**Name:**

**Reading Feed Tags Lab**

Learning Objectives

1. Students will identify and evaluate a feed ration based on it’s feed tag.
2. Students will apply prior knowledge of nutrition to make informed decisions on small animal nutrition issues.

**Definitions**

* Crude Fiber: The cellulosic material obtained as a residue of chemical analysis of vegetative substances. Primarily composed of lignin.
* Crude Protein: A mixture of true protein and non-protein nitrogen in a feedstuff. It is an indicator of the capacity of the feed to meet an animals protein needs.
* Dry Matter Basis: The amount of dry matter in a feed. Used to compare nutrient composition in rations by eliminating moisture content in feeds.
* Fat: One of the six main classes of nutrient. Needed for overall animal health.
* Fiber: One of the six main classes of nutrients. Found in plant cell walls.
* Guaranteed Analysis: The amount of a nutrient that is guaranteed to be in a feed. Feeds may contain more than the guaranteed analysis (minimum guaranteed) or less than the guaranteed analysis (maximum guaranteed).
* Moisture: Water in a feed. Must be removed mathematically in order to compare different feeds.
* Protein: One of the six main classes of nutrients. Composed of amino acids and used as structural components such as muscle, hair and other tissues.
* Total Digestible Nutrient: The energy value of a feedstuff.

**Step 1:**

Pick out a feed tag from the given supplies. Try finding one that you might use in your ‘real life’ outside of the classroom.

**Step 2:**

Locate the “Guaranteed Analysis” table on the feed tag. Record the guaranteed analysis of your own feed in the following table and answer the questions that follow.

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| --- | --- |
| **Nutrient** | **Amount (units)** |
| *Ex: Crude Protein* | *42.0%* |
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Answer the following questions:

1. **What does “Guaranteed Analysis” mean in terms of specific amounts of nutrients in a feed?**
2. **Why might some nutrients have a minimum guaranteed analysis while other nutrients have a maximum guaranteed analysis?**

**STOP! Do not proceed until you have been given a stamp by the instructor.**

**Step 3:**

Determine the composition of the feed on a dry matter basis.

**Why would we want to know the composition of the feed on a dry matter basis rather than by including moisture?**

To do this, first subtract the percentage of moisture from 100 (total percentage)

100% - 5% Moisture = \_\_\_\_\_\_\_\_\_\_% Dry Matter

Next, convert the protein, fat and fiber percentages to a dry matter basis.

To do this, divide the percentages of protein, fat and fiber by the percentage of dry matter (previous calculation)

\_\_\_\_\_\_\_\_\_\_% Protein / \_\_\_\_\_\_\_\_\_% Dry Matter = \_\_\_\_\_\_\_\_\_\_ % Protein on a Dry Matter Basis

\_\_\_\_\_\_\_\_\_% Fat / \_\_\_\_\_\_\_\_\_\_% Dry Matter = \_\_\_\_\_\_\_\_\_\_\_\_\_% Fat on a Dry Matter Basis

\_\_\_\_\_\_\_\_\_% Fiber / \_\_\_\_\_\_\_\_\_\_\_% Dry Matter = \_\_\_\_\_\_\_\_\_\_\_\_% Fiber on a Dry Matter Basis

Answer the following questions:

1. **Why is the percentage of protein, fat and fiber different on a dry matter basis than what is shown on the feed tag?**
2. **How could the guaranteed analysis potentially mislead consumers who don’t convert the composition of the feed to a dry matter basis?**

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**Step 4:**

Identify major ingredients in your feed.

All feeds are made of component ingredients. In any labeling of animal feed or human food, the ingredients are listed by total weight in the feed. The ingredient that makes up most of the feeds weight is listed first in the list.

**Does the order of the ingredients on the label matter? Why or why not?**

List the top five ingredients by weight in your feed:

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Answer the following questions:

1. **Why is it important to know what ingredients are in a feed ration?**

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**Step 5:**

Identify nutrient composition of top five ingredients.

Using the provided feed composition table, identify the Total Digestible Nutrient (TDN), Crude Protein (CP) and Crude Fiber (CF) percentages of the top five ingredients in your feed. If an ingredient is not included in the table, write “Not Included).

|  |  |  |  |
| --- | --- | --- | --- |
| **Feedstuff Ingredient** | **Total Digestible Nutrients % (TDN)** | **Crude Protein % (CP)** | **Crude Fiber % (CF)** |
| *Ex: Alfalfa Fresh* | *61%* | *19%* | *27%* |
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Answer the following questions:

1. **How might we use a feed composition table when formulating a ration? Think about how the percentages of Total Digestible Nutrients, Crude Protein and Crude Fiber may play a role in feedstuff choice.**

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When done, write your names at the top of the sheet and turn into the instructor.