

Feeding the Weanling Requires Careful Consideration

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Few topics in equine nutrition stir more controversy than feeding the weanling. Many factors add to the confusion of providing nutrition at this critical stage of growth. For example, weanlings may have different commercial endpoints. Some will be shown in halter futurities where maximum growth and condition are required at a young age. Other weanlings will be prepared for sale, again requiring a “well-grown” individual. Still other weanlings will be kept on the farm to be used as replacement horses or future performance horses. These horses often have less pressure on them to look their best at a young age.

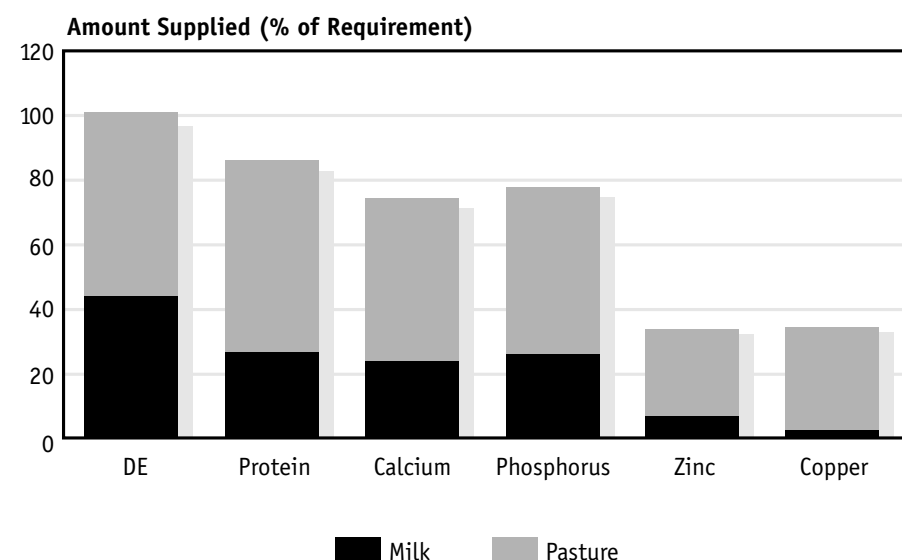
Another point of confusion rests with the breed of horse being fed. The phrase “you can’t feed an Arabian like a Thoroughbred” highlights the impact of differing genetics on growth rate and ultimately on the amount of feed the weanling is given. The influence of genetics on nutrition is well understood in other farm animals where it is common to have a different feeding program based on the genetics of the animal. In horses, the genetic diversity within a breed is often as influential a factor as the genetics between breeds. Quarter Horse weanlings bred for halter classes have a far greater capacity for muscle growth and development than weanlings bred for performance classes. Simply looking at the physical differences between halter horses and reining horses should point out the genetic differences and thus the need for different feeding programs. Finally, “good old difference of opinion” is a factor in feeding young horses. Some people like to feed grain to babies; others feel that feeding grain to young horses is the root of all evil. Although feeding weanlings is confusing, the fact remains that nutrition mistakes (overfeeding or underfeeding) made early in life can lead to structural problems that limit performance potential.

Creep Feeding - Preparation for Weaning

One of the more complex management decisions that the breeder has to make is whether or not to creep feed foals. Creep feed is feed (usually grain) that is available to the foal, but not to the mare. Creep feeding has achieved somewhat of a negative connotation with many horse owners. The term “supplemental feed” is a more accurate term indicating that foals have access to a controlled amount of nutrients in addition to mare’s milk. The reasoning behind supplemental feeding of the foal is twofold. First is the issue of providing nutrients that may not be in adequate supply in the combination of mare’s milk and forage (pasture/hay). The National Research Council’s Nutrient Requirements of Horses published in 1989 does not give specific feeding recommendations for the suckling foal other than to say that supplemental feed prior to weaning may be desirable in foals nursing mares that are poor milkers. Recent research, both in the United States and Japan, has indicated that foals require supplemental feed to achieve growth rates desired by today’s horse owners. These studies revealed that foals not only require supplemental energy, but also supplemental protein and minerals.

