



2022 NATIONAL FFA HORSE EVALUATION

TEAM PRACTICAL ACTIVITY #1

Feed Calculation (10 points per question) 50 points

Calculating the cost of forages is important to any horse owner to provide the best possible forage at the most economical level for the owner. Many times producers may have to decide between different forage products. Please see the information below and answer the following questions.

Table 1.

Forage	Weight	Price	% Waste when fed
Alfalfa/Mix Round Bale	1,200 lbs	\$100	10%
Alfalfa/Mix Small Square bale	60 lbs	\$5.00	5%

1. Calculate the price per lb of actual hay fed after waste is removed for the alfalfa/mix round bale. (**Hint:** this calculation should be in price per lb to the nearest \$0.001)
 - A. \$0.083
 - B. \$0.104
 - C. \$0.082
 - D. \$0.093
 - E. \$0.092
2. Calculate the price per lb of actual hay fed after waste is removed for the alfalfa/mix small square bale. (**Hint:** this calculation should be in price per lb to the nearest \$0.001)
 - A. 0.093
 - B. \$0.088
 - C. \$0.089
 - D. \$0.092
 - E. \$0.087

Another factor in purchasing and storing forages is the percent moisture of the forage. Please review the recommendation regarding ideal storage moisture and the formula to calculate percent moisture to answer the following questions.

“Knowing the moisture (dry matter) content of forage at the time of harvest and storage is essential for making and preserving high-quality hay. Knowledge of dry matter content is also important for accurately formulating rations. Hay harvested and stored at too high a moisture content (greater than 20%) will result in spoilage and possibly spontaneous combustion. Harvesting hay when it is too dry results in excessive leaf loss; this reduces the feeding value and increases dry matter loss.” *Unit Three: Equine Nutrition from Equine Science Curriculum, National Council*

Calculating percent moisture

$$\text{Percent Moisture} = \frac{(\text{wet weight}) - (\text{dry weight})}{\text{wet weight}} \times 100$$

Sample #1: 24 lbs wet weight, 18 lbs dry weight

Sample #2: 32 lbs wet weight, 26 lbs dry weight

3. What is the percent moisture of sample #1 to the nearest 0.1%?
 - A. 17.5%
 - B. 25.5%
 - C. 25.0%
 - D. 18.8%
 - E. 8.3%

4. What is the percent moisture of sample #2 to the nearest 0.1%?
 - A. 43.8%
 - B. 25.5%
 - C. 25.0%
 - D. 18.8%
 - E. 8.3%

5. According to recommendations, which is the more ideal sample for storage with less risk of spoilage, sample 1 or sample 2?
 - A. Sample 1
 - B. Sample 2