PCBFA
PEACE COUNTRY BEEF & FORAGE ASSOCIATION

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Forage Facts

Fall Feeding

Should I Buy Expensive Feed or Custom Feed

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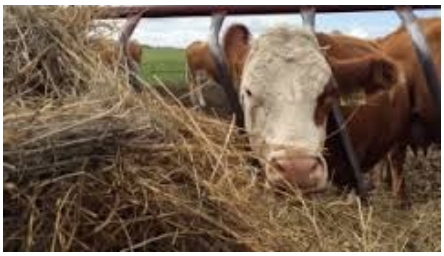

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Lack of moisture curtailed pasture and hay production in many area of Alberta this year. As a result, feed and hay prices have risen dramatically from a year ago. Producers are faced with either buying expensive feed or moving their livestock to feed if they want to keep ownership and equity in their animals. Choosing an option depends on the economics of each alternative.

The first step is to calculate the cost of putting feed into the feed bunk. This is the sum of (1) the cost to purchase the feed, (2) shipping costs, (3) yardage charge on the farm, (4) the opportunity cost of labour for feeding the animals, and (5) shrink and waste.

For example, if each cow needs about 35 pounds of hay per day to maintain her, it will take about 7,500 pounds or approximately 3.75 tons of hay over 215 days. Feeding days are suggested to be longer this coming winter due to a lack of fall grazing opportunities and to give pastures time to recover from lack of moisture. If good quality hay costs about $200 per ton, the total cost of the hay will be $750 per animal. Shipping charges to transport the hay to the farm need to be added. According to Alberta Agriculture and Forestry's custom rate survey, freight charges are approximately $6 per loaded mile. If hay is picked up 100 miles away, the cost will be $600 per load. Assuming 18 tons per load, the freight cost is $33 per ton or $59 per animal for the 6 months.

Yardage charges on the farm include the cost of operating equipment, corral cleaning, utilities, and wear and tear on facilities. Using approximately $0.70 per head per day for "at home" yardage, the total cost of hay delivered to the farm is $959 per animal for 215 days.

This example assumes that there is less than 15 to 20 percent of wasted hay per day and that the farmer has no opportunity cost for labour. That is, if the owner can use the labour to generate alternative income, then the opportunity cost of not feeding cattle must be added to the cost of purchasing and hauling feed.

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The second step is to calculate the cost of moving the animals to a custom operator and pay for the feed and care there. This is the sum of (1) shipping the animals to and from the lot; (2) the cost of feed at the facility; and (3) the yardage charge by the feeder to care and feed the animals.

If the price of hay is the same at the custom feeder, the cost of feed would be $750 per animal. However, the cost of freight for moving the cattle to and from the feed yard has to be factored in. The average custom rate for hauling cattle is about $5.50 per loaded mile with 50 cows per load. A 100 mile round trip cost will be $22 per head, making the total cost of hay and hauling $772 per head for 215 days. If the feeder charges $0.85 per head per day in yardage, the total cost will be $954 per head for 215 days, or $5 per head lower than the cost of buying feed.

These are examples and you must figure your own costs including the purchase price of feed and the cost of shipping hay and cattle. Comparing the two options, if the cost of feed is the same for the producer and the custom feeder , the primary factors in making your decision are (1) the distance and the cost to ship the hay or cattle, (2) the yardage charge, and (3) the amount of feed waste. If you are considering custom feeding, both parties should agree on a body condition score going into and coming out of the feed yard as well as a fairly accurate estimate of pregnancy.

Saving the most equity in the cows should be the primary goal. Evaluate your decision based on your risk-bearing ability, market outlook and distance/availability of feed or custom feeding operations. After considering all the factors, choose the best single or combination of alternatives that will give you the best change at preserving equity.

Interpreting Feed Tests

by Carly Shaw

With the arrival of frigid temperatures, thoughts turn to winter feeding and to feed quality. With your PCBFA membership, you receive 2 FREE feed tests, but what do the results mean? Alberta Agriculture's *Agrifacts* publication *Beef Ration Rules of Thumb* lays out some simple guidelines that you can follow to ensure you interpret your feed tests correctly. Dry matter, crude protein, energy, calcium to phosphorous ratio, minerals and salt must all be considered when creating a balanced diet for your cattle.

It is first important to consider dry matter (DM) as it allows you to compare all types of feed since the moisture has been factored out. The second thing you must consider is crude protein; the crude protein rule of thumb for mature beef cows is 7-9-11 and for feeder calves the rule is 14-12-10. A cow's performance can be monitored in terms of protein by looking at their manure, high levels of undigested fibre equals low protein and vise-versa. Thirdly, energy must be considered, however, first you must learn one of the six measures for energy and stick with it. We will be using the percentage of Total Digestible Nutrients (TDN). The Rule of Thumb for TDN% is 55-60-65 for mature cows. This rule means that in order for a mature beef cow to maintain her body condition score through the winter months she requires this amount of energy for mid, late and post pregnancy. The below chart lays out the requirements of both percentage of crude protein and TDN needed for beef cows and feeder calves.

