Rumen *in situ* Undegraded Protein (RUP) and Dry Matter Digestion (DMD) Guidelines for Commercial Feeds

Summarized by Dr. John Goeser, PAS & Dipl. ACAN
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	RUP, % of CP			DMD, % of DM		
Feed Type	**Goal***	**Average**	**Minimum***	**85th %**	**Average**	**15th %**
Canola Meal	46.0	33.5	20.0	79.2	63.9	47.0
Soybean Meal	37.5	23.6	12.5			
Roasted Soybeans	46.9	35.8	23.5			
Extruded/Expelled Soybean Meal	62.8	49.0	34.7			
Corn Gluten Meal	45.6	32.9	20.6			
Corn Gluten Feed	22.0	16.3	10.2			
Brewers Grains	67.8	52.1	30.4			
Corn DDGS	68.8	51.7	419			

	RUP Intestinal Digestibility, % of RUP		
Feed Type	**Goal**	**Average**	**Minimum**
Protein Feed	> 90%	70 - 80 %	< 50%

*Rock River Laboratory guidelines were determined using our database statistics and references listed below. Goals and Minimums correspond to 85th and 15th percentiles.

Note:
These benchmarks are appropriate for lactating cows. Rock River Laboratory utilizes a 16h *in situ* rumen digestion procedure in lactating dairy cows, further described by Goeser et al. (2013), an *in vitro* intestinal digestion procedure based upon the technique described by Gargallo et al. (2006) and later modified by Boucher et al. (2009).

References

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