Breed differences and forage consumption will indicate the amount of supplemental energy neces-

Figure 1. Four Month Suckling Foals – Milk + Pasture



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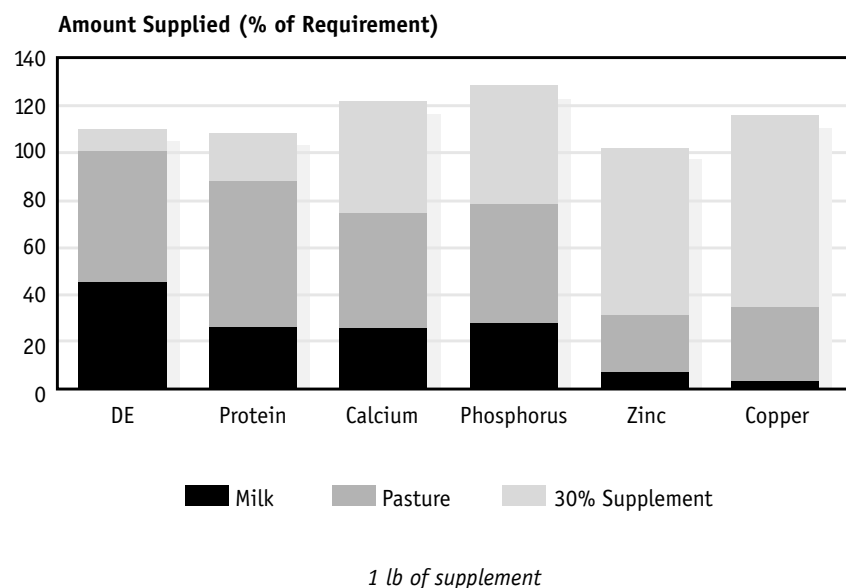
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Figure 2. Four Month Suckling Foals – Milk + Pasture + 30% Supplement



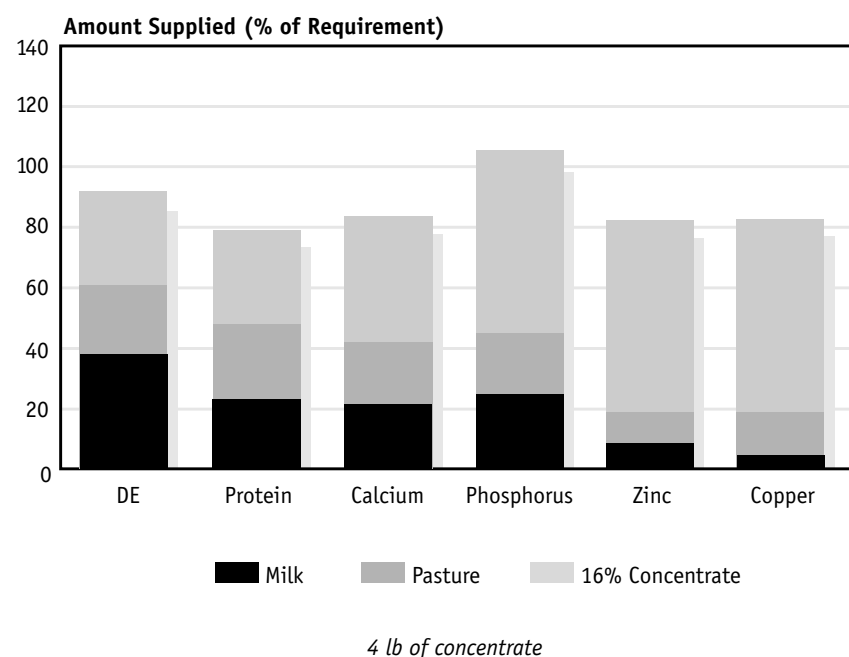
sary for a suckling foal to reach industry standards for growth. In some cases, foals may derive enough calories from milk and forage to achieve adequate growth. Figure 1 shows the amount of digestible energy a foal would achieve from milk and high quality pasture. This foal does not require any additional calories but would require mineral fortification. This represents a common scenario with warmblood foals. They get plenty of calories from milk and pasture and typically do not require supplemental grain to assist in body weight gain. However, feeding these foals a low-intake (one pound per foal per day), low-calorie source of vitamins and minerals would ensure they are properly fortified with nutrients critical for sound growth without making them obese. This diet scenario is shown in Figure 2.