Beef Cow Rule of Thumb	**Mid Pregnancy**	**Late Pregnancy**	**Post Pregnancy**
% Crude Protein	7%	9%	11%
% Total Digestible Nutrients	55%	60%	65%
Feeder Calves Rule of Thumb	**550-800 lbs**	**800-1050 lbs**	**Finishing**
% Crude Protein	14%	12%	10%

A fourth consideration is the Calcium to Phosphorous ratio (Ca:P); this ratio should be within the range of 2:1 and 7:1 for a mature beef cow. You can use your feed tests to calculate this by dividing dry matter Ca (%) by dry matter P (%) and anything that is outside of the above range needs to be addressed. We must also consider the combination of the minerals Magnesium (Mg), Potassium (K) and Calcium (Ca) which make up the tetany ratio K/(Mg+Ca). It is recommended that this ratio be no higher than 2.2:1. The combination of high K (over 1.75%) and/or low Ca (under 0.6%) and low Mg (under 0.3%) can lead to animal performance issues. It is important to look at these numbers both individually and as a ratio in order to see if a problem exists. The last thing to look at when reading a feed test is your salt percentage. Sometimes feed tests only report sodium (Na) but not salt (NaCl), however a simple calculation can used to figure out your NaCl; Na*2.5= NaCl. It is important to note that livestock will receive all of their salt requirements if salt levels are over 0.25% and thus will have no need for commercial minerals with added salt.

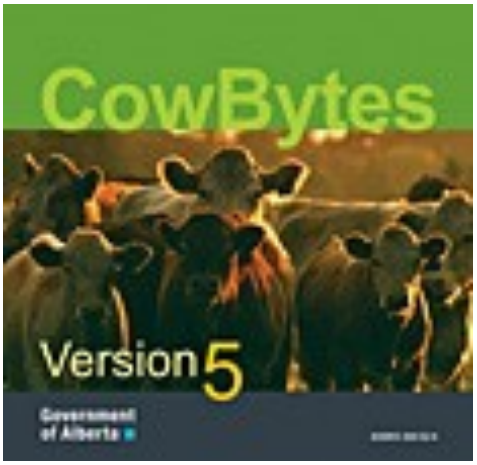
Assessing feed quality is important whether we are feeding in corrals, on pasture, or in more intensive feeding operations.

Once you understand the quality of your feed the next challenge is to determine the amount of feed required pre individual animal and the herd as a whole. *Agrifacts* explains that beef cattle will consume approximately 2.5% dry matter (DM) of their body weight per day of average quality feed with both moisture and water factored in on top of this number.

The below table is taken from the Cowbytes Ration Balancing Software program, which depicts different consumption levels based on forage quality.

Forage intake guidelines [as per cent of body weight (BW)]			
	Straw & Poor Forage	**Medium Quality Forage**	**Excellent Quality Forage**
Growing & Finishing Cattle	1.00%	1.8 to 2.0%	2.5 to 3.0%
Dry Mature Cows & Bulls	1.4 to 1.6%	1.8 to 2.0%	2.3 to 2.6%
Suckled Cows	1.6 to 1.8%	2.0 to 2.4%	2.5 to 3.0%

We must remember though that as the temperatures get colder cattle come under cold stress and we must begin to up our feed. Decreasing temperatures and advancing pregnancy can mean the energy in the feed we provide can easily be used up by the cow to keep herself warm and by the growing calf. The rule is for every 10°C below -20°C, an increase of 3kg of hay, 6kg of silage or 2kg of grain AS FED to cows is required. In other words for every degree drop below -20°C, a cow's energy requirements increase by 2%.



Cowbytes is a least-cost ration formulation software available to producers and

central testing laboratory ltd.

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TEST REPORT

Submitted By:

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Fairview, AB T0H 1L0
Attn: Monika

Phone #: 1-780-523-4033
Fax #: 1-780-835-6626
Date Received: August 18, 2015
Date Printed: August 24, 2015

Client: Bernadette Wearden
Product: [redacted]
Description: Fescue Aftermath
Arrival Condition: Sample Intact

