

# What the Feed Industry Wants from Canola Meal

## A Wish List

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# Canola Meal Definition

(Feeds Act/Regulations)\*

Canola Meal - (prepress) solvent extracted, low erucic acid, low glucosinolates (or Canola Meal):

Consists of the meal obtained after the removal of most of the oil, by a (prepress) solvent extraction process, from the whole seeds of *B. napus*, *B. rapa* or *B. juncea*; <2% erucic acid in oil portion; < 30 micromoles (< 5 allyl) glucosinolate(s) per gram dried meal portion.

Labelled with guarantees for Crude Protein (min); Crude Fat (max); Crude Fibre (max); Moisture (max); Erucic Acid (max); glucosinolates (max).

Paraphrased

\*Schedule IV, Part 1, 5.3.3 (IFN 5-06-145), and (5.3.4 IFN 5-06-146)

# Canola Meal Wish List:

“ A safe, efficacious and consistent ingredient that will provide economical, balanced nutrition to commercial livestock”

# Safe:

Free from anti-nutritional factors –  
glucosinolates, (sinapine), processing by-  
products – soapstock, gums, processing  
aids, screenings, etc. (or, if present –  
controlled or inactivated)

(Fibre +/-, Phytate Phosphorus, etc.)

# Efficacious:

Ingredient does what it is intended to do  
(provide balanced nutrition, etc.)

# Consistent:

Essential that the nutritionist/QC understand the nutrient profile; and not have to change it when (re)formulating feeds; and not have to monitor profile excessively.

# Economical:

Competitively priced to other sources of nutrients when feeds are formulated – important to have an accurate nutrient profile to evaluate fairly and completely.

# Canola Meal Provides:

Reasonable amounts of “balanced protein”

- Lower aa availability/digestibility, high(er) by-pass protein

Low levels of fats

- Lower energy, no fatty acids

High levels of fibre

- Monogastrics vs. ruminants (+/-)

Minerals

- Ca, (Phytate) P, K, (Sulfur), other micro-minerals

Vitamins

- Supplied in meal but inexpensive to add to diets

Other bio-active components??



# Inherent Nutrient Profile Places Canola Meal in:

- Maintenance/lower energy monogastric feeds
- Feeds where fibre is required or not detrimental to performance
- Ruminant (dairy/beef, etc.)
- Limited use in “specialty feeds” – niche market?

# Formulation trends:

Was:

Protein/energy(fat)/minerals/vitamins  
(order of formulation and limiting nutrients)

Now:

Energy(fat)/protein/minerals/vitamins  
(order of formulation and limiting nutrients)

# Relative Ingredient Energy Costs:

Ingredient

cents/1000 kcal AMEn\*

\*Depends on \$ cost/kg, energy term used, and energy value assigned

Barley	6.694
Wheat	6.774
Corn	5.882
Peas	7.692
Canola Meal	8.736
Soybean Meal, deh.	14.375
CDDGS	7.000
Animal Tallow	9.210
Canola Oil	11.040

Calories from fat actually cost ++1.5 x more than from carbohydrates

# Ways to Improve Canola Meal – (Separate the Components):

- Physical separation
- Chemical separation
- Enzymatic separation
  
- Genetic Inputs into Whole Plant
- Palatability concerns??
- Color concerns??
- Reduce add-backs

# Next Generation Canola Meal:

- Monogastric Base: higher amino acid digestibility, increased energy level (reduced fibre level or increased fibre digestibility)
- Ruminant Base: Protein/amino acid bypass values increased, fibre level (+/-)
- Valid concern about “bin space” for segregated meals; also transportation of “fibre”.
- Combine with another complementary feed ingredient??
- Remember: Price Point ultimately determines use. Industry will find a place if economically sound.

# Summary:

Feed Industry - Canola Meal wants:

- Increased Energy Content of Meals
- Increased fibre digestibility (all species)/ +/- increased bypass protein (for ruminants)
- Improved (aa/energy) digestibility and definition for monogastrics
- Safe, efficacious and consistent product, improved palatability - No surprises on nutrient profile
- Other possible uses – specialty feeds, bioactive/other components, etc.

-Thank You -

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Canola Meal and Feed Industry Use