A Thoroughbred foal given the same access to pasture and mare's milk may not be able to achieve industry standards for growth. Figure 3 shows a diet of milk, pasture and four pounds of a 16% protein fortified grain. Both the low-intake, low-calorie supplement and the 16% grain concentrate satisfy vitamin/mineral needs with the primary difference being the 16% grain provides more calories to the growing foal. So how does a horseman tell if his foal needs four pounds of well-fortified grain concentrate or just one pound of a concentrated protein, vitamin and mineral supplement? The answer lies

in body condition. If foals are well conditioned and are gaining an acceptable amount of weight to achieve their commercial endpoint on milk and pasture, choose the low-intake supplement. On the other hand, if the foal requires extra calories to keep pace with industry standards, feed the higher-volume, higher-calorie grain concentrate. An easy way to track foal weight gains is to utilize an equine weight tape or scale. Both will allow you to check the weight of your foal against normal growth rates for foals of that age and breed. Normal growth curves can be obtained from the National Research Council or the nutritionists at Kentucky Equine Research.

The second reason for feeding foals prior to weaning is to teach them to eat the feeds they will be expected to consume once they are weaned. Introduction of grain and hay will help prevent a post-weaning slump in growth. Post-weaning growth depression is often followed by surges in growth once the weanling learns to eat. This deceleration followed by rapid growth is thought to be a prime opportunity for the foals to get developmental orthopedic disease (DOD). DOD is a term used to describe a number of related diseases affecting the maturation of cartilage into bone in young horses. Clinical manifestations of

Figure 3. Four Month Suckling Foals – Milk + Sparse Pasture + 15% Concentrate



this disease include physitis (commonly but incorrectly called epiphysitis), osteochondrosis, osteochondritis dissecans (OCD), cervical malformation (wobbles), contracted tendons and angular limb deformities. Serious cases of DOD are economically devastating, eventually leaving valuable weanlings essentially worthless due to crippling lameness.

Example Weanling Diets

The philosophy behind feeding weanlings rests largely with expectations for individual horses. These expectations can be divided into three broad categories: futurity weanlings, weanlings to be sold as weanlings, and weanlings to be kept. The following discussion will highlight the potential differences in the feeding programs for each type of weanling.

Futurity Weanlings

A futurity weanling is usually between four and ten months of age. These weanlings are of light horse breeding (Quarter Horses, Paints, and Appaloosas, for example) and are shown at halter. Many weanlings are shown in futurity classes as it is the first opportunity to get young horses seen and promote stallions. Evaluation of weanlings is based on conformation, size and way of going. Therefore, it is an advantage for weanlings to be large-framed and stout. To achieve maximum growth and condition, weanlings are often fed large amounts of grain. It does little good to tell handlers raising futurity horses that they are feeding a young horse too much concentrate. If handlers do not maximize growth and condition early, they will not win a prize at the futurity. Balancing maximum growth, maturity and condition with sound skeletal development is the challenge of feeding futurity weanlings.

