MAXIMIZE COW PERFORMANCE™

Your decisions impact her potential.

SELECT SIRES INC.

YOUR SUCCESS *Our Passion.*

Production potential and cow performance are determining factors in an operation's profitability. Caring for cows that excel both productively and reproductively begins by implementing a strategic calf raising protocol with the goal to Build A Better Heifer®.

Maintaining proper nutrition and management practices throughout the cow's adult life-cycle are key to fulfilling the performance potential developed at an early age. In consultation with industry experts, we have developed a program focused on the changing needs of the adult dairy cow. Throughout the transition zone, lactation and dry period, along with management and environmental events, our goal is to MAXIMIZE COW PERFORMANCE™.

TRANSITION ZONE

21 DAYS PRE-CALVING

Fine-tuning during the transition phase is important because this period is highly influential in benchmarking potential milk production for the entire lactation. A successful transition period can improve milk yield for the entire lactation. The calf doubles its size in the ninth month, therefore additional nutrients are needed to sustain its growth and development. As parturition approaches, colostrum formation begins taking place and the quality and volume of colostrum determine the health of the newborn calf.

As gestation progresses the growing calf occupies more space and reduces rumen volume. The density and size of rumen papillae decrease during this phase and the microbial rumen population dramatically changes. Providing a direct fed microbial (DFM) will help maintain a high count of beneficial microbial populations to ensure cows have a rumen that is functional 24/7, so the rumen is prepared no matter when she calves.

A successful transition period can improve milk yield for the entire lactation.

CALVING

Calcium is the second most abundant mineral in milk and cows need to adjust immediately for milk calcium outflow as a new lactation begins. Calcium blood concentration starts declining at parturition and reaches the lowest levels at 12-24 hours after calving. For second and greater lactation cows, the declining concentration can include more severe drops.

75% of health disorders in dairy cattle happen in the first 30 days after calving.

Calcium is vital for muscle and nerve function and is related to skeletal muscle strength and gastro-intestinal motility. Calcium imbalance can lead to decreased dry matter intake, metabolic disorders and has also been associated with lower conception rate. The onset of each new lactation provides a challenge to maintain blood calcium concentration, thus calcium supplementation is often needed.

21 DAYS POST-CALVING

Research shows that 75 percent of health disorders such as clinical ketosis, displaced abomasum (DA), retained placenta (RP), metritis and mastitis occur in the first 30 days after calving[1]. Moving an animal from the dry pen to a lactating group puts an enormous amount of stress on her metabolic system. In addition, there are tremendous differences between a pre-fresh diet and a lactation diet. This means cows need to adapt fast. Having an adequate number of beneficial microorganisms in the rumen to help with the dietary transition is key. A healthy rumen, with adequate rumination pattern, increases bunk visits and stimulates consistent dry matter intake throughout the transition period.

