Blue Pacific MINERALS

CLEVER by NATURE

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OptiGuard™ BIOBOOST

PRODUCT OVERVIEW

High Performance Probiotic Paste

OptiGuard™ BIOBOOST

PROBIOTIC PASTE

OptiGuard™ BioBoost is for use in young calves at birth to support early gastrointestinal microbial establishment during the critical neonatal period, with repeat administration recommended during periods of environmental or physiological stress, illness, or following antibiotic therapy to assist re-establishment of gut microflora.

PRODUCT OVERVIEW

Positioning note:
*This document provides an evidence-based overview of **OptiGuard™ BioBoost Probiotic Paste**. It is not a product-specific efficacy trial. The scientific rationale presented is based on published studies and reviews evaluating probiotic, yeast, Bacillus, and vitamin E interventions in calves.*

Supports gut stability and resilience, while contributing to early-life growth, metabolic development, and immune function through probiotic, yeast, and antioxidant support.

OPTIGUARD™ BIOBOOST

High performance probiotic paste

PRIMARY APPLICATION:

Neonatal gastrointestinal microbial support and stress resilience.

DOSE:

Apply the product directly onto or mix into feed at the following rates.

Cows: 10-15g for off-feed cows. 5g at calving, times of stress or illness.

Calves: 5g at birth, times of stress or illness and as a re-inoculant post antibiotic therapy.

ACTIVE CONSTITUENTS:

Lactic acid bacteria ≥ 1 billion CFU/g; Saccharomyces cerevisiae ≥ 1 billion CFU/g; Vitamin E 10 IU/g

DELIVERY FORM:

Oral paste for targeted administration.

INGREDIENTS:

Per 5g dose

Lactic Acid Bacteria @ no less than 5,000,000,000 CFU
Enterococcus faecium, Lactobacillus acidophilus, Lactobacillus plantarum, Pediococcus pentosaceus, Lactobacillus casei, Bacillus subtilis, Bifidobacterium longum
Vitamin E 50 IU

EFFICIENT NUTRIENT UPTAKE - CONTRIBUTES TO GROWTH PERFORMANCE

NUTRIENT ABSORPTION

SUPPORTS IMMUNITY

HIGHLY TARGETED

PACK SIZE: 80CC / 300CC

Available from your local Vet

WHY EARLY-LIFE MICROBIAL SUPPORT MATTERS

The establishment and development of the gastrointestinal microbiota in neonatal calves is a critical determinant of growth performance, immune system maturation, intestinal barrier integrity, and long-term health outcomes.

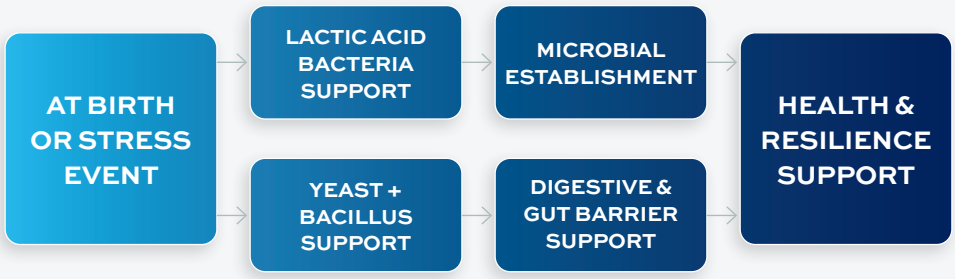
The early-life microbiome is highly dynamic and can be influenced by nutritional inputs, environmental exposure, and targeted supplementation, including probiotics.

Disruptions to the gastrointestinal microbial balance (dysbiosis) have been associated with an increased incidence of digestive disorders, including neonatal diarrhea. Nutritional strategies aimed at supporting and stabilising the gut microbiota during early life have been shown to assist in reducing the severity and duration of digestive disturbances in calves.

OptiGuard™ BioBoost is therefore positioned as an early-life microbial support intervention, designed for administration at birth to assist initial gut colonisation, and for repeated use during periods of physiological or environmental stress to support gastrointestinal stability and recovery.