Package #: 1FFNIR
Complete ☑
Sample #: 104

Analysis:	AS RECEIVED	DRY MATTER
Moisture (%) (test date 08/24/15)	51.12	
Dry Matter (%) (test date 08/24/15)	48.88	
Crude Protein (%) (test date 08/24/15)	3.62	7.41
Insoluble Protein (%) (test date 08/24/15)	2.18	4.46
Soluble Protein (%) (test date 08/24/2015)	1.44	2.95
Calcium (%) (test date 08/21/15)	0.30	0.61
Phosphorus (%) (test date 08/21/15)	0.07	0.15
Magnesium (%) (test date 08/21/15)	0.09	0.18
Potassium (%) (test date 08/21/15)	0.65	1.34
Sodium (%) (test date 08/21/15)	0.01	0.02
Sodium Chloride (calc from sodium) (%) (test date 08/24/2015)	0.03	0.05
Acid Detergent Fibre (%) (test date 08/24/15)	20.27	41.46
Neutral Detergent Fibre (%) (test date 08/24/15)	31.54	64.52
ADI-CP (%) (test date 08/24/15)	0.55	1.13
ADIN (% Crude Protein) (%) (test date 08/24/15)	15.27	15.27
Non Fibre Carbohydrates (%) (test date 08/24/2015)	8.44	17.27
Total Digestible Nutrients (%) (test date 08/24/2015)	26.56	54.34
Metabolizable Energy (Mcal/kg) (test date 08/24/2015)	0.97	1.99
Net Energy for Lactation (Mcal/kg) (test date 08/24/2015)	0.59	1.21
Digestible Energy (Mcal/kg) (test date 08/24/2015)	1.17	2.40
Net Energy for Maintenance (Mcal/kg) (test date 08/24/2015)	0.56	1.14
Net Energy for Gain (Mcal/kg) (test date 08/24/2015)	0.28	0.58
Relative Feed Value (test date 08/24/2015)		82

It is important to make sure we follow these guidelines provided, especially in a year with feed shortages as we do not want to see any waste. The rule of thumb says if you see feed on the ground, you have 15% waste, and a 20% waste equals an excess costs of 40$/cow which is best to avoid.

The above information has been gathered from *Agrifacts: Beef Ration Rules of Thumb* which was compiled by Trevor Yurchak of Alberta Agriculture and Food, and Dr. Erasmus Okine of the University of Alberta.

To the left is a sample of a feed test, in yellow is where you will find Crude Protein (CP) and Total Digestible Nutrients (TDN) percentages. When reading a feed test be sure to use the Dry Matter values (also in yellow), so you can compare any feed type, from grain, to hay to silage, accurately.

With your PCBFA Membership you are Entitled to 2 FREE Feed Samples! These results are more important than ever in a year with feed shortages! Get yours in today!

Contact us for:

- *Project Ideas*
- *Feed Testing*
- *Growing Forward 2 Assistance*
- *Ration Formulation Help*
- *Environmental Farm Plans*
- *Past Project Information*

Upcoming Events!

Thanks to our Sponsors!

Feed & Ration Balancing Workshops

Several Locations Across the Peace

Friday Oct 2—PCBFA High Prairie Office (1-4pm)
Tuesday Oct 6—Valleyview Ag Society (1-4pm)
Wednesday Oct 7—Savanna Rec Complex (10am-2pm)
Wednesday Oct 7—Hines Creek Composite School (5:30-9pm)

Join us to learn how to:
*Read Feed Tests * Formulate Cattle Rations*
Make Winter Feeding Decisions * Best Utilize the Feed We Have

Working Stock Dog Clinic

Valleyview AgPlex
October 24 & 25
Facilitator: Corey Perry
Contact Judy Smith for
Information and to Register
780-524-2790

Biosecurity Workshop

Creating Awareness of Biosecurity Risks and Practices in Peace Country
GPRC Fairview
October 20, 2015
*Zoonosis * Carcass Disposal*
*Vaccination Protocols * Contagious Disease*

EFP & Growing Forward 2 Workshop

Brownvale Small Hall
October 22
1-4pm
Update on Growing Forward 2 Programs & Environmental Farm Plan Workshop

Coming in November 2015

* **Herd Management Software**
* **Succession Planning**
* **Dugout Workshop**

More Details to Come!

A proud member of

Western Canada Conference on Soil Health

December 8-10, 2015
Agenda to Include:
Dr. Yamily Zavala, Gabe Brown, Producer Panel, Dr. Jill Clapperton, Neil Dennis and Banquet Speaker Blake Vince

Early Bird Conference Fees (Banquet not included) ~ Student $200/pr ~Producer $250/pr ~ Farm Unit (2 members) $450/farm unit ($225/additional farm members) ~ Industry $175/pr ~ One Day Registration $175/pr ~ Banquet Ticket $42/pr
~After Nov 11 and at door conference fees increase an additional $25/pr~
Register at www.albertasoilhealth.ca or ARECA 780-612-9712

For more information, directions or to register for PCBFA events please call Stacy or Kaitlin at 780-835-6799!

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