UNIVERSITY OF MISSOURI RESEARCH SHOWS **CLOSE-UP PELLET®** INCREASES FEED INTAKE AND MILK PRODUCTION

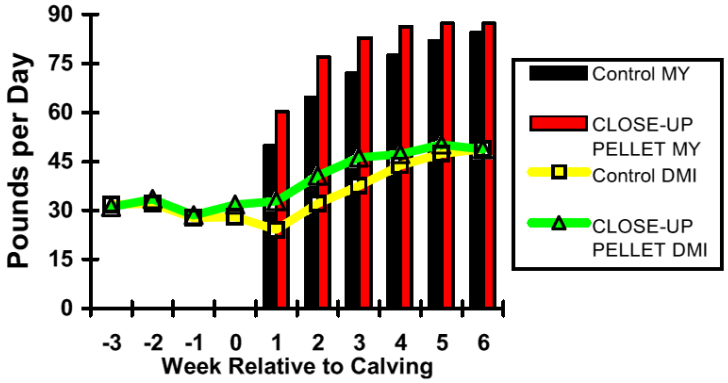
Research conducted at the University of Missouri by Dr. Jim Spain shows cows fed **CLOSE-UP PELLET** as part of an effective close-up feeding program have greater feed intake and higher milk production, as well as improved health, calcium status, and energy balance.

Twenty-six mature Holstein cows were fed a control TMR (DCAD = +20 mEq/100 g DM) or a TMR plus **CLOSE-UP PELLET** (DCAD = - 10 mEq/100 g DM), beginning 21 days before expected day of calving, through freshening. After calving, all cows were fed standard lactation diets for the first 42 days of lactation.

- ✓ **CLOSE-UP PELLET REDUCED URINE pH**: Cows fed CLOSE-UP PELLET had lower pre-fresh urine pH compared with control cows (6.78 versus 8.29; P < 0.0001).

- ✓ **CLOSE-UP PELLET INCREASED DRY MATTER INTAKE**: Average daily DMI was greater (P<.10) during the first four weeks after calving in cows fed **CLOSE-UP PELLET** (Control = 34.4 lbs; **CLOSE-UP PELLET** = 41.7 lbs.). Dry matter intake during the pre-fresh period was not reduced by feeding **CLOSE-UP PELLET**.

Effect of CLOSE-UP PELLET on Intake (DMI) and Milk Production (MY)



- ✓ **CLOSE-UP PELLET INCREASED MILK PRODUCTION**: Average daily milk production over the first 6 weeks of lactation was 11.8% higher (8.5 lbs./d) in cows fed **CLOSE-UP PELLET** (71.7 lbs./d and 80.2 lbs./d for control and **CLOSE-UP PELLET** groups, respectively). There were no differences in milk fat and protein content, or somatic cell counts.

- ✓ **CLOSE-UP PELLET IMPROVED FRESH COW HEALTH:** Cows fed **CLOSE-UP PELLET** prior to calving experienced dramatically lower incidence of metabolic diseases after freshening, even though many cows calved during periods of extreme heat stress.

Effect of Feeding CLOSE-UP PELLET on Disease Incidence

Disease	Control (Diagnosed Cases/Total)	CLOSE-UP PELLET (Diagnosed Cases/Total)
Milk Fever	3/13	0/13
Retained Placenta	8/13	4/13
Metritis	7/13	1/13
Ketosis	4/13	2/13
Displaced Abomasum	3/13	2/13

- ✓ **CLOSE-UP PELLET IMPROVED CALCIUM AND ENERGY STATUS**: Cows fed CLOSE-UP PELLET had higher serum Ca at d 3, 7 and 14, indicating improved Ca status of fresh cows. Overall serum NEFA was lower for cows fed **CLOSE-UP PELLET** (292 versus 402 µEq/l; P < 0.01), indicating improved energy status, which has been associated with better reproductive performance and reduced risk of ketosis.

This research from the University of Missouri shows **CLOSE-UP PELLET** increases feed intake and milk production, and improves health as well as calcium and energy status of fresh cows.

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