

Dry Matter and As Fed Conversions, Unit Conversions

REMEMBER TO SHOW ALL YOUR CALCULATIONS!

1. Fill in the following table:

Ingredient	%DM	Dry matter amount, lb	As fed amount, lb	% of diet As fed
Barley	91		6	
Soybean meal	95		2	
Grass hay	88		20	
Total	XXXXXXXX			100%

2. A sample of corn containing 12 % water has been analyzed and found to contain the following nutrients on an as-fed basis. Convert the nutrients to a dry matter basis.

Nutrient	As-fed	Dry matter
Protein	8.62%	
Fat	3.57%	
Crude fiber	1.95%	
Calcium	0.026%	
Phosphorus	0.28%	
Niacin	0.20 mg/kg	
Vitamin E	25.0 IU/kg	
Lysine	0.23%	

3. A sample of corn silage containing 33% dry matter has been analyzed and found to contain the following nutrients on a dry matter basis. Convert them to as fed basis.

Nutrient	Dry matter	As fed
Protein	8.6%	
Fat	2.6%	
Crude fiber	17.2%	
Vitamin A	58.10 IU/g	

4. Convert the following:

- 2000 Kcal/kg to _____ Mcal/kg
- 5 tons to _____ kg
- 35 lb/ton to _____ %
- 25 mg/kg to _____ %
- 43 mg/ton to _____ ppm
- 0.04 % to _____ ppm

5. The composition of timothy hay is 8.6% protein, 2.4% fat and 39.2% crude fiber (as-fed basis). How many pounds of protein, fat, and crude fiber are present in a ton of hay?

6. Corn contains 90% TDN and barley contains 84% TDN. How many lbs of barley will it take to supply as much TDN as a ton of corn?

7. Barley grain contains 88% dry matter. If you are feeding 12 lb. of barley to a feedlot steer on a dry matter basis, how much are you feeding on an as fed basis?