



# Dairy Details

May 2020

NORTHERN VALLEY DAIRY PRODUCTION MEDICINE CENTER

## From the beginning...

Do you ever wish that calf care was straightforward? That what works for your neighbor would work for you? Calf care seems to be an art that is unique to each farm!

Much of what affects the calf as a lactating cow occurs in the first 90 days of life. This includes birth, feeding, vaccinations, and health challenges. In fact, the birth of a calf signifies an especially important time. The feeding of colostrum alone has been shown to affect adult milk production.

First things first, colostrum! Calves, like many animals, are born with most parts of a mature immune system. However, the way the bovine placenta is made, the calf is born agammaglobulinemic, or lacking in globulins, better known as “antibodies”. Because calves are born in this naïve state, passive immunity, or antibodies acquired through colostrum are especially important. We are able to measure transfer of passive immunity in calves by checking their serum immunoglobulin (IgG) or serum total protein (STP) levels between 1 and 7 days old. The previous standard of 80% of calves achieving a 5.5 or higher is up for debate these days. With data that shows increasing concentrations of IgGs or STPs is associated with reduced morbidity risk, improved calf health performance, and greater milk production during lactation, a new evaluation system has been recommended. The new system is meant to set higher goals for calf health in the dairy industry and has 4 categories. Most of the time, our clinic uses the STP level to measure passive immunity.

Category	IgG Level (g/L)	STP Level (g/dL)	Serum Brix Level (%)	Percent of Calves in Each Category
Excellent	>25.0	>6.2	>9.4	>40
Good	18.0-24.9	5.8-6.1	8.9-9.3	30
Fair	10.0-17.9	5.1-5.7	8.1-8.8	20
Poor	<10.0	<5.1	<8.1	10

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However, if you are feeding colostrum replacer in place of maternal colostrum, the same set of numbers may not apply. Unfortunately, the many different products available differ in IgG source, amount of IgG, level of absorption, and manufacturing techniques. Some companies have measured the serum IgG/ STPs for their specific products but many haven't, making evaluation of STPs difficult. Do not be surprised to see calves fed colostrum replacer measure up to 1 point lower on the total protein scale. In addition, take care to ensure that a colostrum replacer is being used to replace maternal colostrum and not a colostrum supplement. Colostrum supplements are cheaper and meant to be fed separately in addition to maternal colostrum, but do not contain enough IgGs to provide adequate immunity alone. A colostrum replacer should contain no less than 150 g IgG. Often colostrum supplements are meant to be fed when maternal colostrum does not achieve a 22% on the Brix scale.

To wrap it up, colostrum is a key element that affects a calf in the pre-weaning period and adulthood. The above table shows a new evaluation system. However, in the interest of simplicity on the farm, I think one could use a benchmark of **75% of calves reaching 5.8 or higher**. In my experience checking total protein samples on farms, one could achieve this benchmark with at least 1 gallon of colostrum. However, it is easier to achieve if the farm follows up with a 2<sup>nd</sup> feeding of colostrum (2 quarts).

And don't forget the 5 basic Q's of colostrum:

1. Quickness – within 2 hours of birth
2. Quality – 22% or greater Brix reading for 1<sup>st</sup> feeding
3. Quantity – 1 gallon +/- 2<sup>nd</sup> feeding of 2 quarts
4. sQueaky clean – less than 10,000 cfu standard plate count and less than 100 cfu coliform count
5. Quantify – measure STP in calves 1-7 days old, at least 12/month.

Want to learn more about measuring passive transfer on your farm? Ask one of the Northern Valley veterinarians today! We would be happy to help you perform this on your farm.

Watch for more information about choosing a colostrum replacer next month!

### Are the boys ready!?

As summer approaches, so does beef breeding season! Have your bulls had their breeding soundness exams yet? Drs. Megan and Portia are looking forward to meeting the boys of summer! We offer full service BSE work ups, vaccinations, tagging, and can bring a chute to accommodate bulls.



Call today to schedule an appointment!

### Current backorder items

12CC SYRINGES  
 ALCOHOL  
 ALL GLOVES  
 BLOOD DRAW NEEDLES  
 C&D ANTITOXIN  
 CHLORHEX SCRUB, NOLVASON SCRUB  
 EXPRESS FP 10 vaccine  
 GEL CAPS  
 NOVA MAX PLUS KETONE TEST STRIPS  
 PENICILLIN  
 PIRSUE  
 SWABS  
 TRIANGLE 4, 5, & 10 vaccine  
 VETRIMYCIN 200  
 MOST ALL DISINFECTANTS (not Chlorine Dioxide)

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