

SUPPLEMENT STRATEGIES

CRYSTALYX
For a competitive edge.



A regular series on cost-effective supplementation strategies, sponsored by CRYSTALYX® Brand Supplements. Results By the Barrel™

Nutrition critical in reducing post-partum interval

Consolidating your calving season to the recommended 65 days or less requires strict nutritional management. Why?

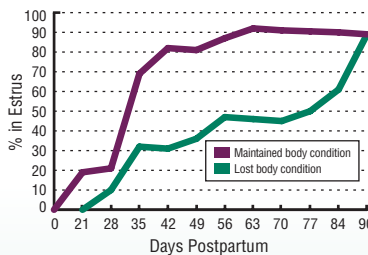
- Thin cows cycle later after calving, causing a higher chance of failure to breed. Cows should maintain or gain body condition in order to return to estrus within the target window.
- Even when thin cows do settle, they tend to do so later in the season. If a cow calves 70 days before the breeding season begins, research shows, she will conceive on the first service twice as often as herdmates calving 30 days before breeding. That delay has lingering effects into the next year.
- Cows getting less than adequate trace minerals may also be at risk. New research shows heifers consuming organic copper and zinc exhibited estrus sooner than those getting either inorganic mineral or none at all.
- Late-calving cows take 21 days of growth off your calf crop for every missed cycle. At typical rates of gain, that adds up to 40 or 50 pounds of marketable calf lost at weaning.
- Large variations in calf crop weight make marketing uniform load lots more difficult, limiting your participation in value-added marketing programs.

Effective cow nutrition is a matter of timing supplementation: Nutritional

Quick Summary

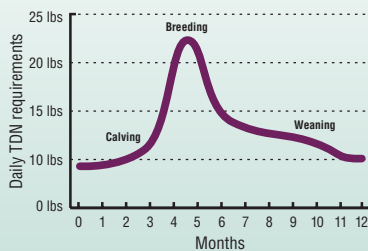
- Reducing the length of your breeding season leads to better pregnancy rates, heavier calves at weaning and a more uniform, marketable crop.
- To accomplish it, you must maintain

needs rise sharply at calving, peak at breeding and are the lowest at the beginning of the last trimester.



Thin cows, delayed heats. Numerous studies demonstrate a direct connection between body condition score at weaning and return to estrus. Keeping cows in good condition in the third trimester and after calving is critical to getting them rebred within the target breeding season.

Source: Rutter and Randel (1984) Journal of Animal Science 58:265-74.



Time supplementation. Cow supplementation can be cost-effective if you time it to coincide with the cow's nutritional demands and forage supplies.

Source: Based on NRC Nutrient Requirements of Beef Cattle, 2000.

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- or add condition to cows after calving.
- Keeping cows in condition requires well-timed supplementation to optimize forage digestion and utilization.

ECONOMIC IMPACT

Achieve—and maintain—a consolidated calving season, and several economically important results follow:

- Calves on average weigh more at weaning.
- Calves are more uniform. Calves born 60 days apart can differ by 120 pounds at weaning. In a 120-day season, the difference can be 240 pounds.
- First-service conception rates increase. Fewer open cows spreads cowherd costs across more calves.
- Labor demands at calving, weaning and breeding (if AI'ing) become more concentrated, more predictable.

Calving date affects weaning weight

Breeding season (days)	Avg. calving date	Avg. age (days)	Avg. weaning weight (lbs.)	Difference (lbs.)
60	Jan. 30	270	634	
90	Feb. 15	255	603	-31
120	Mar. 1	240	572	-31

Assumptions: Average cow weaning 500 pounds of calf. Calf birth weight of 80 pounds and average daily gain of 2.05 pounds (500 lb. wng. wt. - 80 lb. birth wt. = 420 lb. gain). Breeding season begins Mar. 20. Weaning date is Oct. 1. Source: Clemson, 1995.

Increased conception rates increase income (\$/100 cow herd)

Change in first service conception rate	Breeding season length, days	45	70	120
50 to 60%		\$1875	\$1059	\$621
60 to 70%		\$673	\$531	\$1064
70 to 80%		\$448	\$701	\$425
50% to 80%		\$2989	\$2291	\$2110

Source: University of Nebraska, 1990.

Bulls, too

One researcher estimates that up to 25 percent of all beef bulls are sub-optimum breeders, costing an estimated \$6 to \$20 per cow... up to \$180 per cow if they're sterile.

Studies show that underfeeding bulls during development causes reduced sperm-cell count, without reducing libido. Other work shows that properly fed bulls recover full sperm count within a week of service; underfed bulls, 3.5 weeks.

RESULTS BY THE BARREL™

The all-natural, 27 percent protein in CRYSTALYX® Natural 27™ or the highly bioavailable organic form of important trace minerals in CRYSTALYX® Crystal-Phos®, offers you breeding cattle supplement options that provide the extra boost cows need to breed back quickly and profitably.



- Either product makes an ideal supplement during late gestation and the breeding season to supply necessary nutrients for high conception rates.
- Both offer high levels of important trace minerals at low daily consumption rates, to help support disease resistance and reproductive efficiency.
- Naturally self-limiting, low-moisture blocks can't be bitten, chewed and wasted. Impervious to wind and weather. No waste means an economical daily cost per head.