

ProfeLAC[®] FUSION

Whole Milk Booster

“For Accelerated Lean Growth”



ProfeLAC FUSION is recommended as a **Whole Milk Booster** for calves from two (2) days of age at which stage the calf will have received optimum benefit from first colostrum (10% of bodyweight within the first 12 hours of birth) – an essential start to life.

ProfeLAC FUSION is NOT a milk replacer and cannot be fed as a sole source of liquid feed. This whole milk booster has been designed to complement whole or transition milk at a specific inclusion rate to drive accelerated, lean growth for those producers who desire higher growth targets in the first 3 months of life.

ProfeLAC FUSION is a high-protein, low-fat formula blended from selected dairy ingredients and nutritional additives and does NOT contain Tallow or any Restricted Animal Materials.

This Whole Milk Booster contains **BioPAK[®] FUSION**, a specific blend of amino acids, oligosaccharides, nucleotides, acidifiers, essential vitamins (including B-group) and trace minerals to meet the specific needs of accelerated lean growth; and botanical extracts as an aid to digestion and gut health.

FEEDING FOR ACCELERATED LEAN GROWTH:

Successful calf rearing is judged by:

- 1) percent survival to weaning and beyond, and
- 2) growth rates of the calves.

Accelerated growth rates of dairy replacements ultimately affects the onset of puberty which affects fertility, in-calf rates, and the age at first calving, as well as increased milk production in the first lactation.

Heifers on conventional and restricted milk feeding programs do not achieve their genetic potential for growth. Calf growth rates can exceed 1kg per day when given ad-lib access to milk and “accelerated growth” is in fact biologically normal growth (Drackely 2003).

Work by Mike Van Amburgh and others (Daiz et al 2001; Tikofsky et al.; 2001; Bartlett, 2001) have shown that these rates can be achieved with high-protein milk replacers and liquid milk.

However, feeding more whole milk does not deliver lean growth. University research shows that a high fat liquid milk diet will lead to excessive fattening and no improvement in body weight or protein gain.

Crude Protein (CP) is not a reliable indicator of protein quality in milk replacer or starter feeds. Akey research shows that supplementing the milk feed with amino acids led to a dramatic improvement on bodyweight gain. Improving the amino acid profile in the milk feed will improve lean growth outcomes.

Lean growth refers to daily gain that result in measurable increases in frame size with greater protein accretion, rather than weight gain with excessive fat deposition.

Calves fed high-protein, low-fat milk diets are visibly leaner (i.e. taller), wider and longer framed than their conventional whole milk fed pen mates.

Australian data generated by SBScius replicated AKEY daily gain results but also showed that FUSION fed calves had better daily gain after 7 weeks than their conventional, whole milk fed pen mates.

The principles behind accelerated rearing strategies are now well established in the literature.

The benefits of these programs are:

- Better and leaner gains in the liquid-feeding phase
- Improved appetite as evidenced by improved ADG post weaning
- Larger framed replacement heifers, at an earlier age
- Improved fertility at joining
- Higher body weight at calving
- Calving earlier than conventional feeding programs
- Improved milk production in first and subsequent lactations

When feeding more whole milk we need to reduce the fat percentage since high fat reduces starter intake and results in excessive fat deposition in the body and its organs (e.g. liver).

To accelerate lean growth we need to supplement the liquid feed with amino acids and fatty acids to facilitate more structural growth.

ProfeLAC FUSION is a value-added milk feeding program that delivers specific fatty acids, specific amino acids, milk protein, and selected additives to convert whole, transition or pasteurised milk into an optimum growth formula for calves.

Benefits of the **ProfeLAC FUSION** program are:

- Greater gain pre and post weaning
- More structural growth (larger frames) sooner
- Greater appetites post weaning
- Cost effective - per kg of daily (lean) gain

Lean growth gains in the milk feeding phase can be continued in the pre and post weaning phase by feeding calves a solid starter feed designed for lean growth. Lean growth from starter feeds requires more than just crude protein and sufficient energy.

Consult your servicing nutritionist or ProviCo for more information on starter feeds formulated to optimise lean growth in rapidly growing calves.

MIXING INSTRUCTIONS:

The mixing rate for **full-strength FUSION** milk must always be in the ratio of **75g of ProfeLAC FUSION added to 1L of whole milk**. Various mixing volumes using this ratio are provided in Table 1 (below) for ease of mixing.

Kg FUSION	0.3	1.5	7.5	15	(1 bag) 20
Added to milk L	4	20	100	200	266
Total L made	4.3	21.5	107.5	215	286
DM %	18.6%	18.6%	18.6%	18.6%	18.6%

Add the required quantity of **ProfeLAC FUSION** powder to the required volume of whole, transition or pasteurised milk and stir thoroughly until dissolved.

ProfeLAC FUSION is an easy-mixing powder and is best mixed at warm temperatures. Powder mixing at lower temperatures may take a little more time. Gentle paddle or whisk actions are best for powder mixing. Avoid high-speed mechanical devices that generate an air vortex down the shaft of the stirring device.

DIRECTIONS FOR USE:

ProfeLAC FUSION is an **easy-to-mix** milk booster designed for accelerated lean and structural growth.

Targeted Growth Rates vary from one farm to another which in turn determines Dry Matter Intake (DMI) from the liquid milk feed.

