Matching Forage Quality to Livestock Needs in Winter

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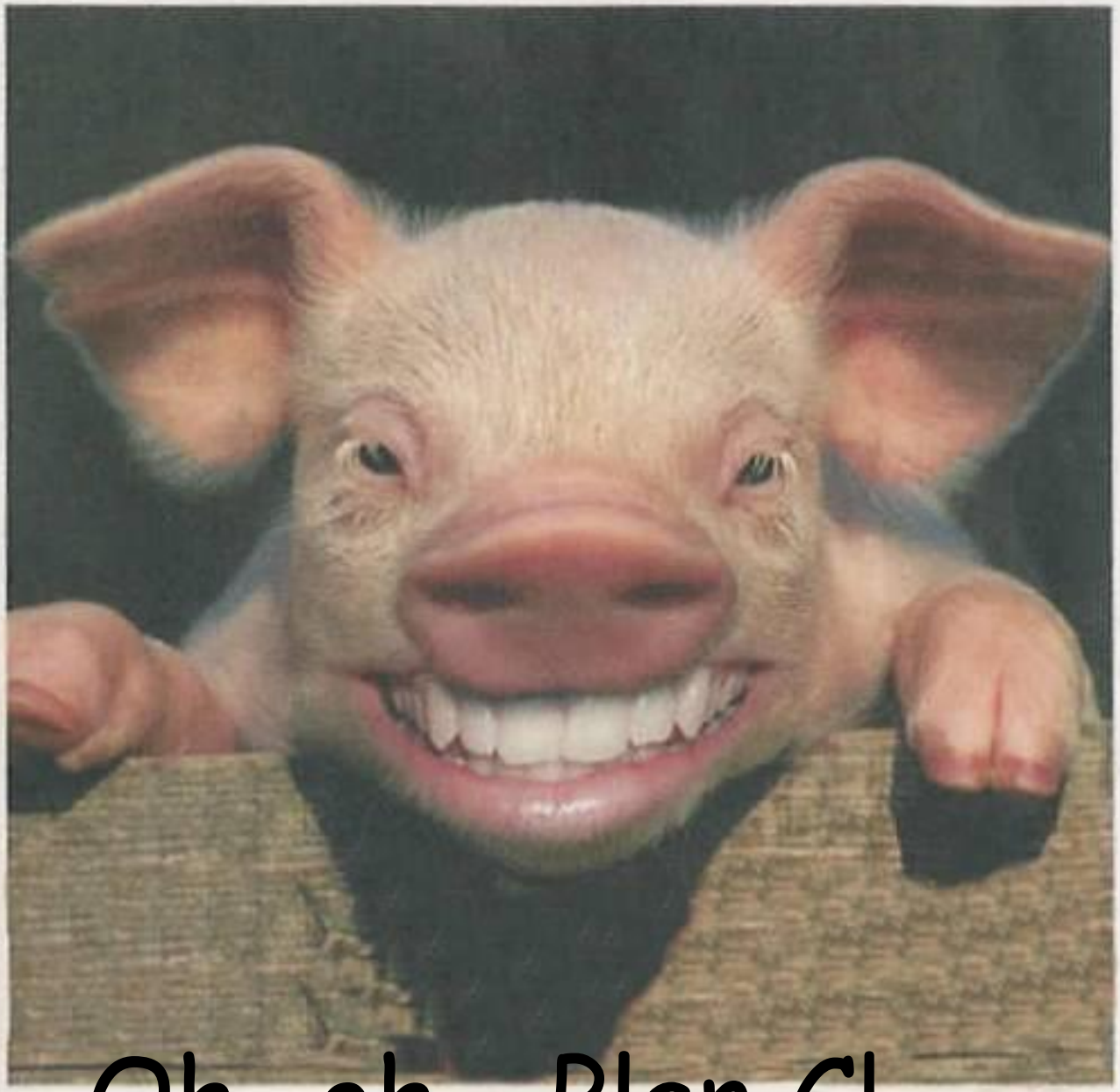


Oh…oh… Plan C!

