

Expeller Canola Meal Composition

Table 10. CHEMICAL COMPOSITION OF EXPELLER MEALS (AS RECEIVED)*

Nutrient	Units
Moisture (%)	7.1
Crude protein (%)	36.3
Crude fat (ether extract) (%)	11.1
Linoleic acid (%)	2.4
Crude fibre (%)	10.6
Neutral detergent fibre (%)	24.1
Acid detergent fibre (%)	16.9
Free sugars (%)	9.8
Non-starch polysaccharides (%)	13.7
Ash (%)	6.3
Glucosinolates (umol/g)	5.3
Rumen bypass (% of protein)	30
Undegradable protein (%)	10.8

Expeller meal comes from dual pressings to extract as much oil as possible without the use of solvent extraction to remove the remaining oil.

Source:

Canadian International Grains Institute, *Feed Industry Guide*

Cattle Protein Supplement

- Typical winter feed requirement:
- 20 to 30 lbs of hay at 8% CP
- 1.6 to 2.4 # CP/day
- Problem: Our pasture hay is about 6% CP
- Solution: Supplement w/ 2 # CM/head/day
- On a 20 #/day diet of hay and CM this yields 1.8 #/day of CP
- On a 30 #/day diet of hay and CM this yields 2.4 #/day of CP

Protein Choices

- Alfalfa, 18% protein, \$100-\$150/ton
\$0.27-.42/lb
- Canola Meal, 36% protein, \$250-\$350/ton
\$0.35-.49/lb
- Molasses, 36% protein, \$400/ton
\$0.56/lb
- Licks, 30% protein, \$800/ton
\$1.33/lb

Why Choose Canola Meal over Alfalfa?

- Handling
- Wastage
- Cattle preference
- Oil content



Oil Content/Composition is Important

	Corn Oil	Canola Oil	Camelina Oil
Omega-6 FA%	57.3	19.5	16.9
Omega-3 FA%	1.2	13.7	34.9
Omega 6:3 Ratio	47.9	1.4	0.5

- Recommended dietary Omega 6:3 ratio is less than 4
- Grass fed beef has a ratio range of 4-7
- Grain fed beef has a ratio range 7-20 (20 is typical)
- Rhod McIntosh Steer Analysis:

	Grain Fed	CM plus Barley Fed
Omega-6 FA%	5	2.79
Omega-3 FA%	0.7	0.95
Omega 6:3 Ratio	7.1	2.9

Having a few data points that exhibit a positive correlation between canola meal and the omega ratio in beef is nice. However...

- We need statistically reliable/published data on the impact of feeding canola and camelina on the omega acid content of beef
- Boutique producers can use this data to market their beef for a better price
- Perhaps a feedlot might see a marketing advantage and start using pressed oil seeds as part of their feed source for the health benefits