PROPOSED MODE OF ACTION FOR OPTIGUARD™ BIOBOOST PROBIOTIC PASTE.

This is a formulation rationale diagram, not direct trial data.



PRODUCT COMPOSITION & FORMULATION RATIONALE

Component	Specification	Why it matters in calves
Lactic acid bacteria blend	>= 1 billion CFU/g	Supports early establishment of beneficial gastrointestinal microbiota, competitive exclusion of undesirable organisms, and development of a more stable gut environment during the neonatal period.
Saccharomyces cerevisiae	>= 1 billion CFU/g	Supports digestive function and microbial balance; yeast supplementation in calves has been associated with improved resilience to nutritional and environmental stressors and reduced incidence of digestive disturbance in published studies.
Bacillus subtilis	Included within bacterial blend	Spore-forming organism that supports microbial stability and enzymatic activity; associated in published studies with improved early-life performance and metabolic function in calves.
Vitamin E	10 IU/g	Provides antioxidant support during a period of high oxidative stress and immune system development in neonatal calves.

INCLUDED **BACTERIAL SPECIES:**

Enterococcus faecium, Lactobacillus acidophilus, Lactobacillus plantarum, Pediococcus pentosaceus, Lactobacillus casei, Bacillus subtilis, Bifidobacterium longum.

INGREDIENT EVIDENCE FROM CALF LITERATURE

*The following studies do not evaluate **OptiGuard™ BioBoost** directly but provide peer-reviewed evidence supporting the functional roles of key ingredient classes included in the formulation.*

FIGURE 1.

In a double-blinded, placebo-controlled field study, diarrhea incidence within the first 14 days of life was lower in calves receiving Lactobacillus reuteri (31/83) compared to placebo-treated calves (44/83).

The authors concluded that L. reuteri plays a beneficial role in supporting intestinal health in neonatal calves, with findings suggesting that earlier or extended administration may further enhance outcomes.

These results support the application of early-life lactic acid bacteria supplementation as a strategy to assist gastrointestinal microbial establishment and stability around birth.

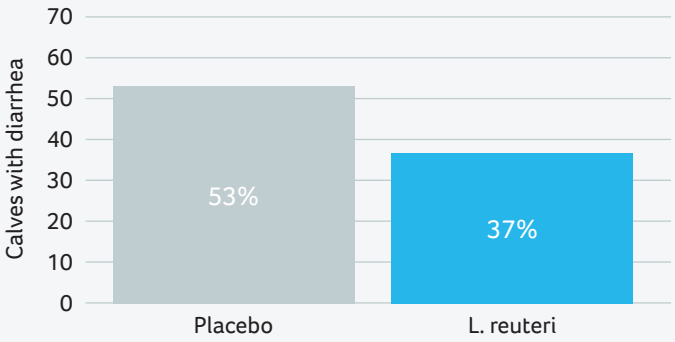


FIGURE 1:
Example literature outcome in newborn calves: oral L. reuteri reduced diarrhea incidence in the first 14 days of life.
Schwaiger et al., 2023

FIGURE 2.

A conference abstract reported a lower incidence of diarrhea in yeast-supplemented calves compared to controls (50% vs 67%), along with a reduction in severe diarrhea (10% vs 29%).

Additional controlled calf studies under heat stress conditions have reported reduced diarrhea frequency, as well as improvements in physiological parameters such as rectal temperature and heart rate, alongside lower counts of E. coli and Enterobacteriaceae with yeast supplementation.

These findings support the inclusion of yeast as part of a nutritional strategy aimed at supporting gastrointestinal stability and resilience in calves, particularly during periods of environmental or physiological stress.

