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MONITOR DRY COWS' FEED INTAKE

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Having dry cows too heavy or gaining too much weight in the dry period can lead to calving difficulties and metabolic disorders after calving. Fat cows also reduce their dry matter intake at calving. Poor feed intake in transition cows can have two related effects:

(1) less than ideal nutrient intake and
(2) low gut fill.

Feed intake in the final five to ten days before calving can be 35 percent less than early in the dry period. This happens just when the requirement for fetal growth is highest and the cow is gearing up to produce colostrum. Fetal growth and colostrum production (combined) demand high percentages of the cow's nutrient intake: 88 percent of energy, 18 percent of protein and 90 percent of calcium.

Research suggests that the dry matter intake of cows with a body condition score more than 3.75 can be reduced by 1.5 to 2.0 percent. The table shows the nutrient intakes in a properly-conditioned, close-up dry cow; requirements for fetal growth in late pregnancy; nutrient drain for colostrum production; and the reduction in nutrient intake with fat dry cows.

Nutrient intake (DM basis) and requirements of the close-up dry cow.[1]

Nutrient	Nutrient Intake @ 3.5 BCS	Fetal Requirement	Colostrum Production	Nutrient Intake @ 4.5 BCS	% nutrient intake reduction (4.5 to 3.5 BCS)
Mcal energy	**13.4**	.82	11	12.7	5.0
Protein, g	**1382**	117	140	1303	5.7
Calcium, g	**37.2**	10	23	35.1	5.7
Phosphorus, g	**22.9**	5	9	21.6	5.7

[1]Calculated on average 1.7% of intake as intake reduction factor.

Rumen volume can be reduced as much as one-third in late gestation, primarily due to the space required by the growing uterus. After calving, the uterus contracts and leaves a large void in the abdomen. This is a period of high risk for displaced abomasum if the rumen and abomasum do not return to normal position and size. Other significant changes in the gut may include a 50 percent reduction in absorption capacity from the rumen papillae. Dry cows switched directly onto a high energy lactation ration are at a high risk of developing rumen acidosis.

Quality feed presentation and proper ration balancing are critical for encouraging good nutrition around the time of calving. If not properly managed, the dry cow's health can be compromised and production inhibited in the upcoming lactation.