LACTATION

EARLY LACTATION

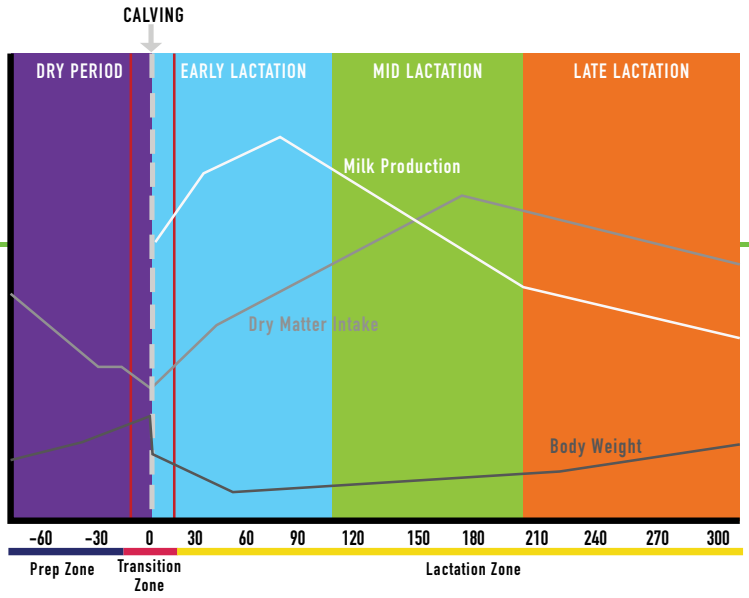
Low voluntary dry matter intake

Negative energy balance affects reproduction

Improper nutrition can negatively impact conception rate

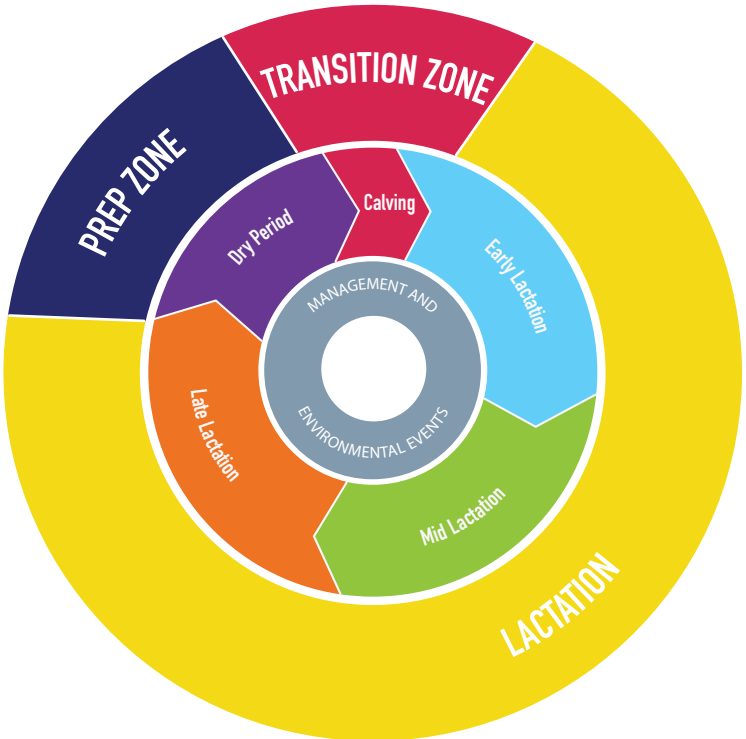
High energy demand for milk production

While the cow is achieving peak milk production, dry matter intake is lagging and she is losing weight. Typically, one extra pound of milk per day, at peak lactation, translates to an extra 200-250 pounds per cow over the entire lactation. However, one of the biggest obstacles during this time period is voluntary feed intake. After calving, it generally takes 10-12 weeks for the animal's appetite to reach its full potential and consume all the nutrients required for production. Cows need highly digestible sources of starch and fiber available at the feed bunk. During this phase, the cow's rumen needs to be 100 percent functional to provide enough energy and metabolize protein to reach a high production peak. Rumen health should be maximized to deliver a great yield of microbial protein and milkfat-producing volatile fatty acids (VFA). These VFAs are used as the building blocks for milk production.



MID LACTATION/LATE LACTATION

The energy required for milk production is less demanding within this phase. The cow has already reached peak milk and her production has started to decline. Getting the most nutrients from forage is still important as energy is required to sustain a pregnancy and to build up body condition as energy reserve for the next lactation. Young cows are still growing during this time, which also demands energy and nutrients.



PREP ZONE

DRY OFF TO 21 DAYS BEFORE CALVING

The dry period is nutritionally critical to the cow in preparation for an upcoming series of stressful events. While she is supporting a calf through the final stages of development, this time is for her to rest and reset in preparation for the demands ahead. Not only is the goal to prepare the cow for birth and lactation, but also sustain body condition to minimize the risk of physical and metabolic challenges during freshening. This phase becomes increasingly important as we near the final 21 days and enter the transition zone.

MANAGEMENT AND ENVIRONMENTAL EVENTS

Detecting issues early and taking appropriate action can help minimize dramatic economic losses and prevent additional challenges. Pockets of lower-quality feed in the bunk, heat stress through summer months, stresses from calving and the transition to a lactating diet all affect cow performance. Appropriate and quick response to stressful events can help achieve consistent lactation curves and improve expected milk yields.

OFF FEED

When cows are off feed, restoring digestion quickly and promoting feed intake is a priority. When a cow goes off feed, rumen fermentation slows and the number of beneficial microbes decreases. DFMs can be used to reestablish the beneficial microbial population and enhance the rumen environment.

FORAGE

Although a majority of producers are incorporating innoculants into their harvesting protocols, occasional instances of poor condition feed may still occur. There are nutritional solutions specifically designed for feed challenges caused by molds and their metabolites. Common signs that may be present can include: loose manure, low or erratic feed consumption, reduced milk production, elevated Somatic Cell Count (SCC) and poor reproductive performance, including weak heats, cystic cows and even abortions.

HEAT STRESS

Heat stress puts vast limitations on reproductive performance. It disrupts many early reproduction processes of follicle and embryo development, lowers pregnancy rates, compromises fetal development and reduces both detection and duration of estrus behavior. In high temperatures, as cows try to cool down their bodies, water consumption increases. While water effectively cools down the body, the increased intake leads to increased urination and results in electrolyte loss. It is important to keep cells hydrated with proper electrolyte balance.

METABOLIC DISORDERS

Although a majority of metabolic disorders occur shortly after calving, direct fed microbials and nutritional supplements can be used proactively to help maintain health and performance. Metabolic disorders such as displaced abomasum, retained placenta, ketosis, milk fever, mastitis and metritis can impose significant cost to an operation.

UDDER CARE

Promoting udder health and hygiene are imperative. The presence of environmental and contagious pathogens that cause mastitis are a threat on almost all dairy operations. Implementing stringent protocols for both udder health care and milking parlor cleaning and sanitation are effective ways to support milk quality and minimize mastitis occurrence.

Successful udder health begins with using specifically formulated solutions such as quality pre-dip to kill bacteria and clean the teat before milking. Applying a post dip provides a protective barrier on the teat end after milking and helps prevent the spread of mastitis-causing organisms. Udder cream peppermint oil liniment is an all-natural choice for softening hard and swollen udders.

Economic Impact*

Metabolic Disorders	Estimated Cost
Subclinical Hypocalcemia[2]	$125
Milk Fever[3]	$300
Lameness[4]	$178
Retained Placenta and Metritis[5]	$315
Ketosis[6]	$289

[1]LeBlanc, S. J., K. D. Lissemore, D. F. Kelton, T. F. Duffield, and K. E. Leslie. 2006. Major Advances in Disease Prevention in Dairy Cattle. J. Dairy Sci. 89:1267-1279, [2]Oetzel, 2015, [3]Guard, 1996, [4]Cha et al., 2010, [5]Guard, 2008, [6]Mc Art et al., 2015.