

# Swift Start™ Calf & Heifer Program

by Dan Leiterman

The Crystal Creek® Swift Start™ Calf & Heifer Program is formulated on industry leading technology and the highest quality ingredients possible. Our goal is to provide the very best nutrition for your calves and heifers so you can build your future on them with confidence, knowing that they were prepared properly for your herd and will perform to their full potential. The Swift Start™ Calf & Heifer Program consists of a line of quality milk replacers, calf pellets and calf and heifer minerals.

## SWIFT START™ CALF MILK REPLACER

Proper calf nutrition is an important key in raising healthy, productive animals. (See Dr. Leiterman's article on page 3). The Swift Start™ Calf & Heifer Program begins with quality milk replacers. Two new innovative Swift Start™ Calf Milk Replacer formulations have been added to the Swift Start™ Calf & Heifer Program. The new formulations are designed for the calf raiser who insists on healthy calves, excellent performance and a common sense economic value.

**Swift Start™ Calf Milk Replacers are designed to provide:**

- Excellent calf acceptance
- Outstanding calf performance
- Smoother transition to dry feeds
- Easy mixing
- Economical feeding value



Here are some industry leading features and benefits that make Swift Start™ Calf Milk Replacers the best choice for your calves and for your bottom-line.

### Gently Processed Calf Milk Replacers:

The gentle processing of Swift Start™ Calf Milk Replacers (CMR) does not use additional heat or steam that could compromise nutrient availability like many other brands of calf milk replacer. Fats are incorporated into the milk replacer by both 'gentle processing' and spray drying to provide a more even absorption of the energy by the calf resulting in better utilization, improved gains and lower risk of scours.

### Human Grade Milk Powders:

All milk powders used in Swift Start™ CMR meet human consumption quality standards before being allowed for use in the Swift Start™ formulas, assuring the highest level of ingredient digestibility.

### High Quality Fat Formulation:

All of the supplemental fats used in Swift Start™ CMR meet human edible grade standards which results in better calf performance. A unique combination of animal fats, coconut oil and palm oil are used to form a combination of long and short chain fatty acids which mirror the fatty acid profile of whole milk, resulting in optimum fat digestibility.

### 100% Chelated Trace Mineral Fortification:

100% of the trace mineral fortification of the Swift Start™ CMR is chelated/proteinated trace minerals for improved bio-availability; unlike other brands that use sulfates and oxides that are lower in bio-availability and can interfere with other nutrient use in the diet.

### 100% Selenium Yeast Fortification:

Selenium yeast is over 90% bio-available, as compared to typical selenium sources such as sodium selenite which is less than 25% bio-available. This means improved immune support for the calf.

### Acidified Calf Milk Replacers:

The Swift Start™ Calf Milk Replacers are acidified to promote optimum stomach pH for better digestive function to help reduce the growth and colonization of pathogenic bacteria in the gut.

### Sodium Butyrate:

Swift Start™ High Gain 25/18 and Swift Start™ 21/20 CMR contain sodium butyrate, a digestion aid to better support a healthy, efficient digestive tract. This helps make transition to grains and forages smoother, assisting in earlier rumen development and improved weight gain.

### Extra Amino Acid Fortification:

Additional key amino acids are added to the Swift Start™ 18/20 calf milk replacer so that it will feed similar to a 20/20 calf milk replacer, but at a lower cost.



### THREE FORMULATIONS TO CHOOSE FROM:

There are three Swift Start™ Calf Milk Replacers to choose from based on the amount of calf milk replacer powder that will be fed per day and the desired target growth rate. Swift Start™ High Gain 25/18 and the Swift Start™ 21/20 are formulated using wheat isolates and porcine plasma. (See Figure 1). The Swift Start™ 18/20 is an all milk calf milk replacer.

Figure 1	Swift Start™ High Gain 25/18	Swift Start™ 21/20	Swift Start™ 18/20
All Milk			X
Milk/Wheat Isolate /Plasma	X	X	
CMR Powder/ Hd./ Day (lbs. powder)	Up to 2 lbs.	1 to 1.5 lbs.	1 lb.
Gentle Processed	X	X	X
Human Grade Milk Powders	X	X	X
Edible Grade Fats	X	X	X
High Levels of Liquid Fats	X	X	X
100% Chelated Trace Mineral	X	X	X
100% Selenium Yeast	X	X	X
Sodium Butyrate	X	X	
Acidified	X	X	X
Extra Amino Acids			X

Below is a summary of research trials showing the advantage of using wheat isolate and plasma formulation in calf milk replacers as compared to an all milk formulation.