Courtesy Duane McCartney

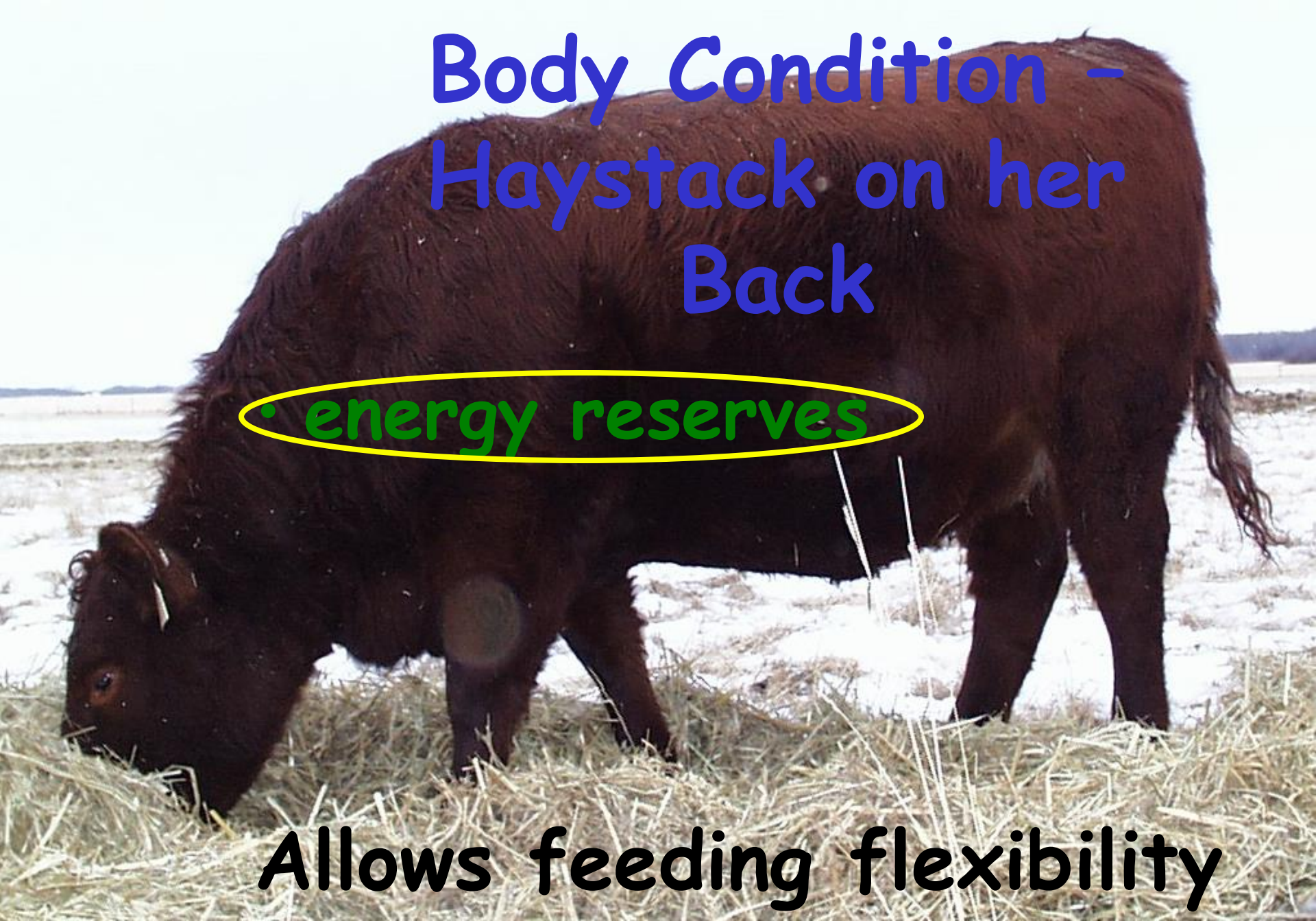
Low Cost Producers

- Sorted cow herds
- Quality/Quantity feed balance and adjusting
- Strived to get cows fatter in summer
- Control wind effect, hair coat, parasite load

Kaliel, et.al. AgriProfit$ 2006, Economics & Competiveness, Alberta AG

Cows

Weight, condition, herd variability, past nutrition, calves on/off, calf performance, weather, when calving, etc.



