CONCLUSION

Horse, which often makes up a considerable portion of a horse’s diet, can vary greatly in quality. As a horse owner, you should consider the quality of the hay you buy before you consider the price. A good quality hay is a better buy because, although it may be more expensive initially, you will use less to meet your horse’s needs, with less waste.

REFERENCES

Publications
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Table 1. Typical Test Values of Legume and Grass Hays Harvested at Various Stages of Maturation

<table>
<thead>
<tr>
<th>Type of Hay and Stage of Maturation</th>
<th>Acid Detergent Fiber (ADF)</th>
<th>Detergent Fiber (DF)</th>
<th>Total Digestible Nutrient (TDN)</th>
<th>Crude Protein (CP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legume Pre-bloom</td>
<td>20</td>
<td>8.2</td>
<td>66</td>
<td>18</td>
</tr>
<tr>
<td>Legume Full bloom</td>
<td>22</td>
<td>9.1</td>
<td>65</td>
<td>16</td>
</tr>
<tr>
<td>Legume Post-heading</td>
<td>26</td>
<td>9.5</td>
<td>62</td>
<td>12</td>
</tr>
<tr>
<td>Barley Pre-heading</td>
<td>32</td>
<td>7.8</td>
<td>44</td>
<td>10</td>
</tr>
<tr>
<td>Barley Full bloom</td>
<td>36</td>
<td>6.5</td>
<td>40</td>
<td>8</td>
</tr>
<tr>
<td>Barley Post-heading</td>
<td>41</td>
<td>5.1</td>
<td>38</td>
<td>6</td>
</tr>
</tbody>
</table>

Other Sources
Kooperman, W., P.O. Box 238, Culver, OR 97734

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Extension Serving Oregon County, C. D. Sherman, director. This publication was printed and distributed in fulfillment of the Act of Congress of May 18, 1862, in the 4th Section of the Eighty-Eighth Congress, 19th Session, and Title I, Section 5 of the 1972 Food and Agriculture Act. The Oregon State University Extension Service is an Equal Opportunity Employer.

Horse Owner’s Guide to Buying Hay

To buy good hay for meeting a horse’s nutritional needs, it is necessary to understand something about the horse’s digestive system. The digestive system (fig. 1) is made up of a single, large-capacity stomach, the small intestine (the main site of absorption for carbohydrates, proteins, and fats), and the large intestine, which functions in the absorption of the last small amount of nutrients.

The large intestine contains a microflora that helps to digest fiber. The horse cannot synthesize such nutrients, and the microbial activity in the large intestine is necessary for proper digestive function. Horses are simple-stomach herbivores, so their digestive system is not as complex as that of ruminants, which contain the rumen and have a reticulorumen digestive system.

The high-quality hay is of great importance to the horse’s digestive system. The large intestine contains a microbial population that helps to digest fiber. The horse cannot synthesize such nutrients, and the microbial activity in the large intestine is necessary for proper digestive function. Horses are simple-stomach herbivores, so their digestive system is not as complex as that of ruminants, which contain the rumen and have a reticulorumen digestive system.

REFERENCES


Vough, L. R., M. F. Adams, and W. Vough, Funding Grass Cost in the Horse's Nutrition Program (The High Quality Forage Council, 1984).
For most current information:

THIS PUBLICATION IS OUT OF DATE.

The energy requirements of mature horses can vary depending on the animal's stage of maturity, work output, and health status. It's essential to provide horses with a diet that meets their energy needs to prevent weight gain or loss. Inactive horses require less energy compared to working horses or those recovering from illness.

Protein is crucial for growth and maintenance. Increasing a horse's work output can necessitate an increase in protein content to meet the increased energy demands. However, the protein requirements of horses do not increase proportionally with energy demands. A balanced diet is key to maintaining optimal health and performance.

The energy requirement for mature horses is determined by their weight and activity level. Horses at rest need less energy than those engaged in high-intensity work. Factors such as age, sex, and body condition also influence energy requirements.

Energy intake is closely tied to energy output. The energy balance in horses is critical for maintaining body condition and preventing weight loss or gain. A negative energy balance can lead to muscle and fat loss, while a positive energy balance can result in weight gain and obesity.

