

What's the Feed Recipe? Worksheet

There are many things to consider when creating a horse's diet, such as age, breed, use, and activity level, among others. Since horses are natural grazers, one could consider that a horse's dietary needs of carbohydrates, protein, fat, and vitamins/minerals, may be met with forages alone. A horse kept in a well-managed pasture could easily eat 20 to 30 pounds of plant matter each day. Some horses, such as those being worked regularly, growing, or lactating, may need a different mix of nutrients for optimal health. Some horse owners may not have enough pasture for regular grazing, so that is also a consideration. Let's look at a horse profile and try to understand what diet this horse may need.

Choose a horse profile and answer the following questions.

1. What is the horse's age? _____ Weight? _____
2. How would you rate the horse's activity level? Circle one: No work Light Moderate Heavy
3. Does this horse require more protein than the average horse? Why?
4. What other factors may impact the amount of food this horse receives?
5. Most horses eat about 2% of their body weight in food, and that is a good starting point when creating a diet for horse with light activity. Calculate that number below. Do you think this horse may need more or less food?

Horse Weight	% Body Weight	Total Food Weight
Lbs. X	<u>2</u> /100	= Lbs.

If you need to supplement a horse's diet with concentrates/grain to meet specific nutrient requirements, most horse nutritionists suggest feeding horses at least 1.5% of their body weight in forages (hay/grass).

Horse Weight	% Body Weight	Total Forage
Lbs. X	1.5% /100	= Lbs.

Answer the "Group Questions," then research different horse forages and feeds. What would be your recommended diet for this horse?

What's the Feed Recipe? Instructions

1. Have students do some reading or provide instruction on horse feeding recommendations. Horse nutrition publications from the University of Kentucky can be found at <http://afs.ca.uky.edu/equine/equine-publications>. The Oregon State 4-H horse project guide also has a great summary (see page 62). Include information on Body Condition Scoring.
2. Place students in groups of at least 2 and give each a horse profile and have them fill out the student worksheet.
3. Allow them to use a calculator for their work.
4. Prior to the last activity, have students read their horse profiles to the group, then ask the Group Questions below. This is the most important part of the activity, to determine if they understand that horses have different nutritional needs and adjustments may need to be made.
5. The last question asks them to research different feed stuffs and recommend a diet. You may provide different examples to show them with nutritional information and labels. This may also be a great time for feed identification. Students may check their recommendations for calorie and fiber needs at <https://www.standleeforage.com/tools/feed-calculator/>. A more detailed feed balancer can be found at <https://nrc88.nas.edu/nrh/>, but students will need to input label information.

Group Questions:

1. **What horses have the highest nutritional needs? Why?**
2. **What horses have the lowest nutritional needs?**
3. **What horses may require a nutritionist consultation?**
4. **What horses may need a change in their diets?**

Digging Deeper:

1. Have student practice using a weight measuring tape.
2. Provide a utility scale and have students weigh the amount of hay they typically provide their horses. Does this align to the recommendation for your horse's body weight? Is it too much, too little, or just right? Discuss factors that can affect forage weight and quality.
3. Have students weigh concentrates and compare the volumes of the same weight of feeds. Have students create graduation marks for different weights on their chosen "scoop" so they can easily measure feed.
4. Evaluate pastures at different times of the year and talk about factors that may impact the amount of grass a horse consumes.
5. Attend a lecture provided by a horse nutritionist.



Horse Profile: Racehorse in Training

- This horse is 3 years old and still growing.
- He currently weighs about 1,000 pounds and is 16 hands tall.
Body condition score: 4
- He is exercised on the track 4 to 5 days per week, and may have light exercise on his off days.
- No pasture is available.



Horse Profile: Trail Horse

- This gelding is 15 years old.
- He currently weighs about 1,250 pounds and is 15.2 hands tall. Body condition score: 7
- He has access to pasture/turn-out during the day and may be taken on a light to moderate ride once or twice per week.
- It is winter, and grass is scarce.



Horse Profile: Early Lactating Mare

- This Thoroughbred mare is 7 years old and recently gave birth to a foal.
- She weighs 1,100 pounds and is 15.3 hands tall. Body condition score: 5
- She is turned out on pasture for about 6 hours most days.



Horse Profile: 4-H Project Pony Mare

- This grade mare is 9 years old. She is 13.3 hands tall and weighs about 750 pounds. Body condition score: 6
- She is ridden several times a week on trails and in the arena for drill team practice.
- She is kept on pasture most of the time.



Horse Profile: Schooling Horse

- This Paint Gelding is 17 years old. He is 14.3 hands tall and weighs about 950 pounds. Body condition score: 5
- He is ridden twice for about an hour on most days out in the arena and on trails. He does some jumping, and is occasionally taken to a show.
- Pasture turn-out is limited, but he is placed in a paddock with hay most nights.



Horse Profile: Clydesdale Yearling Colt

- This Clydesdale yearling colt is growing quickly and is expected to reach 18 hands in height.
- He is most often kept in a paddock with other yearlings, but is being handled daily. This may include some light lunging.
- Body condition score: 5



Horse Profile: Senior Gelding

- This Appaloosa gelding is 25 years old and has been used as a schooling horse most of his life.
- He is 15.2 hands tall and weighs about 1,100 pounds. Body condition score: 5
- He is lightly ridden a few times per week but is starting to show ribs without changing his diet.



Horse Profile: Dressage Dutch Warmblood

- This Dutch Warmblood mare is 12 years old. She is 17.1 hands tall and weighs 1,300 pounds. Body condition score: 5
- She is trained for 1 hour about 5 days per week.
- Turnout is limited, but she is handgrazed a few times per week as a post workout treat.