



## RESEARCH SUMMARY

# Precision Start - 3 Week Milk Replacer

A trial was conducted at the Mapleview Agri Future Performance Research Center to evaluate a targeted approach to feeding different milk replacer formulations during the first three weeks of life. Calves are particularly susceptible to diseases such as diarrhea during this early period, making nutritional strategies crucial for their health and development.

The objective of this trial was to assess the impact of a specialized milk replacer with higher energy content (24% fat), lower osmolarity, and ingredients with increased naturally occurring lactoferrin, along with functional proteins—supplemented with or without IMMUNOLIFE | 200 colostrum. This was compared to a control milk replacer containing 26% crude protein (CP), 17% fat, and all-milk proteins. Recognizing that higher fat levels can suppress starter grain intake later in life, the targeted milk replacers were fed for the first 21 days. After this period, all calves were transitioned to a high-quality 26% CP, 17% fat formulation to encourage starter grain consumption, supporting optimal growth and rumen development. This research suggests that a staged nutritional approach, tailored to different phases of a calf’s life, may be the most effective strategy to enhance health, improve performance, and maximize growth potential.

### METHODOLOGY

The primary objective of this study was to evaluate the effects of different milk replacer compositions on calf health and growth during the first 28 days after arrival at the Mapleview Future Performance Research Center. Calves were housed individually and fed milk twice daily. Solid feed and water intake were provided ad-libitum and body weights were recorded weekly. Health metrics such as fecal consistency and respiratory symptoms were monitored twice daily.

#### Specifically, three feeding programs were assessed:

- o Control: 26% protein and 17% fat for the full 28-day period
- o Precision Start + IMMUNOLIFE | 200: 26% protein and 24% fat with 5% functional protein and 35 g of IMMUNOLIFE | 200 colostrum per day for the first 21 days, followed by the CON formulation from days 21 to 28.
- o Precision Start : 26% protein and 24% fat with 5% functional protein for the first 21 days, followed by the CON formulation from days 21 to 28.

#### Fecal scores were reported twice daily:

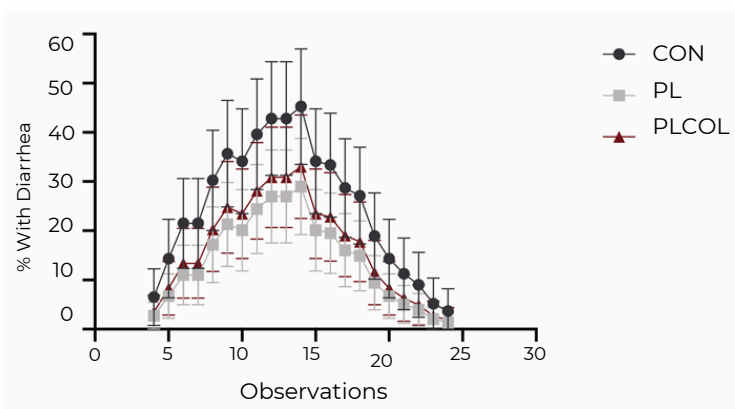
Score 0: Normal    Score 1: Soft and spreads slightly    Score 2: Runny and spreads easily    Score 3: Watery and separates  
A fecal score of 2 or 3 was considered to be abnormal.

#### DAILY MILK REPLACER FEEDING RATE

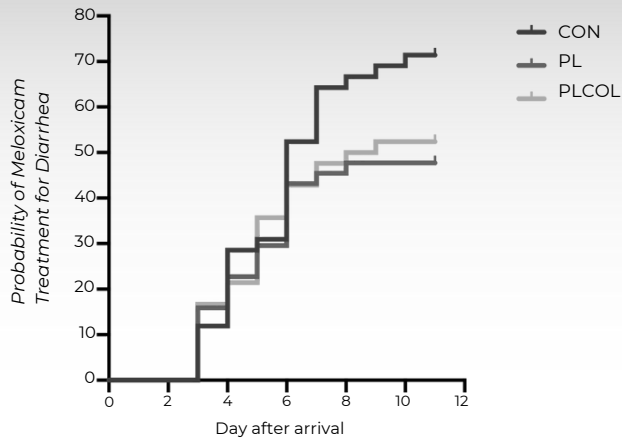
**DAY 0-13**  
650g- 5L

**DAYS 14-20**  
780g-6L

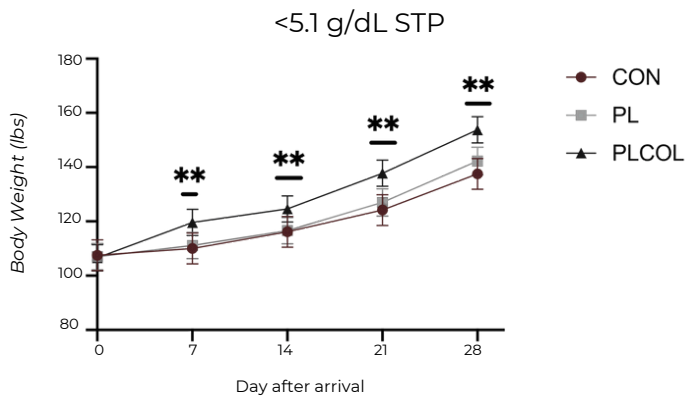
**DAY 21-28**  
1040g-8L



Precision Start experienced less diarrhea ( $P = 0.02$ ) and Precision Start + IMMUNOLIFE | 200 tended to have lower odds ( $P = 0.08$ ) of diarrhea over all the observations when compared to CON.



On the onset of a fecal score of 2, calves were treated using fluid therapy (Truvitalyte), if calves reached a fecal score of 3, an NSAID (Oral Meloxicam) was administered. When assessing the number of calves that required treatment, the Precision Start group tended to have a lower odds of requiring treatment with NSAID (P=0.09)



When assessing body weights between the treatment groups, calves in the Precision Start + IMMUNOLIFE | 200 group with STP < 5.1 g/dL (failed transfer of passive immunity) were 9.6 lbs (P = 0.01), 8.5 lbs (P = 0.03), 13.6 lbs (P < 0.001), and 16.2 lbs (P < 0.001) heavier at days 7, 14, 21, and 28 after arrival, respectively, compared to CON calves in the same category.

## TRIAL CONCLUSION

The first three weeks of a calf's life can be a stressful period with an increased risk of diarrhea. To address these challenges, Mapleview has developed a specifically formulated milk replacer designed to support calf health during this critical stage.

### PRECISION START INCORPORATES:

- High energy, with readily available fatty acids to support early growth and development.
- Naturally occurring lactoferrin, a peptide with demonstrated antibacterial properties.
- Functional proteins, providing bovine-specific IgG and naturally occurring antibodies.
- High-quality ingredients selected for their lower osmolarity to support digestive health.
- Premium casein-based milk proteins to optimize nutrient absorption.

By combining these proven technologies into a targeted milk replacer for the early weeks of life, Precision Start has been shown to **reduce the incidence of diarrhea and improve overall calf health**. Additionally, when supplementing 35g per day of IMMUNOLIFE | 200 alongside Precision Start, further benefits were observed, particularly in **supporting weight gain in calves experiencing failure of passive transfer**. By reducing diarrhea and promoting overall health, calves are less likely to experience lifelong and costly performance setbacks, such as lower milk production, delayed breeding, and increased age at first calving.