Body Condition – Haystack on her Back

- energy reserves

Allows feeding flexibility

Christoph Weder, 2002

1 Body Condition Score

- Be careful here!
- Can save $50+ in winter feed
- Reduces risk when mistakes are made

Nutrient Reserve

Courtesy Karin Lindquist-BRRG/Elgar and Annie Grinde

BC's Alternative Legumes

Yellowhead Alfalfa

Adaptability in our management systems, climate??

Alsike and Red Clover

Some tend to be short-lived, and/or lower productivity than alfalfa, clover or our warm season

Cicer Milkvetch

BFT (vigor ↑), Purple Prairie clover and Sainfoin (regrowth ↑)have condensed tannins

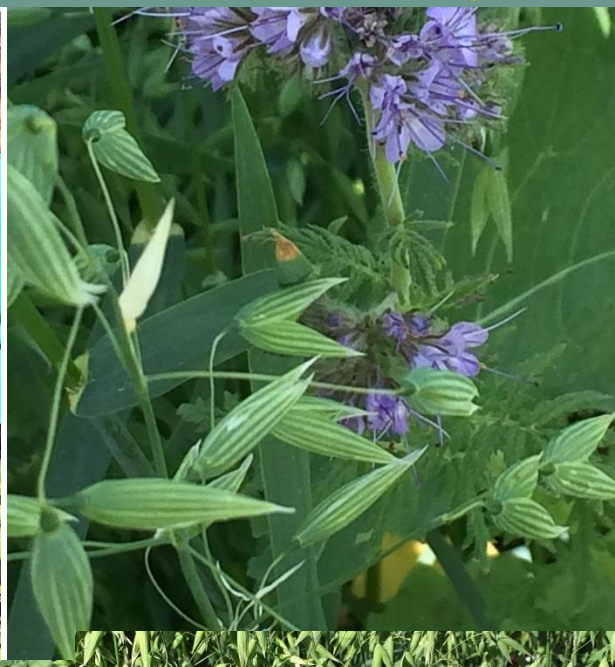
New Cicer milkvetch

Sainfoin

Birdsfoot trefoil

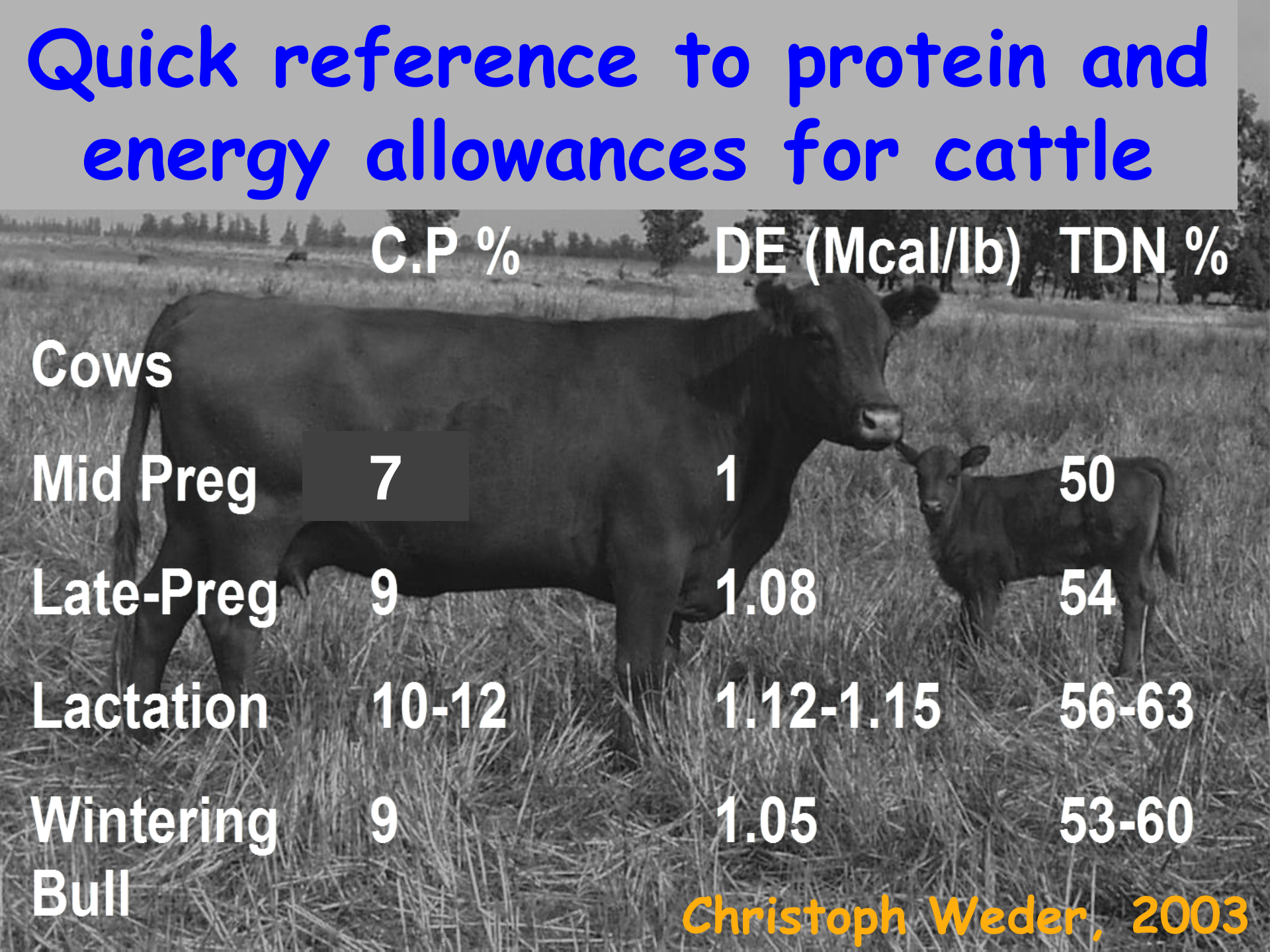
Purple Prairie Clover

Cocktail Mixes/Cover Crops




Duane McCarteny photo.

Quick reference to protein and energy allowances for cattle



	C.P %	DE (Mcal/lb)	TDN %
Cows			
Mid Preg	7	1	50
Late-Preg	9	1.08	54
Lactation	10-12	1.12-1.15	56-63
Wintering Bull	9	1.05	53-60

Christoph Weder, 2003

Feed Test
-Less Surprises

To utilize weathered forages

- FEED Testing for no Wrecks
- Supplement for deficiencies in energy & protein
- Balance rations
  - Feed vitamins & minerals
  - Check for mineral interactions
    - Ca:P, K/Mg+Ca, S

My Rule of Thumb:
Don't commit two crimes at once

