

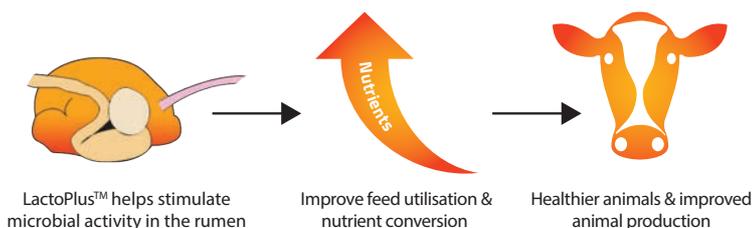
# Digestive Enhancer

Help your cows adapt to feed change



BioStart LactoPlus™ has been scientifically formulated to help optimise rumen function in dairy cows and promote well-being especially during periods of “digestive stress” such as feed changes, mating, calving, transport and climatic stress.

## LactoPlus™ helps optimise rumen fermentation to improve function and feed utilization



LactoPlus™ is made from the fermentation of specially-selected beneficial bacteria, prebiotics, vitamins, minerals and trace elements. LactoPlus™ helps stimulate microbial activity in the rumen in order to enhance rumen fermentation.

### Benefits

- Helps optimise rumen function
- Helps increase rumen fermentation and efficiency
- Reduces “digestive stress” from feed change and heavy grain feeding, climatic stress, transition period stress, mating and transport
- Improves milk production
- Improves animal well-being
- LactoPlus™ is non-viable (not live); efficacy not effected by heat, air or digestive acids
- Nil withholding period

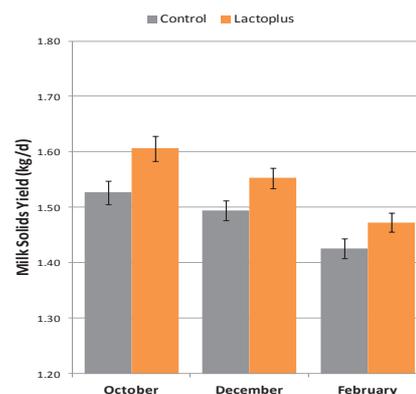
*Always use LactoPlus™ in conjunction with good animal management practices.*

Pack size available: 20 L

## LactoPlus™ trial increases milk solids

Results: LactoPlus™ increased Milk solids yield/day by 5% in Nov, 4% in Dec and 3% in Feb in grass-fed cows.

Effect of Weekly LactoPlus™ Dose on Milk Solids Yield per Day through Lactation (2004/2005)



Note: This is an independent trial conducted by Mark Bryan, Central Southland Vet Services, Southland, 2004/2005 season across two farms.

### Directions for use

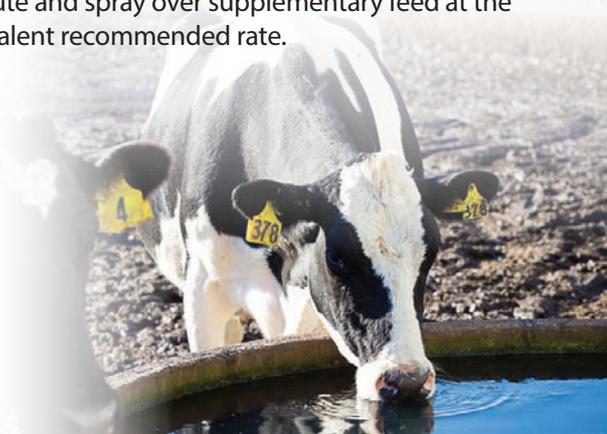
**In-Calf Cows:** One dose of 20 mL/head 1-2 weeks prior to calving.

**Lactating Cows:** 15mL/head once a week

**Goats/Lactating goats:** 5mL/head per week

**Kids:** 2mL/head per week

Dose LactoPlus™ weekly through the trough dispenser, co-administer with oral supplements via drenching, or dilute and spray over supplementary feed at the equivalent recommended rate.



Available from leading rural retailers and vets.

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**www.biostart.co.nz**

## Understanding your cow's rumen function

A healthy rumen is home to billions of micro-organisms, including a wide range of bacteria, protozoa and fungi, which all have a role to play. Cows rely on rumen microbes to efficiently convert pasture and other fibrous feeds into nutrients for animal milk and meat production. The populations of microbes in the rumen are greatly affected by the type and quality of feed an animal is eating, the stress that the animal is under and the use of antibiotics and de-wormers. If the populations of microbes are out of balance then the cow's rumen function will be suboptimal and digestive efficiency will decline.

## Calving and mating and stress

Like humans the effects of stress can lead to adverse metabolic changes in the dairy cow and can have significant effects on their health, immune system and productivity. Stress can also lead to decreased appetite. Dose with LactoPlus™ to help maintain optimal rumen function, animal well-being and digestive efficiency.

## Climatic stress

When a cow suffers from heat or cold stress more energy is partitioned towards maintaining body temperature and there is less energy for milk and meat production. Under heat stress the cow's rate of gut and rumen motility, appetite and feed intake is reduced. Ensure plenty of water and shade is available and dose with LactoPlus™ to improve digestive efficiency. Under cold stress the cow increases dry matter intake and rumination. Provide sufficient feed and dose with LactoPlus™ to help stimulate rumen function and digestive efficiency.

## Introducing a supplementary crop

When introducing a supplementary crop the makeup of the rumen microbe populations are required to change rapidly so they can digest this new feed and maintain feed utilisation and animal performance. This process of changing the microbe populations can take between 4 – 9 days under normal conditions. Introduce the supplementary crop over a few days and dose with LactoPlus™ to help boost rumen microbial growth and thereby allow the rumen microbial populations to adapt rapidly.

## Help restimulate the cow's appetite after animal health problems

Conditions like acute or sub-acute acidosis, milk fever and grass staggers depress the cow's appetite and production. High acid levels in the rumen, and the use of antibiotics can also adversely affect the rumen microbial populations and therefore rumen fermentation. Follow your vet's treatment plan for the health problem and dose with LactoPlus™ to help restore rumen microbial populations and digestive efficiency.

## Transportation stress

Transportation is very stressful for stock. Prior to transport, moderately restrict feed intake, feed hay or silage as the low water content will help reduce the liquid content of effluent, and supplement with magnesium (with vet's advice). Dose with LactoPlus™ prior to transport to reduce transport stress and help cows adjust to the feed change pre and post transport.