Feeding Rations Notesheet C. Kohn, Waterford WI

Name: Hour Date:

Date Assignment is due: Why late? Score: + ✓ -
 Day of Week Date If your project was late, describe why**Directions**: Use the accompanying PowerPoint (*available online*) to complete this sheet. This sheet will be due upon the completion of the PowerPoint in class. These assignments are graded on a +/✓/- scale.

1. Feed costs are of producing beef.
2. Using feed as efficiently as possible is critical for a beef producer to be .
3. What is a feeding ration?
4. What is a balanced ration?
5. What are the six basic nutrients?
6. What is a nutrient composition?
7. Nutrients are measured as or the

of the total each nutrient

after
8. Why does a producer use the dry weight for this purpose if the feed that will be fed to the animal contains water?
9. As-Fed refers to
10. Because the amount of dry matter in feed can vary, a ration should be balanced on a

and then to account for

the .
11. How is the protein content of feed determined?
12. Why is nitrogen is the nitrogen content multiplied by 6.25?
13. Why measure nitrogen? Why not just measure protein?
14. Not all nitrogen-containing compounds are protein; these are called
15. True or false: NPN is not actually used by the cow. Explain:
16. True or false: NPN is not as valuable as actual protein for cattle with high-protein needs.
17. True should be used for the majority of
in a feeding ration.
18. Crude Protein consists of two kinds of actual protein:
19. DIP, or will be
20. UIP, or will

and will
21. UIP is also known as
22. True or false: because DIP is broken up by microbes in the rumen, the cow should only be fed UIP.

Explain:
23. Energy is not an actual but a reflection of the provided by

the
24. What is TDN?
25. TDN refers to the total amount of
components of a ration.
26. Fiber is a measure of the of the feed.
27. True or false: because fiber is essentially just cellulose, the type of fiber fed to a cow does not matter. It will all break down easily well.

Explain:
28. Besides providing a fermentable source of energy to rumen microbes, what other critical role does fiber play?
29. What would happen if fiber in a cow’s diet were completely replaced with more-easily digestible sources of energy such as corn?
30. What is the scratch factor?
31. True or false: if a cow is fed the appropriate amount of fiber for pH balance, it cannot get acidosis?

Explain (hint: particle size):
32. How are macrominerals measured differently than microminerals in a cow’s ration?
33. What is ppm?
34. True or false: because vitamins are all water soluble, you cannot overfeed them to a cow. Explain:
35. True or false: fat soluble vitamins are more likely than water soluble vitamins to be deficient and to be overfed.

Explain:
36. Water is usually not specifically factored into a feeding ration because
37. If water is not freely available to a cow,

and , making it critical to the
38. Why should well water for cattle be tested?
39. The nutritional requirements of cattle are determined by two main factors:
40. The needs of the animal are determined by
41. Environmental factors include
42. Cattle should be according to
43. Common groupings of cattle include
44. Briefly summarize the needs and characteristics of each of the following groups.

Growing weaned calves:

First-calf heifers:

Mature cows:

Mature bulls:

Newborn calves:
45. How a group of similar cattle are fed is determined through
46. A nutrient requirement table is similar to a for except that instead of

 the table describes the

needed .
47. These nutrients are listed as of the

of the given to that .
48. What are ionophores?
49. Ionophores increase

while decreasing
50. True or false: Ionophores are a type of antibiotic and overuse increases the risk of antibiotic resistance.

Explain:
51. What are implants?
52. Implants ensure that a are similar to an

 . This ensures appropriate

and , traits that otherwise would be after

the animal was .
53. True or false: hormone implants are pumped into a cow to unnaturally high levels to make them grow as quickly and cheaply as possible.

Explain:
54. Once the of a group of cattle are determined, the feeding ration needs to

be tested to ensure it .
55. Briefly summarize the two ways in which the nutrient composition of a feeding ration can be determined:
56. Why pay to send a ration to an Extension office? Why not just use the nutrient composition tables for free?
57. What is a University Extension Office?
58. What is a land grant university?
59. What were the Morrill Acts?
60. What are some examples of land-grant universities?
61. What is the final step in developing a feeding ration?
62. The Pearson Square method is
63. Using the space below, show how a producer would use a Pearson Square to determine the appropriate ratio of fescue to shelled corn for a 500 lb. steer with a desired rate of gain of 2 lbs. per day. Use arrows and written descriptions to show how you used this square to determine this feeding ratio.
64. Once the preliminary ration has been determined, the producer must next determine if this ration
65. If the crude protein requirement is met or exceeded by this ration,
66. However, if the crude protein requirement is not met by this ration, it will
67. If fescue comprised 58% of the ration and has 10% crude protein, and shelled corn was 42% of the ration and has 9.8% crude protein, how would you use this information to determine the crude protein provided by this ration? Show your work below and describe how you came to your conclusion:
68. If your 500 lb. steer needs 12.9% protein, show how you would use a Pearson Square to adjust its ration. Use arrows and written descriptions to show how you used this square to determine this:

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1. What is a topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
2. What is a 2nd topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
3. What is a 3rd topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept: