

# DIRECT FED MICROBIALS

Suitable for large and small ruminants. For inclusion in grain rations.



Live Yeast in the rumen has been demonstrated to increase the rumen beneficial microbial population, maintain a stable rumen pH, and improve fibre digestion potential in ruminants.

They are made from a unique combination of 11 powerful biological compounds sourced from Japan, US and Europe.

5 selected strains of Probiotic bacteria microencapsulated to get to the lower GI tract for improved immune function and for competitive exclusion of pathogens.

A specific strain of active live dry yeast (Saccharomyces Cerevisiae). This yeast stimulates cellulose digesting bacteria, improving fibre digestibility and the development of the rumen.

A blend of 5 digestive enzymes working on protein, starch, cellulose, fat and pectin. These result in better feed breakdown and more surface area for microbes to work on.

## **BiOPRO Ingredients**

## A blend of five Probiotic bacteria

- Bacillus subtilis
- Enterococcus faecium
- Lactobacillus acidophilus
- · Bifidobacterium longum
- Bifidobacterium thermophilum

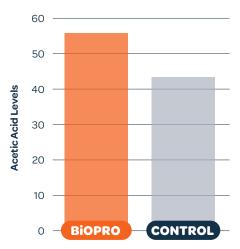
# Five digestive enzymes for increased feed conversion efficiency and fibre utilisation

- Alpha Amylase
- Protease
- Cellulase
- Lipase
- Pectinase

## An active dry live yeast for improved digestion and rumen pH balance

· Saccharomyces cerevisiae

## **Lincoln University Trial Observations**



Invitro Production & Fermentation Outputs

This is an initial trial to determine the merit of further research into the benefits of using BioPro Probiotics for enhanced feed digestion and improved feed conversion efficiency.

The above graph displays the BioPro showed a significant difference in acetate production which is usually a reflection of improved fibre digestion.

This experiment was conducted at Lincoln University (New Zealand) and approved by the Animal Ethics Committee at Lincoln University (AEC2020-42).

### Diet

**60%** Ryegrass **15%** Barley **25%** Maize silage

## **Improvement**

**29%** above the control group

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