

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Historical Materials from University of
Nebraska-Lincoln Extension

Extension

1996

G96-1276 Creep Feeding Growing Horses

Kathleen P. Anderson

University of Nebraska - Lincoln, kanderson1@unl.edu

Pete G. Gibbs

Texas A&M University

Follow this and additional works at: <https://digitalcommons.unl.edu/extensionhist>



Part of the [Agriculture Commons](#), and the [Curriculum and Instruction Commons](#)

Anderson, Kathleen P. and Gibbs, Pete G., "G96-1276 Creep Feeding Growing Horses" (1996). *Historical Materials from University of Nebraska-Lincoln Extension*. 237.

<https://digitalcommons.unl.edu/extensionhist/237>

This Article is brought to you for free and open access by the Extension at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Historical Materials from University of Nebraska-Lincoln Extension by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.



Creep Feeding Growing Horses

This NebGuide discusses the benefits and implications of creep feeding horses during the growing period of development.

*Kathy Anderson, Extension Horse Specialist, University of Nebraska
Pete G. Gibbs, Extension Horse Specialist, Texas A&M University*

- [Location and Types of Creep Feeders](#)
- [Selecting a Feed](#)
- [Creep Feeding Management](#)
- [If You Cannot Creep Feed](#)
- [Summary](#)

Creep feeding, providing a place where foals can eat without interference from the mare and other horses, should be used if foals are to grow at optimum rates. Creep feeders are used to provide a nutritionally balanced, digestible concentrate to young nursing foals before weaning. The practice of creep feeding serves to supply nutrients beyond what a foal receives from mare's milk. And, creep feeding minimizes foals' intake of broodmare feed which often lacks the concentrated amounts of protein and minerals relative to the energy needed by foals. Creep feeders also decrease the chances for injury to a foal when competing for feed from the mare's feeder. Finally, creep feeders allow foals to become accustomed to eating concentrates before weaning time, thus reducing weaning stress.

Foals will show an interest in eating grain as early as two weeks of age, often consuming small amounts of feed along with the mares. Mares' milk production will begin to decline after 30 days, thus creep feed should be introduced within the first two months. Foals consuming good quality creep feeds will gain 2.5 to 3 pounds per day. Although optimum growth rate and specific energy requirements have not been identified for suckling foals, data from one study indicate consumption of milk accounts for less than 30 percent of energy needed by a four-month-old weanling. Consequently, there is some implied need for supplemental feeding of foals prior to weaning.

Location and Types of Creep Feeders

Any method that allows foals unlimited access to feed and prevents consumption by the mare will work for creep feeding. Feeders should be located in areas frequented by mares and foals such as near water, shade, or mare feeding areas.

The type of creep feeder, its size, and cost, all depend on the facilities in which mares and foals are kept and the number of foals that will be fed. Feeders should be constructed to prevent over-aggressive mares from breaking them apart. Commercially manufactured creep feeders are available and are a consideration for many horse owners. Creep feeders may be built using either treated lumber or pipe. The following guideline are provided to help mare/foal owners that are interested in building creep feeders..

Corner feeders

In situations where mares and foals are kept in a dry lot, corral or small paddock, perhaps the simplest design is a corner feeder. The most economical corner creep feeder can be constructed by using one post and two boards (2" x 6") attached to the existing fence in the corner of the lot/paddock (*Figure 1*).

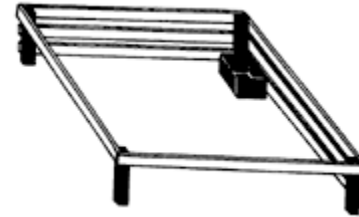


Figure 1. This is an example of a corner feeder. Note, that the 3-rail portions of the enclosure represent previously existing fences.

Minimum suggested sizes for the perimeter of a creep feeder depend on the number of foals. The following are general guidelines, at best, and size will be further influenced by foal behavior, broodmare behavior, foal size, paddock size, etc.

# Foals Eating	Minimum Perimeter Size
1	8' X 8'
2	10' X 10'
3	12' X 12'
4	14' X 14'

If three or more foals are being creep fed, the trough should be located so foals can stand on two sides of the trough, always with their tails toward an exit area.

The perimeter fence should let foals in and keep mares out by at least restricting the height of the opening. Width of the entrances and exits can also be regulated, to discourage mares from trying to enter the creep feeder. The size or the openings into the feeder depend on the age and size of the foals and can be built so adjustments can be made. For typical stock-type and thoroughbred foals from mares weighing between 1,000 and 1,300 pounds, the height should be approximately four feet (distance from ground to bottom of horizontal board). Width restrictions should usually range from 22 to 26 inches, with two feet serving as an average.

