Ration Formulation Handout

1. Formulate a 500 lb. cattle feed ration that requires a CP of 23%. Your feeds are corn at 9% CP and a supplement at 15%. Show ALL your work below.

8 parts corn

Corn – 9%

23

14 parts Supp.

Supp. –15%

22 total parts

8 parts corn / 22 total parts = .363636 x 100 = 37% corn

14 parts supp. / 22 totally parts = .636363 x 100 = 63% supplement

.37 corn x 500 = 185 lbs. of corn

.63 supp. x 500 = 315 lbs. of supp.

1. You have a goat that is on a feed that requires a CP of 30%. The CP of the two feeds you are going to use are barley at 7.2% CP and soybean meal at 18% CP. Using these two feeds, formulate a 150 lb. ration that meets the requirements of your goat. Show ALL work below.

12 parts barley

Barley – 7.2%

30

22.8 parts SBM

SBM – 18%

34.8 total parts

12 parts barley / 34.8 total parts = .3448 x 100 = 35% barley

22.8 parts SBM / 34.8 total parts = .6551 x 100 = 65% SBM

.35 barley x 150 lbs. feed = 52.5 lbs. barley

.65 SBM x 150 lbs. feed = 97.5 lbs. SBM

1. You are the owner of a feedlot trying to finish out some cattle for slaughter. You need 5000 lbs. of feed that have a CP of 55% at the lowest cost possible. You have several feed options to choose from. Utilizing these feeds, create a ration that meets the nutritional requirements of your cattle at the most efficient cost to you. Show ALL work, including the final cost of your feed!!

Corn- 8% CP, $ .76 per lb.

Barley – 7.8% CP, $. 62 per lb.

Wheat Straw – 13% CP, $1.02 per lb.

Soybean Meal – 44% CP, $2.50 per lb.

Molasses – 5% CP, $ .50 per lb.

Fish Meal – 50% CP, $1.00 per lb.

= $2824 total cost

.54 barley x 5000 lbs. = 2700 lbs. barley x $0.62 = $1674

.46 molasses x 5000 lbs. = 2300 lbs. molasses x $0.50 = $1150

50 parts Barley / 92.2 total parts = .5422 x 100 = 54% barley

42.2 parts Molasses / 92.2 total parts = .4577 x 100 = 46% molasses

92.2 total parts

42.2 parts Molasses

50 parts Barley

Molasses – 5%

Barley – 7.8%

55