Precise mineral, salt, protein nutrition

"Cream of the Crop"

Tel: 604-819-4488 E: walter@parklandlabs.com Fax: 604-847-8156

To: Julie Robinson
Address: Box 205
Dawson Creek, BC
V1G 4G7

Fax #:
Tel. #: 250-262-7576
E-mail #: julie@foragefriendly.ca

Date: 02-Oct-18
Report #: H4274-4275
Rep. Page #: 1 of 2

M-2
#N/A

Sple #	Sample Description	Parkland Labs Ref #	Quality Parameter	Value "as fed"	Value dry
1	Price Hay	H4274	Moisture (%)	34.8	
			Protein (%)	3.0	4.6
			Acid Detergent Fibre (%)	28.2	43.2
			Neutral Detergent Fibre (%)	43.6	66.9
			Total Digestible Nutrients (%)	37.3	57.2
			Digestible Energy (Mcal/Kg)	1.64	2.52
			Relative Feed Value		77

Surprisingly Poor

Courtesy Julie Robinson

"Cream of the Crop"

Tel: 604-819-4488 E: walter@parklandlabs.com Fax: 604-847-8156

To: Forage Friendly Enterprises (Bill Wilson/Julie Robinson)	Date: 28-Dec-19
Address: Box 285 Dawson Creek, BC V1G 4G7	Report #: H4629-4639 Rep. Page #: 10 of 11
Fax #: Tel. #: 250-262-7576 E-mail #: admin@foragefriendly.ca	M-2 #VA

Sple #	Sample Description	Parkland Labs Ref #	Quality Parameter	Value "as fed"	Value dry
10	FFE # 10. Home Grass	H4639	Moisture (%)	70.7	
			Protein (%)	5.0	17.2
			Acid Detergent Fibre (%)	12.4	42.2
			Neutral Detergent Fibre (%)	16.3	55.7
			Total Digestible Nutrients (%)	17.0	57.9
			Digestible Energy (Mcal/Kg)	0.75	2.56

