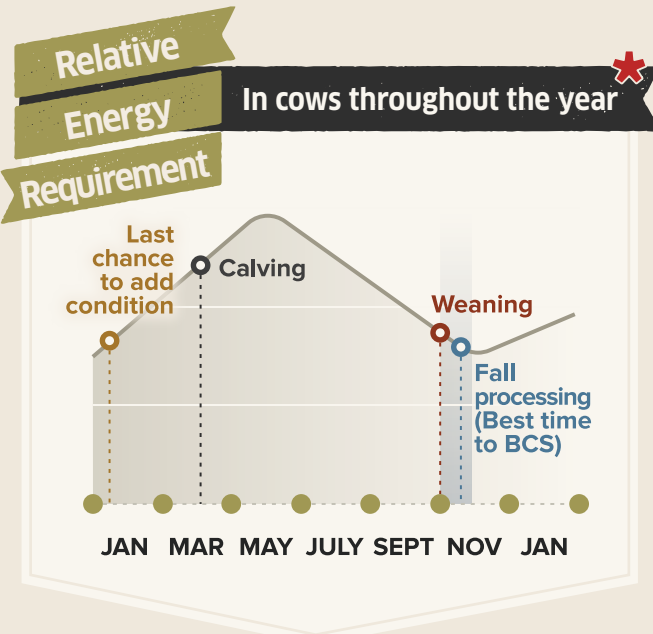




MAINTAINING CONDITION YEAR-ROUND FOR MAXIMUM PROFITABILITY

www.BodyConditionScoring.ca Fact Sheet Series



Understanding how energy requirements change throughout the production cycle is key to economically managing cow condition throughout the year, and enables you to match your available feed resources with your cows' nutritional needs.

Once a cow has passed peak lactation, after the calf is weaned, her energy requirements drop substantially. This is often the easiest time for cows to gain condition. Good quality pasture is often all that's needed for a cow to put on weight and condition during summer and fall. If a cow is in good condition (BCS 3) heading into winter, she'll have adequate body reserves to sustain the winter months with very little if any supplemental feeding.

A cow's energy requirements are highest in late gestation and during lactation. Cows in late gestation or lactation will have 20-45% higher energy and 40-80% higher protein requirements than cows in mid-gestation. This means that the closer to calving and lactation, the more difficult it will be to economically add condition. It is especially difficult to add condition when using some extended winter feeding systems, such as swath grazing, because they can

increase energy requirements even further, approximately 18-21% higher than a drylot situation. Substantially improving BCS near calving and during lactation is very difficult and can be 20-30% more expensive than at other times of the year.

To overcome the spike in nutritional requirements, larger amounts of grain must be fed. Devising an economical ration will depend greatly on the price and availability of hay, grains, and by-products. It can be useful to compare the prices of various feedstuffs based on how much energy each provide to the cow (e.g. \$/lb of total digestible nutrients, TDN). Referring to the National Research Council (NRC) requirement tables or talking to a nutritionist can help you determine the requirements of your herd.

First calf heifers require some extra attention. This is because their energy reserves are being used for growth on top of maintenance and pregnancy. As you can see from the table on the next page, their energy requirements are significantly higher, and heifers should be managed differently from cows. If possible, feed the heifers in a separate group - for two important reasons: you can provide the extra feed the heifers need without overfeeding the cows, and heifers tend to get pushed away from the feedbunk by older, more aggressive cows.

Measuring the body condition of your cows well before winter hits, perhaps at fall processing, is ideal. This allows you to plan for different management groups if necessary and ensure that you have the proper feedstuffs on hand in time.

* Source: Mathis, Sawyer and Parker. Managing and feeding beef cows using body condition scores. Circular 575. College of Agriculture, Consumer and Environmental Sciences, New Mexico State University. http://aces.nmsu.edu/pubs/_circulars/CR-575/welcome.html



TABLE 1.

Nutrient requirements for pregnancy for a mature 1300 lb. cow and 900 lb. bred heifer. Values were generated using Alberta Agriculture's Cowbytes Program. (Assumptions include breeding in late August for June 1 calving, typical Canadian winters, access to shelter from wind and a daily gain of 1.25 pounds for the bred heifer in addition to weight gain from pregnancy.)

	TDN (lbs/day)	Net Energy Maintenance (Mcal/day)	Net Energy Gain (Mcal/ day)	Crude Protein (lbs/day)	Calcium (Grams/day)	Phosphorus (Grams/day)
1300 lb Mature cow (Condition Score 3.0)						
1st Trimester	11.0	10.7	-	1.5	17	14
2nd Trimester	12.8	12.4	-	1.6	17	14
3rd Trimester	15.3	15.2	-	2.1	30	19
900 lb Bred Heifer (Condition Score 3.0 gaining 1.25 lbs/day)						
1st Trimester	12.7	8.1	2.3	1.7	24	16
2nd Trimester	14.9	10.4	2.5	1.9	25	16
3rd Trimester	18.0	13.6	2.7	2.4	36	22

Matching available feed resources to the stage of production of the cows requires attention to detail. Feed testing your available feedstuffs (learn more at <http://www.beefresearch.ca/blog/feed-testing/>), and the use of a ration balancing program such as Cowbytes or working with a nutritionist will make sure that the feed you're providing is most suitable for the cows' needs, including vitamins and trace minerals. If your cows are in optimum condition or overconditioned, you can save your best quality feed for later in the winter, but if cows are underconditioned, you should use your best quality feed first. Visit the 'Developing a winter feeding program for underconditioned cows' factsheet for more information on winter feeding.

By making sure underconditioned cows are putting on condition when their energy requirements are lower provides a bit of an insurance policy during the winter. If cows are overconditioned (BCS 3.5-4) heading into the winter, you can let them use some of those body reserves during the more energy intensive stages of late gestation, calving and lactation. As long as the cows don't drop below the optimum BCS (2.5-3), they will generally still cycle and breed back within 80-85 days and maintain a short calving interval. Remember, the more calves born in the first 21 day cycle, the heavier and more uniform your calf crop will be at weaning.

With a surplus of pasture, cows can become overconditioned during the summer and fall and allowing overconditioned cows to drop to right condition can save some winter feeding costs.

This strategy should be used with care as a drastic or rapid drop in BCS can have long lasting impacts on fertility. Cattle should not lose condition during the post partum and breeding period. It's also important to use the hands-on method to BCS to ensure cows don't mistakenly drop below a BCS of 2.5. For more information on how BCS affects reproduction, view the [reproductive issues with over- and under-conditioned cows](#) fact sheet on www.BodyConditionScoring.ca

The sooner you start managing your cows based on an accurate, hands on BCS, the better. However, if calving is about 100 days away and only one or ½ of a BCS improvement is needed for your cows to reach ideal body condition, you have enough time, and it can likely be done at minimal cost. [Use the feed cost calculator on \[www.BodyConditionScoring.ca\]\(http://www.BodyConditionScoring.ca\)](#) for a demonstration of the costs to improve one BCS. By leaving it to less than 100 days before calving, the less likely you will be to succeed, and the greater chance of reducing your herd's reproductive efficiency and your overall profitability.



For more information about body condition scoring, explore the training materials and interactive web tools at www.bodyconditionscoring.ca, talk to your veterinarian or consult a beef extension specialist. If Internet access is an issue call 403.275.8558, ext. 302 to receive all the information and interactive tools on a free USB data stick that plugs into your computer.

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