

“Utility And Performance Of High Oil Canola Meals



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Symbiosis of Canola Production and Livestock Feeding

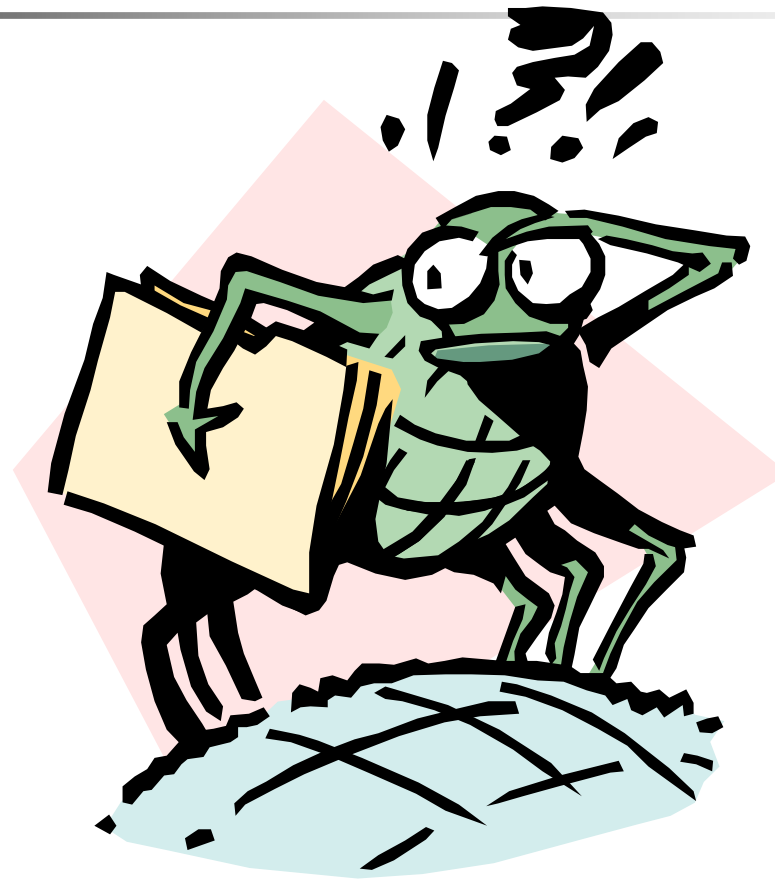




High Oil Canola Meals

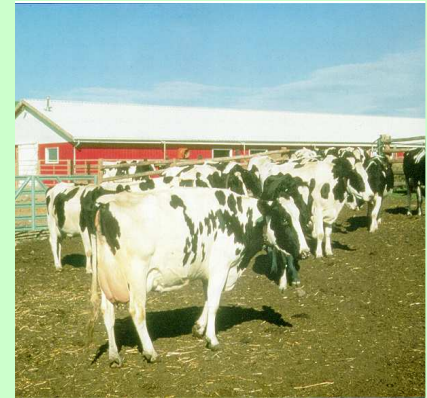
- Most arise from processing non food grade canola (Bio diesel, and other)
- Use of distressed canola a critical part of efficient canola production
- Use of Meal critical to canola production and bio diesel production.
- Allows production of specialized feeds
- Usually a product of cold press extrusion with no solvent extraction
- They are different and should be recognized for their differences.
- Variation exists between plants in feed value and utility of these canola meals

Perception and CHALLENGE





Feed Value of High Oil Meal





Analysis Canola Meals (DM. basis)

Nutrient	Milligan Bio meal	RCM
Moisture %	4.50	10.00
CP %	38.12	38.88
E.E.(oil) %	12.60	3.88
Ash %	6.63	6.66
C. Fibre %	12.62	13.33
ADF %	19.63	19.11
Calcium %	0.64	0.70
Phosphorus %	1.09	1.14
Est. TDN %	81 – 83	74.50
Est. DE. Kcal/Kg	3900	3450

Note: RCM values from Canola industry Guide; M. Bio meal av. Of analysis



Analysis Canola Meals : Toxins and Others

Parameter	Milligan Biomeal
Aflatoxin ppb.	6.48
Vomitoxin ppm.	<0.2
Zearalenone ppb.	20.0
Salmonella	Negative (n=4)
E. Coli cfu/gm	<100 (0-100=threshold)

Milligan Bio tech is ISO 9000 certified
Eliminates any add back to processed meal
Separate screenings and sell separately

Note: M. Bio meal av. Of analysis



Comparing Canola Meal Types:

Effect on Rumen Fermentation and nutrient Flow to the Duodenum in Beef Heifers: Can. J. of AN. Sci. 2009; G. Gozho, J. McKinnon, D. Christensen, V. Racz, T. Mutsvangwa. U of S

Compared: RCM; RCM+ 1.8% oil; CPC (Milligan Bio Meal);
RUP+ 1.32% oil.

-- Barley grain and barley silage based diets

--- Oil added to have same

Diets:

DM = 64%

OM = 95%

ADF 13.4%

NDF 28.2%

CP = 12.1%.



Effect of Protein supplements on:

<u>Item</u>	<u>RCM</u>	<u>RCMO</u>	<u>CPC</u>	<u>RUCMO</u>
<u>Total Tract Dig.</u>				
OM.	76.3	75.7	76.5	74.9(a)
NDF	50.5	48.6(a)	50.6	46.3(a)
ADF	48.1	44.6(a)	46.2	42.7(a)
<u>Flow to Duodenum</u>				
Total N g/day	138	132	135	135
Ammonia N g/day	2.40	1.65	1.76	1.79
Microbial N % of intake	80.1	79.3	78.0	79.7
<u>Amino Acids g/day</u>				
Lysine	54.9	50.4	56.0	56.0
Methionine	11.0	11.1	12.3	13.2
Threonine	36.1	35.2	38.6	37.6

Values at $p < .01$

Summary of CPC

$$1 + 1 = 2+$$

- * Decreased ammonia N with oil addition
- * Adding free oil not the same as CPC oil
- * CPC as good as or equal protein source as the other protein sources

Advantages:

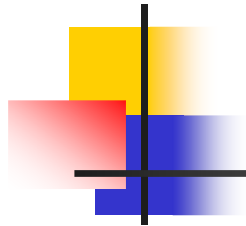
Oil reduces NH₃ N and CH₄, and thus reduces environmental impact
Excellent form and amount of both protein and energy to promote efficient rumen fermentation
Can be used to make specialized feeds
Results are similar in swine and poultry diets
Source of bypass oil and protein

Value More than RCM

Thank You for Support From:
NSERC,
Canola Council of Canada,
Saskatchewan Canola Development Commission



Extruded peas with whole canola





SaskFlax

