **reduce the risk of SARA**

NATURAL BUFFER solution to stabilize the ruminal pH

CALSEAPOWDER Advance: CALCIFIED MARINE ALGAE

MECHANICAL ACTION: POROUS STRUCTURE



Intracellular area

Extracellular area

The product's structure is composed of **intracellular and extracellular areas**. This creates numerous free spaces called « pores ». The more there are pores, the more the specific surface increases.



BETTER SOLUBILIZATION RATE

CHEMICAL ACTION: MOLECULAR COMPOSITION AND STRUCTURE



Magnesian Calcite
& Aragonite



More soluble

Calcite



Less soluble

CALSEAPOWDER Advance comes from a shorter sedimentation process that will give a crystalline form with higher quantity of magnesian calcite and aragonite.



**FASTER Ca RELEASE AND BETTER MINERALS
BIOAVAILABILITY**

1

Buffer effect: maintains the pH thanks to acids neutralization with CO_3^{2-} ions

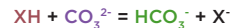
2

Long-term effect: The buffer action will be longer because of the slower solubilization rate

Dissolution & ions release in the rumen



Acid/base reaction with acids neutralization

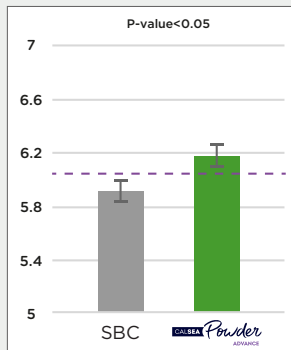


It is possible to use CALSEAPOWDER Advance in lower doses than sodium bicarbonate (NaHCO_3) because of the two acids neutralizations steps

Positive effect of CALSEAPOWDER Advance on the ruminal pH

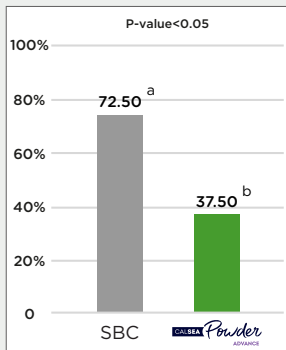
CALSEAPOWDER Advance CONTRIBUTES TO MAINTAIN THE RUMINAL pH

Average ruminal pH on 24 hours

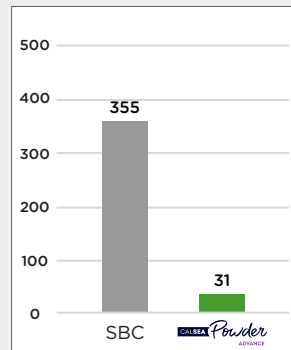


Limit for SARA risk: pH=6 during min 4 hours
source: Peyraud et al (2006)

Percentage of cows with pH < 5.5



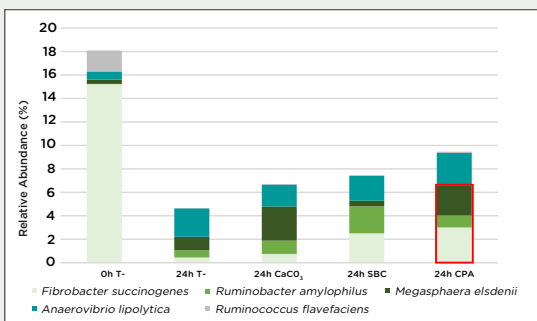
Time (min) with the ruminal pH < 5.5



- Experimental trial - 2023
- 60 dairy cows
- Supplementation CALSEAPOWDER Advance at 100g/cow/d for 42 days (vs 200g/cow/d for SBC)

- ✓ Controls and stabilizes the ruminal pH
- ✓ Limits the risk of SARA
- ✓ Keeps higher pH than sodium bicarbonate

