Feeding Considerations for Broodmares

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The physiological demands of bred and lactating mares require special consideration and increases in the plane of nutrition. Ideally, mares should maintain a body condition score of five or six throughout the winter so that they are prepared to enter the breeding season. Mares that are too thin will have reduced success in breeding. Fetal growth is greatest during the last two to three months of gestation and weight gain in a mare should be relative to fetal growth. During this time of increased fetal growth it is reasonable to feed a mare to reach a body condition score of 6 or 7. This increased plane of nutrition will prepare her for lactation, which is far more physiologically demanding in terms of feed (hay/grain), than gestation. Increasing her feed to the point that she carries much more condition will not increase the amount of milk she produces. In fact, milk quality will decline if she becomes obese. This article provides guidelines to achieve a balance between feeding mares for optimum health and success in breeding and lactation.

WATER

Access to clean, fresh water is essential for a healthy animal. Horses will drink 10-12 gallons of water each day, and the volume will increase depending on diet, lactation, and exercise. The horse has a large, unique digestive system. If a horse consumes food while dehydrated, it can result in a potentially life-threatening colic. When dehydrated, a horse will draw water from their digestive tract to use throughout the rest of the body. This results in a large, hard mass of feed in the digestive tract that will likely become painful, and difficult to pass. Supplying plentiful water and feeding frequent, small quantities of feed are good preventative measures. The amount of water mares will need increases as the quantities of food consumed increases. Lactation also causes a significant increase in the amount of water needed. It is advisable to provide unlimited access to clean, fresh water.

DAILY FEED INTAKE

A mare's daily feed intake should meet her nutritional requirements which increase during late gestation and again during lactation. Often, amateur horse owners will feed based on volume, rather than by weight which can result in a mare that is grossly under-fed or over-fed. The single largest component in the diet, at least 50%, must be forage. A diet composed primarily of good quality forage will be an economical way to meet most nutritional demands. By nature, horses are grazing animals; they consume small quantities of grasses throughout the day. Sometimes it is necessary to add a concentrate or supplement to a horse's diet to meet an increased demand in nutrition. Late gestation is a good example in which a mare will need additional nutrients to meet her own maintenance requirements, in addition to the demands of the growing fetus.

Characteristics of Good-Quality Hay	Characteristics of Poor-Quality Hay
Low moisture (<15%)	Higher moisture (can cause mold)
Green in color	Brown, yellow in color (white, gray and black indicate mold)
Sweet smelling	Musty, moldy, or fermented odor
Free of mold and dust	Dusty and moldy hay are unacceptable
Free of weeds, noxious plants, and foreign objects	Weeds, noxious plants, and trash

Adapated from Williams, 2004

An idle open mare or a mare during the first eight months of gestation will need very little, if any, concentrate (grain) in her diet to meet her nutritional needs. Fetal development is slow and steady during the first eight months of gestation. Mares with good body condition scores should be fed to maintain body condition during this time. In contrast, a broodmare will likely need concentrate added to her diet during months nine through eleven of gestation because fetal growth occurs very quickly during this time. In both cases, the majority of her diet should be composed of forage, rather than concentrate.

FEEDING FORAGES

Forage is the dietary base for feeding any horse. Forage demands can be met by pasture grazing or by supplementing with hay. Many high-quality forages thrive in the Midwest; these forages are high in fiber which is good for digestion. Forages can be tested for nutrient composition to help determine whether the hay alone is meeting the needs of a horse. The table provides visual guidelines to consider when buying or feeding horse hay. However, a visual assessment cannot determine the nutritional quality of hay.

A mare will have an increased requirement for specific nutrients during gestation and lactation. She will need more energy and protein to help develop the foal, along with greater concentrations of minerals and vitamins. Not even the best quality hay can provide all necessary vitamins and minerals; these should be added in the form of supplements. This will ensure the mare will have access to these important building blocks for the foal's bones.

SUPPLEMENTING A FORAGE-BASED DIET

Concentrates can be added to the diet to increase nutrient and energy intake. Concentrates should never be fed at more than 0.75% total body weight. For example, if a horse weighs 1,000 lbs, do not feed more than 7.5 lbs of concentrate at a time. If the horse needs 10 lbs of concentrate each day, split the grain in half and feed twice daily. Graining a horse introduces a style of eating that is not natural. Limiting the amount of concentrate fed at one time will help the horse digest its food with minimal complications.

Horses react poorly to sudden changes in diet. Rather than dumping grain into a broodmare's bucket at month nine of gestation, it is best to slowly incorporate grain. This transition should be done over a period of 10-14 days. Shop for a concentrate balanced to meet nutritional demands of a horse; horses require a balance of nutrients that differs from cattle and other animals.

Providing proper nutrition for a mare through breeding and lactation will keep her healthy and get her foal off to a healthy start. Fresh water and good quality forages provide most nutritional needs at these times. Add supplemental grains (concentrates) as needed to meet increased nutritional requirements late in gestation. Body condition will help determine if she needs extra nutrition along the way.