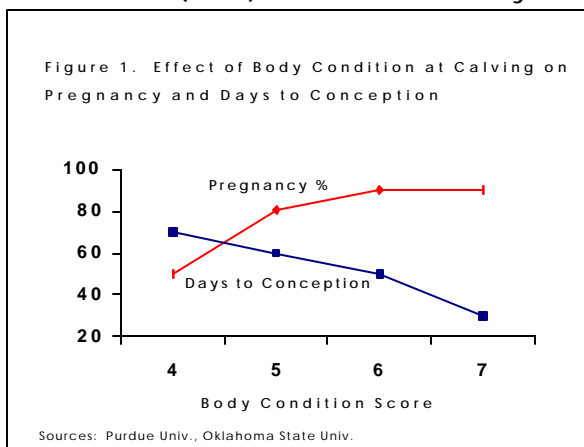


# Winter Gestation Diets For Beef Cows: Re-conditioning, Cold Stress, Rumensin

## Re-conditioning Cows

The use of inexpensive, low quality forages with minimal supplementation of concentrates is common and practical for gestating beef cows during the winter months. After weaning calves in the fall, cows need to regain some of the body condition lost during the previous lactation period. The cow herd should calve with an average body condition score (BCS) of 5.5 on a 1-9 system

(Figure1). At time of weaning, measure and record the BCS of the cows, then feed the herd to achieve a BCS of 5.5 by calving. If necessary, group exceptionally thin cows separately from moderately conditioned cows. For example, a group of cows may average a BCS of 4.3 at time of weaning and be four months away from the beginning of calving season. Thus, to add 1.2 points of BCS in four months, .3 points of BCS per month must be gained. The approximate linear relationship across BCS is .59 Mcal NE<sub>m</sub> daily per .1 BCS change monthly. Protein needs change, as well, at a relationship of approximately .06 lb CP daily per .1 BCS change monthly. Compare diets one and two in Table 1 to see the added supplements needed for this example.



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## Cold Stress

Cold weather requires more energy to be fed to maintain weight, weight gain, or BCS gain in cattle. The added requirement for a period of 20°F weather vs. 50°F weather is 1.3 Mcal NE<sub>m</sub> daily (difference in diets 1 and 3 in Table 1). When feeding more energy to the rumen microbes, as when feeding more energy for cold stress or re-

Table 1. Gestating Cow Diets for Maintenance, Adding Condition, Cold Stress, and Maintenance with Rumensin

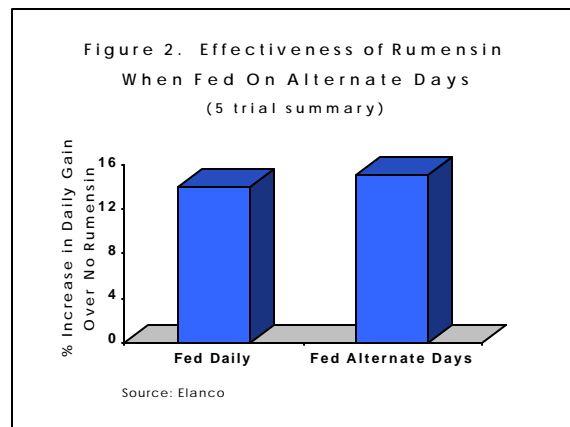
Diet	1	2	3	4
Change in BCS/ mo	0	.3	0	0
Temperature, °F	50	50	20	50
Rumensin, mg/day	0	0	0	200
Nutrient Intake/day				
Dry Matter, lb	21.7	21.7	23.2	21.7
NE <sub>m</sub> , Mcal	10.6	12.3	11.9	10.1
Crude Protein, lb	1.85	2.24	2.08	1.79
Degradable Protein, lb	1.40	1.60	1.54	1.38
Feeds*, lb/day				
Grass Hay	24.1	20.4	24.7	25.0
Soybean Meal-48%	1.2	2.0	1.5	1.2
Corn	1.1	3.8	2.1	.3
Mineral	.2	.2	.2	.2
Feed Cost, \$/day	.416	.540	.482	.400

\*Grass hay = 6% CP, 80% DP, .44 Mcal NE<sub>m</sub>/lb, \$20/ton; Soybean Meal-48% = \$160/ton; Corn = \$72/ton; Mineral = \$400/ton; Mineral w/Rumensin = \$425/ton.

conditioning, the rumen microbes require more degradable CP (DP) to utilize it. This DP requirement (lb) is calculated as .13 Mcal NE<sub>m</sub> required. Cold stress during winter months is not continuous and cows seek shelter and wind breaks to keep themselves in warmer environments, so be careful not to over-feed during cold weather.

## Rumensin

Although feeding Rumensin (monensin) to cows is not as popular or profitable as with growing and finishing cattle, it is still beneficial and cost-effective in many cases. Whenever nutritional requirements are such that supplemental protein and energy are required, Rumensin is cost effective (compare diets 1 and 4 in Table 1). In this example, Rumensin reduces the need for .8 lb of corn, plus lowers the total feed cost even after paying for the Rumensin. The adjustment in efficiency for feeding Rumensin is 2% of NE<sub>m</sub> required and 1.5% of CP required at 100 mg of Rumensin and 4% of NE<sub>m</sub> required and 3% of CP at 200 mg of Rumensin. When high quality forages are fed that do not require supplemental protein or energy, the value of feeding Rumensin is less clear. Rumensin makes the cow more efficient; thus she will be able to either gain more weight (condition) or produce more milk, depending on her physiological state. Rumensin is also approved for, and is effective when fed on alternate days (Figure 2).



## Using the Akey Brill Cow/Calf System

The Akey Brill Cow/Calf System allows for the adjustments in an animal's nutrient requirements based on inputting the temperature, the desired change in BCS, and the level of Rumensin fed. Comparisons in forages, supplements, and feeding strategies can be made and accurate diets can be formulated.