

## Lactoferrin is identified in imunopro® at elevated levels.

### Lactoferrin – research findings

- Plays a vital role in innate defences
- Powerful iron binding antibacterial properties
- 2017 trial: Supplementation to scouring calves results
- Reduction in severity of episodes
- 50% reduction in mortality at 120 days\*\*

\*\*Habing et al. (2017, J.Dairy Sci. 100:3940-3948)

The higher levels of bovine milk oligosaccharides found in imunopro® are an important food source for positive bacteria in the gut.

## We formulate for performance

- We take imunopro® and then balance the proteins, fats and sugars which are specifically required for the needs of the calf.

- We ensure the right amino acid profile to drive a **targeted growth level**.

- We add **butyrate** to fill the fatty acid gap left behind by vegetable oils.

Butyrate is very valuable to the calf and it has been shown to:

- Drive gut blood flow and villi growth
- Promote water absorption
- Stimulate enzyme secretion

...therefore improving digestive performance.

## Health supplements

As part of creating the most performance formulated products available, we have added two additional ingredients together with selected vitamins and minerals to enhance with new range of milk formulas.



### BUTYRATE

#### Benefits

- Stimulates blood flow and villi growth
- Promotes water absorption
- Increases enzyme secretion
- Contains anti-microbial properties
- Recent research suggests that Butyrate, a known energy source, is particularly beneficial in improving gut health



### NUTRY-LYST™

#### Energy uptake

##### Stevia

- Drives GLP-2 production
- Increases glucose absorption
- Improves gut performance

##### Structure

##### Eugenol, Capsicum, Stevia

- Increases mucus production
- Improves villi height

#### Immunity

##### Capsicum, Anethol

- Increases B- and T-cells
- Reduces inflammatory response

##### Benefits

- Improves gut performance
- Improves nutrient absorption
- Decreases risk of diarrhoea



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## When you need high performance

- The considered solution for large herds
- Developed for growth
- Very high imunopro® content
- Nutry-Lyst health package
- Very high leucine level



\*Based on recommended feeding rates with access to ad lib starter feed and water




DESIGNED TO DRIVE 900G GROWTH PER DAY\*

Experts in young animal nutrition



# BLOSSOM<sup>®</sup>

HI-SPEC

Growth target per day	900g
imunopro <sup>®</sup>	★★★★
<b>P</b> Protein	25%
<b>F</b> Fat	17%
<b>S</b> Sugar	46%
Supplements	 NUTRY-LYST <sup>™</sup> BUTYRATE
Leucine % of total formula	2.28
Lysine % of total formula	2.09
Methionine % of total formula	0.78
Energy Mj ME/kg DM	19.6
Mixing rate	150g/L

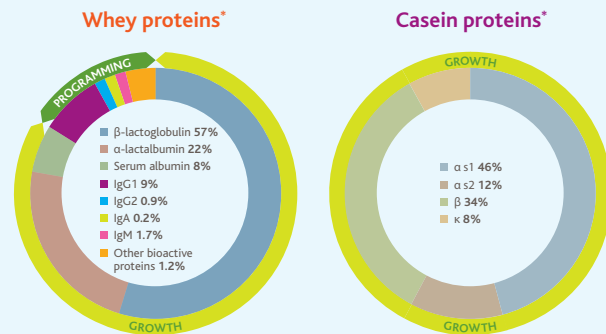
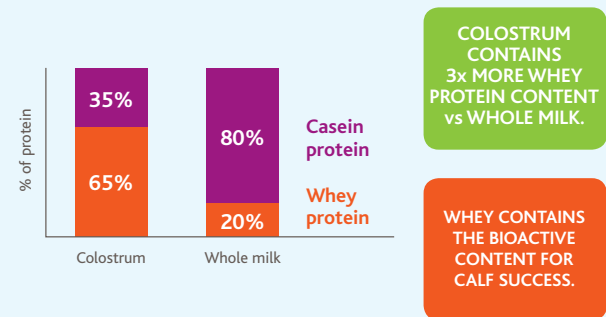
- Unique **imunopro<sup>®</sup>** - capturing the magic of milk and giving the calf the best possible start
- Unique liquid blending to capture flavour, mixability, consistency and essential nutrients
- Formulated for the best performance

## We take the magic of milk

The magic of milk is found in the whey. Volac take up to 50% of all the liquid whey which is produced in the UK and concentrate its goodness for the benefit of the calf.

The majority of protein found in natural cow colostrum is made up of whey protein.

## Whey protein – fundamental for calf programming



- The special components in whey are used to programme the calf for success - in terms of health, the immune system's pathogen control and speed of development.
- We concentrate the components found in milk proteins, fats and sugars and use them as a base for our milk formulas - we call this base **imunopro<sup>®</sup>**

\*Farrell et al. (2004, J. Dairy Sci. 87: 1641-1674) and other sources

# IMUNOPRO<sup>®</sup>

our unique and special milk complex

## Protein for health\*

As a percent of total protein, Volac's **imunopro<sup>®</sup>** contains 3 x more immunoglobulins than whole milk, skim milk powder and whey powder!

	Milk	Skim milk powder	Whey powder	imunopro <sup>®</sup>
IgG %	<1.8	<0.5	<1.5	>4.5

% OF CRUDE PROTEIN

## Amino acids for growth & development\*

**imunopro<sup>®</sup>** contains more Lysine & Leucine than whole milk skim and whey. Lysine is a vital amino acid for growth and Leucine is critical in driving the rate of muscle synthesis.

	Milk	Skim milk powder	Whey powder	imunopro <sup>®</sup>
Lysine %	8.1	7.5	7.8	9.4
Leucine %	9.7	9.6	8.6	11.0

% OF AMINO ACID IN CRUDE PROTEIN

Leucine is also the reason that whey is the protein source of choice for pro athletes!

\*Average analytical data of ingredient after processing and drying.