

Animal Requirements

**REMEMBER TO SHOW ALL YOUR CALCULATIONS!**

1. Use the provided handout tables and determine the DM intake, TDN, CP (Crude Protein, same as Total Protein), and Ca requirements for the following animals:

1. a 154 lb nonlactating ewe during the first 15 weeks of gestation
2. a 154 lb ewe last 4 weeks gestation (130-150% lambing rate expected)
3. a 154 lb ewe first 6-8 weeks lactation suckling singles
4. a 198 lb ewe first 6-8 weeks lactation suckling singles
5. a 154 lb ewe first 6-8 weeks lactation suckling twins
6. a 132 lb replacement ewe lamb
7. a 132 lb replacement ram lamb

Animal	DM intake, lb	TDN, lb	CP (Total protein), lb	Ca, g
1				
2				
3				
4				
5				
6				
7				

What kind of conclusions can you draw about the effects of body weight, stage of gestation, level of milk production, and sex on nutrient requirements?

2. Use the provided handout tables and determine the requirements for a 1400 lb cow nursing a calf (her calf's expected 7 month weight is 660 lb). She just calved, and you want to know her requirements for the month after calving. During this month it is 10°F (be sure to adjust her energy requirement appropriately). Feed her enough Alfalfa hay (sun-cured, mature; 88% DM, 50% TDN, 13% CP, 1.18% Ca, 0.19% P; all on DM basis) to meet her dry matter intake. Calculate in the table below how much TDN, CP, Ca and P this amount of hay supplies. Are her requirements being met? If not, how much is she short of TDN, CP, Ca and P? (Use dry matter basis for all calculations)

	TDN, lb	CP, lb	Ca, g	P, g
Daily requirements				
Daily requirements adjusted for environment				
_____ lb hay DM supplies				
Difference				

2. Calculate the amount of hay you are feeding her from above on an as-fed basis.

3. How much barley grain (89% DM, 84% TDN) in lb (dry matter basis) would be necessary to supply the deficit in TDN?

4. Calculate how much barley this would be on an as-fed basis.