



Farm Animal Council of Saskatchewan Inc.

# Feed Testing and Ration Balancing

## Use Feed Supplies Efficiently

Cattle use feed most efficiently when the nutrients in the daily feed match their daily requirements, hence the term balanced ration. Producers know they can't eyeball feed value but they sometimes use traditional or book values to estimate feed quality against their cows' feed requirement. These can be useful guides but the quality of individual feed supplies can vary widely from the average. Not knowing the exact nutritional value of feeds can lead to underfeeding or overfeeding, both of which cost money.

Nutrient content of feeds vary greatly from year to year because of differences in growing conditions and is also affected by stage of maturity, and method of harvest, storage and processing. Roughage mixtures of unknown proportions or use of unusual feedstuffs or screenings increases the need for precise information. Testing for nitrates, moulds, mycotoxins or other anti-nutritive factors prevents problems.

A little time and a few dollars spent planning can mean the difference between satisfactory performance on minimum feed or thin cows, poor calves, low fertility and/or wasted feed resources. Adding the vitamin, mineral and protein supplements and grain necessary to meet but not exceed nutrient requirements lowers production costs by optimizing performance and feed efficiency.

Talk to the feed lab nutritionist, a consulting nutritionist, your feed company nutritionist or your Extension specialist for advice on balancing your rations to meet the needs of your cattle using your feeds to their best advantage.

The most important times to make sure a beef cow's nutritional requirements are met:

- Most important – from calving through breeding.
  - Use the best quality feeds during this period.
- Second most important – 3rd trimester of pregnancy or about 60 to 90 days before calving.
  - Use moderate quality feeds during this period
- Third most important – breeding through to weaning.
- Least important (IF the cow is in moderate to good condition) – weaning to end 2nd trimester.
  - Use poorer quality feeds during this period.

## Feed Sampling Procedures

Accuracy of analysis is no better than accuracy of sampling procedure. The following recommendations are designed to ensure the sample is representative of the entire lot. Labs and local Extension offices may supply request forms, sample bags and forage probes.

**Grains:** Take 15-20 samples from tailgate at unloading or 15 to 20 bin probes. Mix thoroughly and take 500-gram or 1 litre sample for analysis; double for Ergot testing.

**Ground-mixed rations:** Take three to five samples at feeding over three feedings. Mix thoroughly and take a 500-gram or 1 litre sample for analysis, double for multiple or particle size analyses.

**Supplements:** Take 15-20 samples from tailgate at unloading or 15 to 20 bin probes. Mix thoroughly and take 500-gram or 1 litre sample for analysis.

**Hays:** Use a hay core sampler (forage probe) to take 15 to 20 samples from throughout the stack or lot of hay. Mix thoroughly and take a 2-litre volume sample for analysis.

**Silages and Total Mixed Rations (TMR):** Take five or six samples from three or four feedings. Keep refrigerated in an airtight bag with air squeezed out between collections. Mix thoroughly and take a 2-litre sample for analysis. Keep cool and in an airtight container with air squeezed out. Freeze before shipping.

**Water:** Contact the laboratory for special water sample containers to reduce contamination and for special instructions if bacterial analysis is desired.

## Sample Shipping Procedures

- Good quality large Ziploc plastic bags work very well for sending dry or moist samples.
- Include sender's name, address and contact information, sample identification, and tests requested on a label on each sample bag.
- Bus or courier is the most cost effective method of shipping as samples are usually received at the lab the next business day.

## Feedtest Laboratories

A full range of feed testing packages is available from several laboratories. Example analyses include crude protein, fibre (estimation of energy and intake), minerals and possible toxic substances.

### ENVIRO-TEST LABORATORIES

www.envirotest.com  
124 Veterinary Road  
Saskatoon, SK S7N 5E3  
Tel: 306-668-8370; Fax: 306-668-8383  
Toll free: 800-668-7645

### CENTRAL TESTING LABORATORY LTD.

www.ctl.mb.ca  
Unit 9 - 851 Lagimodiere Boulevard  
Winnipeg, MB R2J 3K4  
Tel: 204-237-99128; Fax: 204-233-0489  
Toll Free: 877-955-7861  
Email: info@ctl.mb.ca

### NORWEST LABS

www.norwestlabs.com  
3131-1 Avenue South  
Lethbridge, AB T1J 4H1  
Tel: (403) 329-9266; Fax: (403) 327-8527  
Toll Free in western Canada:  
800-773-3962  
Email: Lethbridge@norwestlabs.com

### MIDWEST LABORATORIES CANADA

http://www.midwestlabscanada.com  
#8, 4001B-19th Street N.E.  
Calgary, AB T2E 6X8  
Tel: (403) 250-3317; Fax: (403) 250-5249  
Email: mwl@midwestlabscanada.com

### BDS LABS (FOR MOULDS AND MYCOTOXINS ONLY)

www.bdslabs.com  
#13 Qu'Appelle St., PO Box 363  
Qu'Appelle, SK S0G 4A0  
Tel: 306-699-2679; Fax: 306-699-7190  
Toll Free: 888-237-5227  
Email: bds.laboratories@sasktel.net



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*FACS represents the livestock industry in advancing responsible animal care and handling practices in agriculture.*

Associate Memberships are available from \$50.00 – \$199.99 + GST.  
Active Memberships start at \$200.00 + GST  
Receipts are issued for all memberships.

*This FACS initiative is funded by the Saskatchewan Beef Development Fund and endorsed by the Western Beef Development Centre, Saskatchewan Livestock Association, the Canadian Veterinary Medical Association and the Saskatchewan Veterinary Medical Association.*