

BioCalf

(including shaker)



High dosage probiotic powder designed to be added daily to whole milk or milk powder.

- Lays the foundation for the future growth, feed efficiency, and the ongoing health and development of your calves.
- Contains micro-encapsulated probiotics, live yeast, and yucca extract (exhibits coccidiostat properties).
- Active ingredients no less than **15.5 billions** of CFU (Colony Forming Units)).
- Supports immune response and gut health.
- Extended shelf-life.

DOSAGE

- 1g per calf per day – mix in warm water in the shaker, then add to milk or milk powder.
- Feed during the early stages of milk feeding while the calf's digestive system is developing.



"Traditional rates of probiotics in milk are no longer relevant in modern calf-rearing practice. That's why we've included more than double the probiotics in BioCalf over every other current product on the Australian market."

– Dr Robyn Plunkett BVSc



**1000
DOSES**
PER PACK

1 KG

PC: DFABC1

3 KG

PC: DFABC3

PC: DFABCS



"Our sickness levels have dropped, the calves eat more, and they eat it faster. BioCalf seems to fire up their digestive systems. You can see the difference – even their coats are shinier."

– Josh Gillie, northern Victoria



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Calves aren't born with a full complement of gut bacteria for robust immune function.

During the first two to three weeks a calf's only natural defence against bacteria/infection lies in the Passive Immunity Transfer (PIT) of immunoglobulins (a group of proteins with active antibodies) it receives from maternal colostrum. By the time a calf is 12 hours old, its ability to absorb those antibodies through PIT has dropped to 20%. At 24 hours old, that percentage has crashed to just 5%.

BioCalf offers a daily in-milk dose of high-performance micro-encapsulated multi-strain probiotics that promote immunity, recovery, and improves digestion.

HOW BIOCALF WORKS

Because 70-80% of an animal's immune function is driven from its lower gastrointestinal (GI) tract, getting the right concentrations of probiotics to that sweet spot is key.

To that end, the micro-encapsulated probiotics carried in BioCalf allow them to be distributed to the rumen and abomasum where they come to life – providing direct competition for pathogenic bacteria on a daily basis.

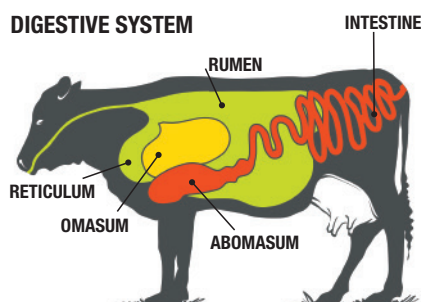
The combination of these extreme levels of good bacteria, active live yeast rumen pH stabiliser, and Yucca extract, have made BioCalf a popular inclusion in many of Australia's calf-rearing facilities.

Research confirms that supplementing the rumen with probiotics accelerates calf growth: it directly stimulates rumen development and reduces the need for antibiotic intervention.

Probiotic supplementation that includes yeast helps maintain an immature rumen pH in the neutral range of 6-7.

That pH of 6 to 7 is critical, because on transfer to the abomasum, the same bugs die in the pH<2 environment, releasing essential amino acids for the calf's growth. This is why calves on BioCalf appear healthier – because they are. The ammonia to amino acid pathway is a net contribution of energy for the calf.

DIGESTIVE SYSTEM



WHEN IT GOES WRONG

When rumen pH drops below 5 plant-based nitrogen is no longer consumed by microflora to build amino acids, rather it is directly absorbed to blood as ammonia, converted to ureic acid by the liver, and excreted.

This is a net energy drain on the calf. On top of that, the rumen acidifies, thus killing beneficial organisms and allowing pathogenic organisms to thrive – and seriously compromising the calf's health.

YUCCA IS A TRUMP CARD

BioCalf includes a plant extract derived from *Yucca schidigera*, which is native to the deserts in south-eastern California, Baja California, New Mexico, southern Nevada and Arizona. Yucca has been used for centuries, and in US cattle production for more than 30 years. It is in no other product on the Australian market.

Yucca contains naturally occurring saponins, which help bind protozoal pathogens such as *Coccidia* and *Cryptosporidium*. It also includes naturally occurring anti-microbials and anti-oxidants with complex properties that are still being researched.

Yucca leads to higher microbial yields through rumen nitrogen uptake. It carries a US GRAS (Generally Regarded As Safe) status, and is FDA-approved for use in humans.

It also cost-effective, safer and more consumer-friendly than synthetic compounds.



Yucca plant extract has been used in US cattle production for more than three decades.



BIOCALF – ACTIVE INGREDIENTS

Host-specific micro-encapsulated probiotic bacteria:

- **Host-specific bacteria** have specific key receptor sites for each host species that allow for more efficient attaching to the epithelium in the small intestine.
- **Micro-encapsulation** ensures passage of the bacteria through the rumen to the lower GI tract.

Bacillus Subtilis:

- *Bacillus subtilis* is a very hardy spore bacteria that has been extensively studied on a genetic and functional level.
- There are several probiotic products in the pharmaceutical and agricultural markets that use this powerful probiotic, and it is well-known for its efficacy.



Active live yeast:

- The live yeast formulated into BioCalf – *Saccharomyces cerevisiae* (SC) – has been reported to have positive effects both directly and indirectly on the immune system. Its subsequent biomarkers helps ease the impact of stress and disease.
- SC has also been reported to simultaneously enhance growth and performance because of increased dry matter intake and the daily weight gain resulting from that.
- It has also been shown to be a very strong rumen control agent – allowing the removal of antibiotic-based rumen control agents.
- SC also contains B vitamins, amino acids, minerals and vitamins

Yucca Schidigera

Ingestion of *Yucca Schidigera* allows for increased flow of microbial protein from the rumen, Bacterial Methanogens, associated with the protozoa may also decrease, providing more energy for growth.