Table 2 (below) lists the feeding rate (in litres) based on mixing directions provided in Table 1 (above) and expected Average Daily Gain (ADG) from **FUSION** constituted milk under thermo-neutral conditions in healthy calves.

FUSION milk/day	DMI g	DM %	ADG g
3.0 L	558	18.6%	362
3.5 L	651	18.6%	497
4.0 L	744	18.6%	627
4.5 L	837	18.6%	752
5.0 L	930	18.6%	872

For accelerated lean growth programs in larger breeds, ProviCo recommends feeding 4.5L of **FUSION** constituted milk daily to enable ~750g of ADG from the liquid milk feed. Table 2 lists daily feeding levels to achieve different ADG targets.

FEEDING PROTOCOL:

- **Day 1: First Colostrum Only** – target 10% BWT within 6-12 hrs.
- **Days 2-3: Colostrum Feeding** – 10% of BWT daily over 2 feeds.
- **Days 4-6: Feed half-strength FUSION milk** (35g/L milk).
- **Day 6 - weaning:** Feed **full-strength FUSION milk** (75g/L milk).
- **Weaning:** Implement Gradual Weaning to avoid weight checks.

Post Colostrum Feeding: For best results, feed **half-strength FUSION** milk for 3 days before switching to **full-strength FUSION** milk. This precautionary transition step ensures all calves make the adjustment to **full-strength FUSION** milk without gastric discomfort.

Based on 4.5L daily **FUSION** feeding program one 20kg bag of **ProfeLAC FUSION** will supply 63 days of liquid feed.

WITHHOLDING PERIODS - NIL

ProfeLac FUSION is developed by and manufactured for:



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ProfeLAC FUSION CALF REARING PROGRAM:

1. **Bio-Security** - Calf disease prevention starts with good hygiene and disinfection management to prevent and control the spread of infection. Thoroughly clean and disinfect pens, sheds and shelters with **VirKon S** (diluted 1:100 with water) between batches. Clean and disinfect calfeterias, teats, water and feed troughs between feeds with **VirKon S** (1:100 dilution). Maintain pen/shed hygiene with a weekly application of **VirKon S** or **NaturClean** – ultra-absorbent powder.
2. **Colostrum Feeding** - Within the first 6-12 hours of life, calves must receive 10% of their body weight of first colostrum (larger breeds require 4-5L - smaller breeds require 2-3L). Ideally tube-feed 4L (2L in smaller breeds) straight after birth or feed half the volume straight away and the remainder within 12 hours. Continue to feed 1.5-2.5L every twelve hours for the first three days of life.
3. Weak or "At Risk" calves that won't suckle will benefit from additional energy. Administer 15mL of **ProfeSTART Energy Plus PASTE** on consecutive days to boost energy levels and aid appetite.
4. After 24 hours of life, administer 5mL of **ProfeSTART PRO-Biotic GEL** to establish intestinal microflora in newborn calves.
5. **Post Colostrum Feeding** - Choose a feeding rate that meets daily gain objectives. Commence with 3 days of **half-strength FUSION** milk before switching to **full-strength FUSION** milk for the remainder of milk feeding.
6. For coccidia prevention and control, supplement daily milk with **FortiMILK** - select the formulation that best suits your calf feeding system.
7. If scours or calf morbidity occurs offer **Bovelyte**, to replace electrolytes and reverse dehydration, in between milk feeds for 2 days. If scours persist beyond 2 days - seek veterinary assistance.
If antibiotic treatments are prescribed, administer **ProfeSTART PRO-Biotic GEL** or add **ProfeSTART PRO-Biotic POWDER** to the milk after treatment to repopulate the gut and to aid intestinal microbial balance.
8. Calves should be fed warm liquid feed during the first 3 weeks of life. Once daily feeding can be introduced from 14 days of age. Liquid feed can be increased in cold weather to maintain calf health and welfare. For every 5°C drop in temperature, feed an extra 0.25L/calf/day of **FUSION** milk.
9. Fresh and good quality solid feed (**calf starter feed**) or muesli can be fed ad lib from day 4 of life to aid rapid development of the rumen wall epithelium. Choose a calf starter feed that is formulated to promote lean structural growth. Seek Nutritionist advice.
10. Calves should be allowed access to some straw or a measured amount of hay (eg via hay feeder). Ensure the quantity of straw/hay provided or consumed does not interfere with calf starter feed intake.
11. Calves must have access to fresh, clean water at all times to maintain hydration status and to stimulate calf starter feed intake.
12. Good quality forage (pasture/hay) should be available free choice to the calf when calf starter feed intake exceeds 500g/day (individual pens) or 800g/day (group housing). Introduction of roughage at this point enables enlargement of the rumen.
13. **Weaning** - Calves can be weaned when consumption of calf starter feed reaches or exceeds 1kg/day over 3 consecutive days.
Abrupt Weaning - reduce milk intake by 50% and feed once daily for one whole week then stop milk feeding altogether.
Gradual Weaning - reduce daily milk intake by 0.5-1.0L for week one then reduce milk intake by another 0.5-1.0L for week two, and so on until milk feeding is finished.
To avoid weight checks, implement gradual weaning and ensure access to calf starter feed for at least 3 weeks post weaning.