# BUILD A BETTER HEIFER



## SUCCESSFUL PASSIVE TRANSFER

## Why is successful passive transfer so important when feeding **COLOSTRUM**?

The goal of feeding colostrum is to achieve successful passive transfer which occurs when enough antibodies from quality maternal colostrum or colostrum replacer are absorbed into the bloodstream of the calf. This enhances the calf's opportunity for a healthy start, can improve growth rates and feed efficiency, decrease age at first calving, and increase first and second lactation productivity.

### What is the **SOLUTION**?

Providing a newborn calf with quality colostrum as soon as possible (6 hours or more) is optimal to achieve successful passive transfer. As soon as a calf is born, the ability to absorb colostrum antibodies (IgGs) begins to decline at a rapid rate.

# Simple. Safe. Scientifically-Proven. FIRST DAY FORMULA®

First Day Formula<sup>®</sup> is derived from 100 percent dried bovine colostrum.

#### SIMPLE.

Open package. Mix. Feed.

#### SAFE

Heat processed.
Sanitary packaging.
Immediate mixing and feeding reduce the potential for pathogenic contamination.
Tested-free of disease-causing pathogens.

### **SCIENTIFICALLY-PROVEN**

299/300 calves fed First Day Formula\* CR had virtually 100 percent successful passive transfer (99.9966 percent)<sup>1</sup>.

#### **FORMULATIONS AVAILABLE:**

First Day Formula® CR Replacer 150 IgG 500 gram single-dose package 20 lb. pail

First Day Formula® CR Deluxe Replacer 150 IgG Contains First Defense Technology® 500 gram single-dose package 20 lb. pail

First Day Formula® CS Supplement 60 IgG 200 gram single-dose package

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## BUILD A BETTER HEIFER



### **SUCCESSFUL PASSIVE TRANSFER**

#### Why is successful passive transfer important?

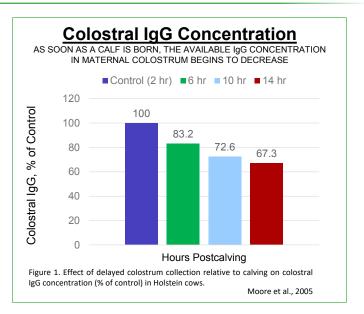
- Reduced treatment and mortality rates<sup>1</sup>
- Improved growth rates and feed efficiency<sup>2</sup>
- Decreased age at first calving<sup>3</sup>
- Increased first and second lactation milk<sup>4</sup>

Quality colostrum is one of the most important factors in getting a calf off to a healthy start. The goal of feeding colostrum is to achieve successful passive transfer which occurs when the antibodies from quality maternal colostrum or colostrum replacer are absorbed into the bloodstream of the calf. Recent research in one of the largest colostrum studies to date demonstrated virtually 100 percent successful passive transfer when calves were fed First Day Formula® CR colostrum replacer (150 grams of IgG per feeding) or 190 IgGs of maternal colostrum<sup>5</sup>.

Immediate colostrum collection post-calving is key to maximizing quality. IgG (Immunoglobulin G) concentration in maternal colostrum steadily declines as hours pass. Experts suggest harvesting colostrum within four hours of calving to obtain maximum quality. Figure 1.

Just as proper timing of colostrum collection is critical, Apparent Efficiency of Absorption (AEA), the calf's ability to transfer immunoglobulins from the digestive tract to the bloodstream, reduces drastically in mere hours. This transfer decreases after birth as measured by apparent efficiency of absorption (AEA%) Figure 2.





Advantages when feeding First Day Formula® maternal colostrum replacer:

- Quality Same amount of IgG fed to each calf every time. \*Research proven.
- Quantity Not dependent upon what the cow provides. Every calf receives the same amount.
- Quickness Open package. Mix. Feed.
- Cleanliness and Biosecurity No need for collection or storage. Tested free of pathogens for transmissible diseases like Johne's disease, bovine leukosis virus (BLV), mycoplasma, salmonella, and cryptosporidium.

### IgG Absorption Opportunity AS SOON AS A CALF IS BORN, THE ABILITY FOR THE CALF TO ABSORB COLOSTRUM ANTIBODIES (IgG) BEGINS TO DECREASE



1 NAHMS, Wells, 1996; 2 Fowler, 1999; Faber et al., 2005; Nocek et al., 1984; Robison et al., 1988; Faber, 2005; 3 Faber et al., 2005; 4 Lago, C. Blanc, M. Socha, A. Geiger, D. Cook, N. Silvia-del-Rio, R. Quesnell, and C. Leonardi. 2017. Efficacy of colostrum replacer versus maternal colostrum on immunological status, health, and growth of pre-weaned dairy calves. J Dairy Sci. 2018 Feb; 101(2): 1344-1354.

™First Defense Technology is a trademark of ImmuCell Corporation. ™First Defense Technology is a unique, un-denatured whey protein concentrate and refers to ImmuCell Corporation's trademarked whey protein concentrate processing method. It is not intended to imply claims of ImmuCell's USDA licensed product, First Defense®. ¹ Anim. Sci. Vol. 93, Suppl. s3/J. Dairy Sci. Vol. 98.

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