A creep feeder restricted only by height with a horizontal board or pipe at about four feet will offer entrance and exit anywhere along the length of that structure. For creep feeders accommodating more than one foal and restricted by width, one more opening than the total number of foals using the creep feeder is required. For example, a creep feeder for three foals should have at least four openings for foals to enter/exit.

Although creep feeders are usually very efficient and safe, one side or area should be hinged so it can be opened if necessary. Some mares will literally crawl into a creep feeder and require manual removal after they have consumed the feed.

Pasture Creep Feeders

In pasture situations, creep feeders should always be located where mares normally congregate. Therefore, feeders are often placed near normal eating or watering locations. Pasture creep feeders can be built out in the open, allowing foals to enter/exit from all four sides. Many creep feeders are built similar to a small round pen, letting foals eat from a trough in the center of the circle. To minimize injury to foals from kicking and biting, entrances/exits should be available around the perimeter fence (*Figure 2*).

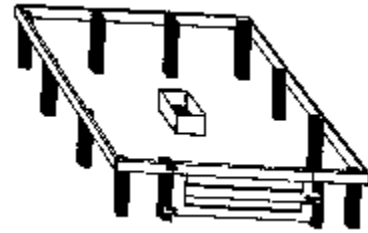


Figure 2. A creep feeder which allows for entry/exit from all four sides.

The perimeter size recommendations and height/width restrictions for a pasture creep feeder are similar to those mentioned for a corner feeder. As the number of foals increases, the size of the feeder should increase. Base on a standard of 144 square feet for a mature horse, the following creep feeder sizes are recommended:

# Foals Eating	Minimum Perimeter Size
5	16 ft. X 16 ft.
6	18 ft. X 18 ft.
7	20 ft. X 20 ft.
8	24 ft. X 24 ft.

A loafing shed located in a pasture makes an excellent creep feeder. With minor adjustments the opening can be restricted, providing foals a covered creep feeding area. A limitation of converting the loafing shed into a creep feeder is loss of a shelter for mares during inclement weather. However, if the pasture offers a natural shelter belt of trees to provide some protection from sun, wind or cold, mares in good body condition actually prefer staying outside.

Stalled Creep Feeders

When a mare and foal are being stalled, there is usually inadequate room for erecting a creep feeder. One solution is to purchase a foal feeder (trough) with adjustable bars over the top of the trough. These bars can be regulated in width so the foal can reach feed in the trough, but the mare cannot. These feeders should be securely mounted low enough so the foal can easily reach it, but the mare cannot kick or rub them down. Careful daily checks are required to ensure the bars a properly affixed and the feed is fresh.

Selecting a Feed

A foal's protein and mineral needs relative to its energy needs differ significantly from those of a broodmare ration based on hay or grazing. Young foals are unable to consume and utilize large amounts of roughage, so the concentrate should contain all dietary essential nutrients and be carefully balanced. Horse owners have the flexibility of either formulating a creep ration using various feedstuffs, or purchasing a commercially manufactured concentrate that has been formulated for the young, growing horse. The amount of protein and minerals needed in the concentrate depends on the amount of energy (calories) supplied in the feed. The feed tag on most commercial feeds do not directly list the megacalories of energy provided, but they do list the percentage of crude fiber. As crude fiber levels decrease, energy levels increase, meaning that the concentration of protein and minerals must also

increase. *Table I* can be used to determine minimum percentages of protein and minerals needed in feeds of varying crude fiber. Some commercial feeds may contain supplemental fat. If so, the crude fiber percentage will remain about the same, but the concentrate will contain more energy than a similar mix without any added fat.

Table I. Concentrations of protein and minerals needed in creep

If feed tag indicates Crude Fiber % of	Then, the following minimums are needed		
	Crude protein (%)	Calcium (%)	Phosphorus (%)
2%	18%	.90	.55
3%	18%	.85	.55
4%	17%	.85	.55
5%	17%	.80	.50
6-8%	16%	.80	.50
(with 3-3.5% crude fat)			

Sample creep rations are given in *Table II*. Ration A can be used as a creep feed and later used as a weanling concentrate feed with grass hay or pasture. If alfalfa hay is fed to foals or weanlings, a ration higher in phosphorus (ration B) should be used to maintain a calcium:phosphorus ratio of 1.5:1 and should not exceed 2:1. Phosphorus should never exceed the amount of calcium in the total diet of any horse, particularly young, growing horses.