IMPACT OF CALSEAPOWDER Advance ON MICROBIAL FLORA



In vitro trial - 2023

- ✓ Improves the growth of **beneficial bacteria** that fight acidosis

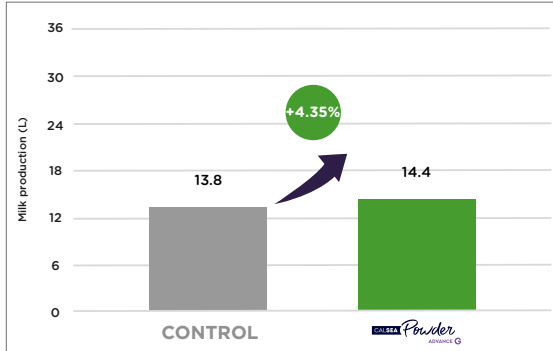
- Presence **cellulolytic bacteria** (*Fibrobacter succinogenes*) and **amylolytic bacteria** (*Ruminobacter amylophilus*)
- Presence of **bacteria fighting against SARA** (*Megaspheara elsdenii*)

PROVEN EFFICIENCY IN DAIRY COWS

IMPROVEMENT OF THE MILK PRODUCTION THANKS TO CALSEAPOWDER Advance



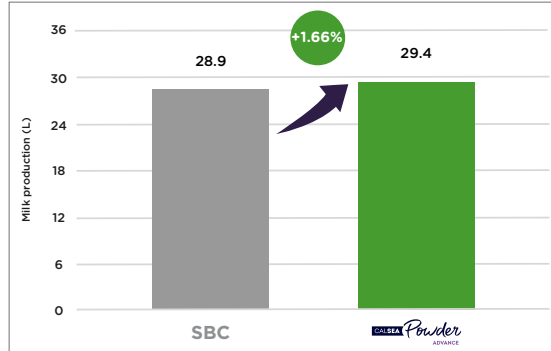
Milk performance on **low** producing cows
($< 20\text{L}/\text{cow}/\text{d}$)



Treatment with 60g/cow/d of CPAG on top for 30 days



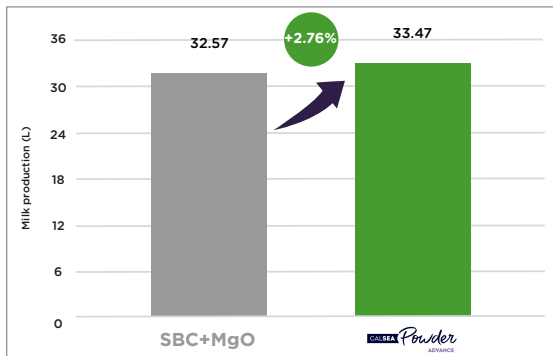
Milk performance on **medium** producing cows



Treatment with 87g/cow/d of CPA on top for 17 days



Milk production on **high** producing cows
($> 30\text{L}/\text{cow}/\text{d}$)



Treatment with 100g/cow/d of CPA for 30 days



- ✓ Milk production can be improved at any level of production
- ✓ **Positive ROI** : between 1.5:1 to 4:1 depending on the country and the farm management

Control : Without buffer

SBC : Sodium bicarbonate

MgO : Magnesium Oxide

For any questions about small ruminant performances, please contact our technical department : technical@phosphea.com

CALSEAPOWDER Advance



SELECT THE BEST SOLUTION

BENEFITS



Stabilizes ruminal pH progressively and over long-term



Stimulates milk production and improves milk quality



Ensures rumen activity and feed efficiency



Provides an available source of Ca with a neutral DCAD

TECHNICAL CHARACTERISTICS

Suitable in organic feed



	CPA	CPAG
Ca (%)	33	29
Mg (%)	2	2
Molasses (%)	-	3
Aspect	Powder	Granule
Particle size	< 315 µm	0.5-1 mm

RECOMMENDATIONS AND DOSAGE:

- ✓ Adapted to ruminants, horses and camels
- ✓ Formulation: 70-100 g/cow/d

PHOSPHEA KEY FIGURES



7
Factories



2nd
Worldwide feed
phosphate player



550
Employees

EU QUALITY CERTIFIED



Phosphea complies with European feed regulations which ensure traceability and safety

technical@phosphea.com

For more information, our technical team is available to assist you.