Normally, weanlings that are going to be prepared for futurities are kept in the barn from the time they are weaned until the time they are shown. This makes meeting nutrient requirements easier in some respects because

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horsemen do not have to account for the variation in pasture nutrient quality. One important consideration with futurity horses is weaning time. Weaning time is affected by the month of birth, the milk production of the mare and the date of the futurity. Foals born early in the year can remain on the mare longer than foals born in April and May. This extra time foals can spend with mares is often an advantage because the foals will continue to grow in a rel-

atively stress free environment. Foals that are born late run the risk of having to be weaned early. If foals are weaned too close to a futurity, it is likely that the weanling will appear pot-bellied due to a nearly unavoidable post-weaning slump.

The diet for futurity weanlings must be extremely palatable since they are being asked to eat large volumes of feed. The forage source should be a high quality mixed (alfalfa and grass) hay or a fine-stemmed alfalfa hay. Mixed hay is

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preferred because of the more ideal balance (ratio) of calcium to phosphorus. Hay should be offered to the weanling at a rate of approximately nine to ten pounds per day. The grain portion of a weanling diet is the primary vehicle for delivery of essential nutrients. Depending on the nutrient content of the hay, the grain will provide the majority of the energy (calories), protein, minerals and vitamins. Therefore, a grain concentrate designed for a weanling should be fortified with high quality protein, additional calories (from fat) and readily available minerals and vitamins. Generally, a grain concentrate appropriate for a weanling will contain at least 14% crude protein. If grass hay is being fed, the grain concentrate will contain between 16 and 18% crude protein. Many people are afraid to feed young horses too much protein for fear of causing bone problems. However, mild excesses in protein intake will not cause bone problems. Instead, imbalances in mineral intake or extremely rapid growth triggered by excess energy intake are likely causes of bone anomalies. The easiest method to determine if the grain contains all the necessary vitamins and minerals is to read the feed tag and be sure the grain concentrate is intended for use in young, growing horses. Grain intakes common for weanlings being prepared for futurities would approach nine pounds per day. Finally, an additional source of dietary fat is a must to provide calories for weight gain and essential fatty acids for hair and skin health. Vegetable oil and/or high fat stabilized rice bran are good sources of fat for these young horses.

Many people incorrectly believe a halter horse need only be fat to be successful. In fact, modern futurity weanlings must display muscle tone. Exercise is the method of choice to achieve muscle tone. Many methods of providing forced exercise are available, including hand walking, longeing, ponying, and treadmills. Ponying is becoming increasingly popular with weanlings since the

horses are not being asked to constantly turn as is the case with longeing. If the duration and intensity of exercise are too great for the individual weanling, injury and weight loss can occur. On the other hand, weanlings confined to stalls without adequate exercise will possess less bone and muscle mass than exercised weanlings. Any exercise program should be adjusted to the conformation and body condition of the individual horses. A single exercise program will not fit every weanling. Proper feed-

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ing and exercise are a large part of getting futurity babies to look the part. The other part of the program is health care and grooming. Weanlings must be wormed on a regular basis and have the necessary immunizations and grooming to look their best.

Sales Weanlings

A young horse destined to be sold as a weanling is much easier to feed compared with the futurity weanling. Weanlings that are being sold usually spend a portion of their day or night confined to stalls with the remainder of the time spent outside where they can graze and exercise. The combined effect of more time grazing and playing in a pasture and less time in a stall translates into fewer digestive problems with greater muscle tone and bone mass. Because forage is a large portion of their diet, sales weanlings typically eat fewer pounds of grain in a given day than futurity weanlings. Most sales weanlings would not exceed six to seven pounds of grain per day. On the other hand, it is rare for a sales weanling not to require at least some grain. Even weanlings described as "easy keepers" would require some extra nutrients (calories, protein, vitamins and minerals) provided by the concentrate to make themselves presentable for auction. Dietary fat is typically included in the diets for these weanlings as a means of assisting with hair and skin quality.