Surprisingly Good

Courtesy Julie Robinson

Why men don't live as long as women

Managing risk or…….. Gambling

9-10%
Crude
Protein

Nutrient Reserve

60% Total
Digestible
Nutrients

http://www.beefresearch.ca/research/feed-value-estimator.cfm#singleFeedTitle

https://www.alberta.ca/software-cowbytes.aspx

Agdex 420/52-5 CD format

$50

Agdex 420/52-6 USB format

$50

A Tool for Evaluating Feed Test Results

This tool evaluates the ability of a single feed to meet basic nutritional requirements of different classes of cattle in different stages of production under normal circumstances. These results will not apply if cows are in poor condition, if the weather is extremely cold, wet, or windy, nor does it account for the extra energy expenditure associated with swath grazing. It is not intended for use in ration balancing, but rather to alert you to potential issues with individual feed ingredients. It is strongly recommended that the user seek advice from a qualified professional to develop a balanced ration, or familiarize yourself with ration balancing software like CowBytes.

Step 1: Select **Cattle Class** - options are Backgrounding, Replacements, Mature Cows, and Mature Bulls.
Step 2: Select **Average Daily Gain** in lbs/day (for Backgrounding), or **Stage of Production** (for Replacements, Mature Cows, Mature Bulls).
Step 3: Enter **Weight** of cattle in lbs - acceptable ranges for Growing and Finishing are between 500 and 1000 lbs; for Replacements are 850 to 1150 lbs, for Mature Cows are between 1100 and 1600 lbs, for Mature Bulls are between 1800 and 2500 lbs; mid-ranges will round down, e.g. 550 rounds to 500.
Step 4: Enter your own feed test results on a dry matter basis, starting with **Dry Matter (DM,%)**.

Select Cattle Class

* select cattle class *

Select Average Daily Gain (lbs/day)

* select cattle class ab

Enter Weight (lbs)

Enter Test Feed Data

Dry Matter (DM,%)	Total Digestible Nutrients (TDN, %)	Crude Protein (CP, %)	Calcium (Ca,%)	Phosphorus (P, %)	Ca:P Ratio	Potassium (K, %)	Magnesium (Mg, %)	Tetany Ratio
%	%	%	%	%		%	%	

Calculate Single Feed Data

Interpretation:
Suitability of the feed is indicated by a color coded response. Green indicates that the nutrient is adequate to meet nutritional requirements. Yellow is within +/- 2.5% of TDN requirements, +/- 5% of CP requirements and 0.05% below mineral requirements.. Red indicates the feed does not meet animal requirements.

The indicator colors are linked to the nutritional requirements of a specific animal type and stage of

http://www.beefresearch.ca/research/feed-value-estimator.cfm#singleFeedTitle

Protein & Energy?? Supplementation

- **Needed when feeding:**
  - **Slightly over-heated hay**
- Denatures protein, molds use sugars
  - –Browning of forage
    - »Carmalized sugars, tobacco
  - **Rained damaged hay**
  - **Poor quality hay, straw**

Silage vs Hay

- Know dry matter of silage
- Want non-rained on at 60-40% moisture baled
- Do early so best feed and lowest cost/unit of Energy & Protein/Acre
- Need sugars AND high bale density AND reduce oxygen as fast as possible, AND keep oxygen out.

Apples to Apples

- Silage bale
  ~~45% moisture~~
- 55% dry matter
- 1 bale 1700# x 0.55=935# dry matter

- Hay bale
  ~~15% moisture~~
- 85% dry matter
- 1 bale 1250# x 0.85= 1063# dry matter

Round Bale Silage

- Plan for it-cut early
- Can be your best feed
- Yields more DM & Quality/Acre
- Can go far in ration to keep costs down by using more poorer quality feed
- Is costly per unit dry matter

Future

- High quality pasture forage in summer or late fall-fatten
- Legume/grass/cocktail annuals?
- Bale Silage manage to be best feed on farm
- Feed test, strategize
- Wean calves ↓ 20%, calve later
- Sort cows, monitor, adjust