#### Plasma vs. All Milk Trial Summaries:

##### Average Mortality (14 trials, 1448 calves) :

Plasma	All Milk
7%	13%

##### Scours Incidence (14 trials, 1206 calves):

Plasma
21% Lower Than All Milk

##### Average Daily Gain (12 trials, 867 calves):

Plasma
9% Higher Than All Milk

#### Plasma Plus Wheat vs. All Milk:

##### Average Daily Gain (753 calves, fed days 1 to 43):

Plasma & Wheat	All Milk
1.44 lbs. ADG	1.41 lbs. ADG

##### Serum Total Protein (TP 4.2 - 4.9):

Plasma & Wheat	All Milk
52%	51%

There is also a growing body of research that supports the addition of sodium butyrate to calf milk replacers to improve the daily rate of gain and improve rumen development. Below you will find a summary of two trials where sodium butyrate was fed.

#### Sodium Butyrate In Calf Milk Replacer (2 trials, 48 calves, fed day 1 to 42):

##### Improved Average Daily Gain:

Days 1 to 14	Days 1 to 42
+11.8 %	+4.3%

*Journal of Dairy Science, Quigley et al. 2003, 2002, 2001, 1999, 1996 (86:586, 85:413, APC, 79:1881), Arthington et al. 2002 (85:413), Morrill et al. 1995 (78:902). Fd & Ag Imm 12,311 Drew et. Al. 2000, Vitek Doppenberg, 1993, 1992, Milk Specialties, Sowinski et al. 1991, Vet Med.(A46:185) Nollet et al. 1999, Pediatric Res. Hunt et al. 2002. (51:3:370), APC/U of MN Hayes et al. 2009, Animix Wood et al. 2007, Animix Research #07-01.*

Ingredients used to formulate Swift Start™ Calf Milk Replacer have been shown to promote early rumen development by:

- Stimulating development of rumen papillae and the thickening of the rumen wall while increasing capillary development
- Providing higher levels of energy for rumen wall development
- Increasing rumen wall absorption of nutrients
- Aiding in the supply of energy to the calf
- Improving local digestive and immune defense systems

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## SWIFT START™ CALF & HEIFER PROGRAM

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What to expect when feeding Swift Start™ Calf Milk Replacer

- Higher body weight gains
- Improved feed conversion
- Improved nutrient digestibility
- Increased trypsin production
- Improved fecal quality
- Less veterinary intervention
- Lower cost of calf production

### SWIFT START™ CALF PELLETS

Swift Start™ Calf Pellets are a protein, mineral, trace mineral and vitamin supplement designed to be mixed with corn and oats to custom build a calf grain mix that will compliment the Swift Start™ Calf Milk Replacer program. There are two Swift Start™ Calf Pellet formulas available; one for organic use and another for conventional use. Both formulas provide:

- All natural proteins
- Contain no cheap fillers, no low grade proteins
- Highly fortified source of minerals, vitamins, trace minerals and selenium yeast
- Cleaned phosphorus source
- 100% polysaccharide chelates
- 100% selenium yeast
- Natural ingredients that reduce the need for a coccidiostat

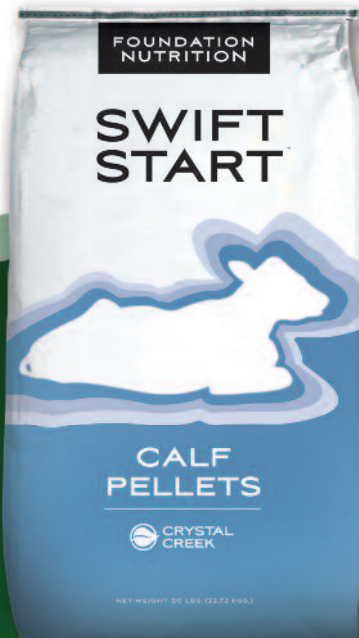
### SWIFT START™ CALF & HEIFER MINERAL

The Swift Start™ Calf & Heifer Mineral is designed to continue supporting optimum performance as the calf grows and is built to the same standards of quality as the Calf Milk Replacer and Calf Pellets. This mineral provides both macro and trace minerals, selenium, vitamins and salt and is designed specifically to meet the needs of pre-weaned, growing and breeding age heifers. The same benefits found in our Crystal Creek® Dairy Minerals, such as high quality phosphorus sources, polysaccharide complex trace mineral fortification, use of selenium yeast as the sole selenium source and high vitamin fortification levels, are found in the Swift Start™ Calf & Heifer Mineral.

The Swift Start™ family of calf and heifer products will support healthy, productive animals and will improve your bottom-line. Call Crystal Creek® and design a calf and heifer program that meets your needs.



**Swift Start™ Calf Milk Replacer** program, offering new exciting ingredient and formulation technology that will support healthier, more productive calves at a lower cost of production.



**Swift Start™ Calf Pellets** are a highly fortified pelleted supplement that can be used to formulate calf and heifer rations. Swift Start can be considered for organic use and will improve intake and enhance calf development.



**Swift Start™ Calf & Heifer Mineral** provides macro minerals, trace minerals, selenium, vitamins and salt for young calves, older calves and growing heifers.