Weanlings to be Retained

Weanlings not going to sales or shows are typically fed in a more conservative manner. These weanlings do not

have to grow at a maximum rate or look their best at a young age. Instead, horsemen are trying to raise young horses that will be sound athletes. Generally the best way to assess the impact of the feeding program of these weanlings is through assessment of body condition. Weanlings should maintain a thrifty appearance in which the horse's ribs cannot be seen but can be easily felt. Monitoring weight along with an accurate condition scoring system allow for the assessment of quality and quantity of growth. The amount of grain necessary to maintain a thrifty appearance varies with the factors mentioned in the introduction of this article. Being able to feed weanlings as individuals and make necessary feeding adjustments is very important. "Easy-keeping" weanlings should be kept from becoming fat by being fed a low-intake, low-calorie source of essential protein, vitamins and minerals. On the other hand, weanlings that are large with much growth potential can consume normal amounts of fortified concentrate. A general rule of thumb for feeding weanlings is one pound of fortified grain per 100 pounds of body weight, up



Photo by Mark Llewellyn

to a maximum of six pounds per weanling per day. It is important to remember that foals from various light horse breeds will not weigh the same at a given age. Further, all young horses do not grow at the same rate or mature at the same time. Horses should be fed as individuals. ♾

Armor for the outside.



Armor for the inside.

The World's Oldest Team Sport Enjoys a Surge in Popularity

BY ROBIN STANBACK

The ability to combine the skill of a Tiger Woods, the agility of a Pelé, the speed of a Michael Johnson, and the stamina of a Lance Armstrong is what it takes to be a superior polo player - and that's just the horse! The human half of the team needs to possess similar exorbitant traits to take to the field in polo. It is not a game for the faint of heart. In this age of extreme sports, polo is fascinating sportsmen and spectators alike.

The game is said to have originated in Asia some 2000 years ago as a competition between nomadic warriors to help them hone their battle skills. It evolved into a valuable training tool for cavalry officers and was played from Constantinople to Japan throughout the Middle Ages. It was known as the

"Game of Kings" and competitions were fiercely joined by princes and their military officers. British planters who observed the sport being played in India adopted it for their own and in the early 1850s members of the English cavalry drew up the earliest rules. Polo crossed the Atlantic to the Americas in 1876 when publisher and adventurer James Gordon Bennett set up the first games in New York. Americans fell in love with the sport and polo clubs sprung up all over the East Coast.

The United States Polo Association (USPA) was established in 1890 to create a uniform method of handicapping players and to standardize the rules of the game. Founders hoped that by doing so they would raise the game to the status of a recognized American sport. By the 1930s they had exceeded their expectations. American players dominated the game in this decade producing legends like Texan Cecil Smith, a ten-goal player who held his rating for a record 25 years, and war hero Tommy Hitchcock, considered the best of best in international competition for 20 years. It became an Olympic sport that drew crowds exceeding 30,000 spectators at the international matches held at the Meadow Brook Polo Club on Long Island.

The depression and World War II stilled the momentum of enthusiasm for the sport but it rebounded at the end of the century. Today, in the United States alone, there are over 225 clubs sanctioned by the USPA with over 3,000 players as members. But the United States can no longer claim to be the dominating force in the sport. Polo has achieved worldwide popularity. There are 13 polo clubs in Africa, 16 in Asia, 42 in Europe and seven in Australia and New Zealand.

For over 30 years, Argentineans have claimed the top rankings in the world. Members of the Gracida family of Buenos Aires are renowned for their horses and their athletic ability. Another family, the Heguyas of Mexico, also dominates the sport. Players with the top rankings in the world travel from Hurlingham, England, to Palm Beach, Florida, to Palermo, Argentina, to La Quinta, California, and to other venues around the world to compete, taking with them entire stables of polo ponies.

What provides the fascination for this game in today's competitive, risk-all sporting environment is the speed and agility required of both horse and rider as well as the danger involved when eight horses and riders take to the field. The game requires two teams of four horse-and-rider combinations. The object is for one team to outscore the other by tipping the ball through the goalposts at either end of a 160- by 300-yard field. Team members assume an offensive or defensive position but, because of the huge size of the playing field and the speed with which the direction of the ball can change, the positions can alternate moment by moment. Unlike football or soccer where sides are changed at the quarter or the half, polo players change field sides after every goal to compensate for field and wind conditions.