Vitamins are essential for horses as they contribute to various physiological processes. Most vitamins can be synthesized by the horse's body, but some exceptions like vitamin D need to be supplied. The correct ratio of these elements is crucial for bone and joint health.

Selenium is another nutrient that deserves attention. Manganese and selenium work together to form antioxidant enzymes, which are vital for maintaining muscle function and preventing muscle problems like tetany.

Hay and grass are the primary sources of fiber for horses. Adding fresh hay to their diet helps maintain normal digestive function and provides a steady source of fiber. However, it's important to consider the quality and type of hay when selecting a feed source.

Protein is a crucial nutrient for horses, especially for those in growth stages or recovering from illness. Providing a diet with the correct amount of protein is essential for optimal growth and recovery.

Applications for hay and grass can be different depending on the horse's needs and the season. Horses in light work may require less frequent feeding, while those in heavy work may need more frequent access to feed. Ensuring horses have access to fresh water at all times is critical for their health.

Thriftiness applies to horses as well as other livestock species. Providing a diet that meets the animal's energy and nutrient needs efficiently is essential for maintaining optimal health and performance. The goal is to balance the horse's energy intake with its energy output.
The horse's digestive system

Horses are simple-stomach herbivores and have a large intestine containing a microbial population that helps them digest fiber. The large intestine contains a microbial fermentation that helps in digesting fiber. The oxygen, however, is usually not readily available for the microorganisms. The microbial fermentation results in the production of usable energy, minerals, and vitamins. To buy good hay for meeting a horse's nutritional needs, it is essential to understand something about the horse's digestive system. The digestive system (Fig. 1) is composed of a small, single capacity (2-4 gallons) stomach, the small intestine (the site of absorption of carbohydrates, proteins, and fats), and the large intestine, which is composed of the cecum and the large and small colon. Because of the small capacity of the stomach and the lack of ruminal digestive system, good nutritional requirements of horses performing medium to heavy work cannot be satisfied by forage alone. However, hay is essential for proper digestive function. Horses are simple-stomach herbivores. The oxygen and color of the large intestine contain a microbial fermentation that helps in digesting fiber. The large intestine contains a microbial fermentation that helps in digesting fiber. The oxygen, however, is usually not readily available for the microorganisms. The microbial fermentation results in the production of usable energy, minerals, and vitamins. The digestive system (Fig. 1) is composed of a small, single capacity (2-4 gallons) stomach, the small intestine (the site of absorption of carbohydrates, proteins, and fats), and the large intestine, which is composed of the cecum and the large and small colon.
forms of including baled, pelleted, and supplemented hay. Properly supplemented with protein, energy, minerals, and vitamins. Horse feeding programs require special handling equipment.

CONCLUSION

Hay, which often makes up a considerable portion of a horse's diet, can vary greatly in quality. As a horse owner, you should consider the quality of the hay you buy before you consider the price. A good quality hay is a better buy because, although it may be more expensive initially, you will save less to meet your horse's needs, with less waste.

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Horse Owner's Guide to Buying Hay

The bulk of a horse's diet is usually some form of roughage, especially alfalfa or grass hay. Therefore, it is important that horse owners know how to evaluate and buy good quality hay. This publication describes the horse's digestive system and nutrient requirements, and methods of evaluating hay. Knowing how to evaluate quality will help you spend your feedbill dollars more efficiently.

THE HORSE'S DIGESTIVE SYSTEM

To buy good hay for meeting a horse's nutritional needs, it is important to understand something about the horse's digestive system. The digestive system (Figure 1) is composed of a single, small-capacity stomach, the small intestine (the area of absorption for carbohydrates, proteins, and fats), and the large intestine (the area of storage and the large and small colon).

Because of the small capacity of the stomach and the lack of a rumen digestive system, good quality hay is necessary to meet the nutritional requirements of horses performing moderate to heavy work cannot be satisfied by forage alone. However, roughage is essential for proper digestive function. Horses are simple-stomached herbivores. The large intestine contains a microflora that helps digest the fiber. The colon, however, is located behind the small intestine, and forms a natural antacid system to protect the gut wall. Horses cannot digest fiber as well as cattle can.

Figure 1. The digestive system of the horse. Adapted from Rohweder and Antoniewicz, 1984 (see references on back page).