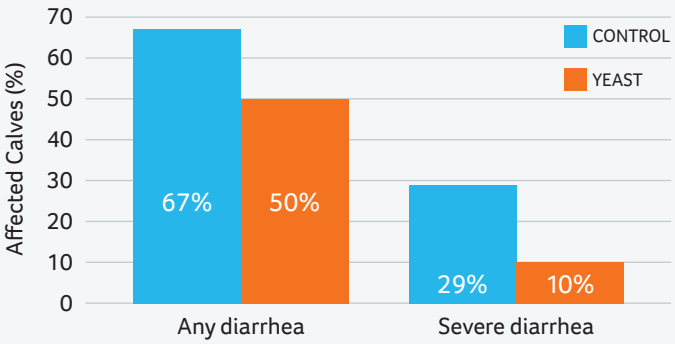


FIGURE 2:
Example literature outcome in calves: yeast supplementation and calf health.
Villot et al., 2018 abstract

FIGURE 3.

In a published preweaning calf study, animals receiving Bacillus subtilis supplementation demonstrated increased body weight relative to controls, being 4.1% heavier at day 30, 3.8% at day 60, and 2.9% at day 90.

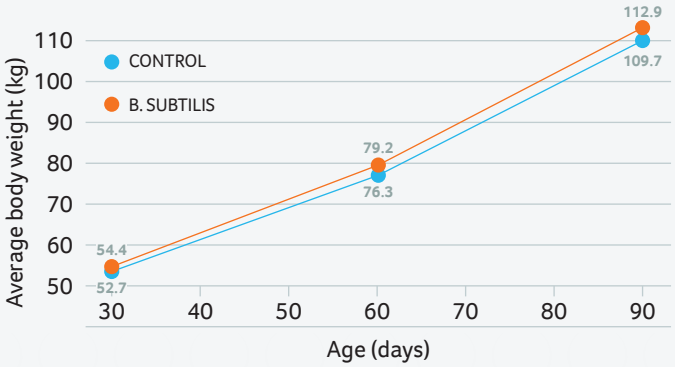


FIGURE 3:
Example literature outcome in dairy calves: B. subtilis supplementation increased average body weight at day 30, 60, and 90 in a published preweaning calf study.
Antanaitis et al., 2024

INGREDIENT EVIDENCE FROM CALF LITERATURE

The same study reported a more favourable metabolic profile in supplemented calves, supporting the role of B. subtilis as a functional, spore-forming probiotic capable of contributing to improved early-life performance and physiological resilience.

As Bacillus subtilis is included within the **OptiGuard™ BioBoost** bacterial blend, this ingredient-level evidence supports the technical rationale for its inclusion as part of a neonatal gastrointestinal support formulation.

FIGURE 4.

In a controlled calf study, vitamin E supplementation resulted in significantly higher serum α-tocopherol concentrations and increased neutrophil α-tocopherol levels compared to controls, indicating improved systemic and cellular antioxidant status.

Additional neonatal calf research evaluating antioxidant supplementation at birth has reported improvements in redox balance and enhanced mucosal immune responses, including increased nasal IgA following intranasal vaccination.

Within the **OptiGuard™ BioBoost** formulation, vitamin E should be positioned as providing antioxidant and immune-supportive nutritional support during early-life development, rather than as a stand-alone therapeutic intervention.

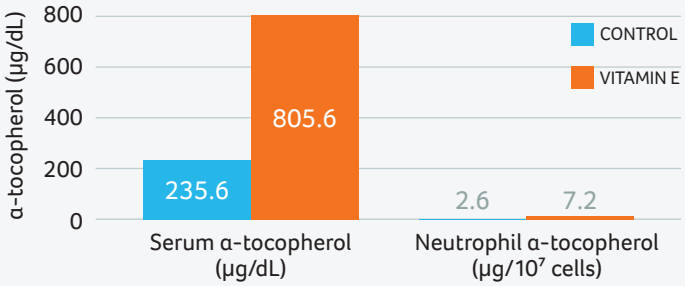


FIGURE 4:
Example literature outcome in Holstein calves: vitamin E supplementation increased serum and neutrophil alpha-tocopherol concentrations after 14 days.
Higuchi et al., 2013

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