A typical match lasts one and a half hours, divided into six, seven and a half-minute periods or chukkers. During these chukkers the play is fast and furious, so much so that one horse would be unable to be competitive in successive rounds. While it is possible to use the same horse more than once in a match, avid players often will bring six horses to a competition to enable them to have fresh horses and spares for every chukker.

There are very specific rules that govern how a competitor can move the ball down the field. Two mounted referees and one official off the playing field monitor the play. Short of interfering with the right-of-way established by the path of the traveling ball, riders may hook an opponent's mallet, steal the ball, bump the opponent's horse, or push a rival's horse off the line. Infractions are penalized by awarding the other team a free hit. The proximity to the goal of that hit depends upon the severity of the infraction.

Most polo matches are played on a handicap basis. The handicap is based upon a player's ability as judged by a select committee. In the United States, the National Handicap Committee meets yearly in October to review the handicap of every registered player. Each player is awarded a skill rating that will range from -2 for the lowest rating to 10 for the highest. In the history of the sport there have been very few players rated above six and an extremely low number rated 10. Today, there are only 11 registered 10-goal players in the USPA. This rating system helps determine a level of play. The handicap of all four team members is added together and compared to that of the opposing team. The lower of the two is subtracted from the higher and the difference is awarded to the lower rated side in goals. The handicaps also assure a certain level of play. A top player with a higher handicap may look for three others similarly rated to play on his team but other teams wishing to match their skills against them will know in advance what it will take to be competitive. Most matches see teams that are mixed between higher handicapped players and those with lower ratings. Games are rated according to the

players that comprise the teams. A 10-goal game would refer to one played by team members whose combined handicaps equal 10. This team could be comprised of a zero rated player and one each rating a one, a three and a six.

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Adam Snow of Aiken, Georgia is a nine-goal player. He explained, "It is to the advantage of the player to be slightly underrated so that the handicap helps the team, but you must remember that the handicap committee is extremely objective and largely made up of retired players who know and love the sport. Their goal is to fairly judge each player. They look for preparedness, number of wins, great horses and where the games have been played."

Mr. Snow is a good example of the dedication it takes to become a highly rated player. He is the third generation of his family to enjoy the game. He remembered, "I began riding when I was very young - eight or nine years old. I was a little bit afraid of the horses until our local club, the Myopia Hunt Club, had a tournament for the younger kids. About 11 of us all started out at the same time. Playing with my friends and riding all the time gave me the confidence I needed. I have been playing ever since. It is a thrilling sport."

Striving to achieve a 10-goal standard has demanded all of Mr. Snow's time. He has a string of 38 horses in various stages of training. "To make it to a rating of 10, I must have horses that are able to sustain a very high level of play. The quality of horses you ride helps to determine your rating. Thoroughbreds are wonderful horses for the sport because they can produce the speed that is needed, but you also need an animal that can maneuver through quick turns and changes in direction. Many people favor Thoroughbred/Quarter Horse crosses to combine speed and agility. My personal favorite is a little black eight-year-old Thoroughbred mare, Hale-Bopp. She is only about 15 hands high and just about as wide as she is tall. She has funny little ears that point in and a tremendous heart."

To keep his horses fit and healthy, Mr. Snow relies upon his wife, veterinarian Shelley Onderdonk, a successful horse-woman in the sport of three-day eventing. Together, they review every facet of their horses' daily regimes. Dr. Onderdonk cited their nutritional program as an example. "Because many of these horses have to travel long distances to compete, we have to formulate a feeding program that takes into account the changing nature of their forages. At home they may spend 14 hours on pasture. On the road



Photo by Mark Lewellyn