Table II. Creep feed and weanling rations.

Ingredients	Ration A ¹		Ration B ²			Calculated Analysis Ration	
	Percent	lb/ton	Percent	lb/ton		A	B
Cracked corn	40	800	47.5	950	Crude Protein	16.5%	14.7%
Oats	32.5	650	30	600	Lysine	.80%	.66%
Soybean meal	20	400	15	300	Digest energy	1.39 mcal/lb	1.42 mcal/lb
Molasses	5	100	5	100			
Calcium carbonate	1	20	.5	10	Calcium	.80%	.66%
Dicalcium phosphate	1	20	1.5	30	Phosphorus	.50%	.63%
TM salt	.5	10	.5	10	Vitamin A	added at	added at
Vitamin A	+	+	+	+		1200 IUs/lb	1.500 IUs/lb

¹To be fed with good quality grass hay or pasture.

²To be fed with alfalfa hay.

Creep feeds should always contain at least 16% crude protein, .80% calcium and .50% phosphorus. Protein quality in terms of balance of amino acids is extremely important in feeding foals. Deficiencies of the amino acid lysine limit growth rates in young horses. Therefore, the protein supplement used in foal creep feeds should be high in lysine and other essential amino acids. Soybean meal, dried skim milk and animal product supplements are all high in lysine. If cottonseed meal or linseed meal are used as a protein source, additional lysine should be added to the ration. Total lysine in the diet for a 3 month old foal should be .6-.7% of the ration.

Pelleted ration or loose grains

Some foals tend to be very selective and will sort the feed, often eating only the grain and leaving protein sources, vitamin and mineral premixes in the bottom of the feeder. Some owners use pelleted feeds so sorting is not possible. The decision to use pelleted feeds should be based on availability of quality feeds, foal behavior, herd size, feeder design, and space limitations.

Creep Feeding Management

Creep feeders should be easily accessible by foals and allow frequent consumption. Young foals will nurse as much as seventy times daily, indicating that foals have limited ability to store feed and prefer many small meals. Because the capacity of the digestive tract is still relatively small, foals need to eat small portions at regular intervals throughout the day. The hindgut of the foal is not fully developed until later so they are, for all practical purposes, fed as a simple-stomached animal. Therefore, creep feed should be introduced slowly and then be provided at all times with little fear of over eating and digestive disturbances. Creep fed foals will consume approximately 1 lb of feed per 100 lb. of body weight per day (ex: 300 lb foal = 3 lb feed/day). Most light horse breeds will eat 1 lb of feed per month of age (ex: 4-month-old foal = 4 lb of feed). Furthermore, horse owners must avoid letting the creep feeder remain empty for a period of time and then pouring in a large amount of feed, leading to overeating by hungry or aggressive foals. Creep feed, if spoiled by moisture or infested with insects and/or larvae should be removed, and replaced with fresh feed.

Groups of foals will all behave differently and some foals will show more dominance than others. Occasionally, one foal will stand in the creep feeder and try to prevent others from eating. Careful observation will identify such problems and allow owners to make adjustments in the amount of feed provided, trough placement, and creep feeder size. However, sorting out the dominant foal is occasionally necessary.

If You Cannot Creep Feed

In situations where mare/foal owners cannot use creep feeding practices certain measures should be taken to limit intake of mare feed that might contribute to growth problems in foals. One solution is to feed a well balanced foal concentrate to the broodmare. With this approach, foals eating from the same trough as the mare will be receiving adequate supply of nutrients without getting too much energy. The practice of feeding mares a foal ration does result in mares receiving slightly more protein and other nutrients than they normally need, but it ensures that foals will receive a good supply of nutrients for skeletal development.

Summary

Creep feeding programs should be designed to let foals learn to eat concentrates in a fashion that emulates the normal eating behavior of horses. A well constructed feeder, located where mares spend a lot of time, will help meet additional nutrient needs of foals while minimizing chances of injury. With some planning and limited cost, horse owners can establish a creep feeding program that will help in the process of developing a foal that will be easier to wean. Also, foals will be receiving a more suitable concentration of nutrients for proper skeletal development, improving the likelihood that they will have greater longevity and usefulness as a sound, mature individual.

File G1276 under: ANIMALS, GENERAL

A-3, Feeding & Nutrition

Issued March 1996, 2,000, printed.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Elbert C. Dickey, Director of Cooperative Extension, University of Nebraska, Institute of Agriculture and Natural Resources.

University of Nebraska Cooperative Extension educational programs abide with the non-discrimination policies of the University of Nebraska-Lincoln and the United States Department of Agriculture.