



EQUIFACTS

Weaning Management for Foals

Doyle G. Meadows, Professor, Animal Science

*John E. Henton, Professor, Department of Large Animal Clinical Sciences,
College of Veterinary Medicine*

Weaning is stressful on both the mare and foal. Many times horse producers wean foals with little regard to the emotional and physical stress that often arises. They typically wean their foals based on tradition or mere convenience. However, in today's highly productive horse operations, many considerations are given to the weaning process that will have a positive influence on the health and general well-being of the mare and foal. This fact sheet will assist the horse owner in developing a weaning management program. Some of the weaning management considerations include: keeping stress level to a minimum, creep feeding, adequate health program, age at weaning, weaning system and concerns for the mare. Weaning should encourage maximum health of the mare as well as optimum growth and positive mental attitude of the foal.

Foal Management Before Weaning

Creep feeding the foal plays a very important role in the weaning process. As foals increase in age, their dependence on solid food increases while milk intake decreases. Creep feeding provides two important segments of the weaning process. The foal develops eating habits to make total separation easier as well as meeting nutrient demands for optimum growth. The mare is providing only about 50 percent of the protein and energy the 3-month-old foal requires. Creep feeding

contributes nutritionally as well as psychologically to weaning.

Creep feed can be offered to foals within the first two weeks after birth. However, very little consumption will take place at this time. Initially, foals will start to nibble and play with the creep feed. Depending on age, the foal will reach consumption levels of one to three pounds per day. Fresh creep feed should be put into the feeder daily. The feed left in the feeder should be removed daily and may be fed to mares or other horses.

The major considerations of a good creep feed include high quality protein, moderately high energy levels, and adequate calcium and phosphorus amounts in the proper ratios. Below is a creep ration that is highly palatable and nutritionally adequate. The foal's digestive tract requires high quality feed ingredients.

Example Creep Ration

Ingredient	% of Ration
Oats, crimped	50.5
Corn, cracked	23.0
Soybean meal	20.0
Molasses	5.0
Ground limestone	0.9
Dicalcium phosphate	0.6
	100.0

Calculated nutritional Analysis of the Creep Ration

Energy 1.4 Mcal DE/lb
Crude Protein 17.8% (.13 lb CP / Mcal DE)
Calcium .8% (2.6 g / Mcal DE)
Phosphorus .55% (1.8 g / Mcal DE)

The key to a good creep feed is palatability and quality. The foal's digestive tract is designed to take in small amounts of feed at frequent intervals, not a large amount once a day. The grains included in a creep feed should be crimped, flaked, rolled or cracked. Generally the creep feed is a mixture of grains, protein supplements, vitamins and minerals. Molasses is normally added to enhance palatability of the creep feed. Creep feeds that are pelleted are not only accepted but are preferred by many horse owners. Creep feed can include just about any method of processing except finely ground. When compared to whole grain, feed processing improves acceptability and digestibility of the feed for the young, growing foal.

Creep feeders should be built with safety in mind. They should be extremely solid and well built and free from sharp protrusions, rough edges and other safety hazards. The feeder design should be simple with sufficient height and width for foals without allowing entry by the mares. Also, if several mares and foals are together, the creep area should be large enough to hold at least two or three foals. The foals are more likely to enter the creep area if accompanied by another foal.

Foals will be more relaxed and enter the creep more easily if it is spacious. Furthermore, the creep feeder should be located in and around loafing and feeding areas of the mares. Place the creep feeder in areas of heavy traffic, as this will increase the effectiveness of the creep feeder and the foals will consume more feed. Location is more important in large pastures than in small paddocks.

In some operations, construction of creep feeders may be deemed unfeasible. As an alternative, owners with one or two mares can halter and tie their mares while they eat and allow the foal access to a separate feed tub. If the mares are in individual stalls, foal creep feeders can be purchased or built that will allow access only by the foal's small muzzle and prevent the mare from eating the creep feed. Foals are inquisitive and will generally find and eat creep feed in confined areas without much help. The health of the foal prior to weaning is very important. The weaning process should not be initiated unless the foal is healthy. Deworming helps to ensure health

of foals and should begin early in a foal's life. Many veterinarians suggest starting at 30 days of age and deworming every 30 days until the foals are 1 year old. Contact your local county Agricultural Extension Service for a fact sheet, TNH-4002 **Control of Internal Parasites of the Horse**, for additional information on deworming.

An immunization program should be initiated when the foal is about three months of age. Foals in Tennessee should be vaccinated for tetanus, Eastern and Western encephalomyelitis, influenza and rhinopneumonitis at three months of age. These vaccinations should be repeated one month later. Also, rhinopneumonitis and influenza boosters should be given every 60 to 90 days. A fact sheet, TNH-4001 **Control of Infectious Diseases of Horses**, is available from Extension offices in Tennessee to provide more information on health management.

Elective surgery to correct conditions such as umbilical hernias and angular limb deformities should be performed well ahead of weaning. Early treatment will aid in more complete correction of these conditions. However, any surgery should be avoided during the weaning process.

Weaning

Weaning breaks the emotional and nutritional bonds between the mare and foal that were initiated at birth. When to wean is one of the questions most frequently asked by the mare owner. There is no single best answer as to exactly when to wean a foal.

There are considerations and restrictions placed on the proper time for weaning. Conditions such as health of the foal, health of the mare, temperament and vices of the mare, environment, maturity of the foal, management level of the farm, facilities, and goals of the horse owner all play a major role in determining when to wean the foal. Deciding on the age to wean usually calls for a compromise between nature's way and the demands of the high intensity production system used in the modern equine industry.

The usual age for weaning is between four and six months. At four to six months, the foal should be accustomed to eating creep feed, have been vaccinated and should have developed active immunity to many organisms in the environment. Moreover, the foal is

usually less dependent on its dam for protection and emotional support. If necessary, however, foals can be weaned early in life.

Some proponents of early weaning wean as early as three months, claiming that with adequate nutrition these foals grow faster than foals weaned at six months. Research indicates that the later-weaned foals catch up by one year of age and subsequent differences are negligible. Proper use of creep feeding, as discussed earlier, will also minimize these differences.

The foal's relative lack of maturity at three months of age suggests that early weaning should be carefully considered before being routinely used. Social interaction is important in a young foal's development and the trauma caused by early weaning could offset any benefits of an early weaning program. Many times horse owners are forced to wean early due to injury or disease of the mare or foal. However, this situation is different from a planned early weaning program.

Many breeders prefer to separate a mare with adverse disposition or vices from her foal as early as possible. Some behavior patterns can be learned from the mare and, with early separation, undesirable behavior may have less influence on the foal's behavioral patterns. Cribbing, wood chewing and poor disposition are undesirable traits for a foal to obtain from its dam. Early weaning may help to reduce these problems in the foal.

Weaning Systems

The primary goal of any weaning system is to minimize stress. There are three types of weaning systems. The most traditional method is the complete, abrupt separation of the mare and foal. Incomplete and gradual separations are also used to wean foals in the horse industry. Each system has its advantages and disadvantages. There is no one system that is right for everyone.

The *complete separation* process has been used successfully in many horse operations. As the name indicates, this system completely separates the mare and foal as a single event. There should be no contact by sight or sound of either the mare or foal. Generally, the foals are placed in small paddocks or stalls and the mares are turned out to pasture. This type of weaning process requires little labor and management. However, many foals lose weight

and experience depression at this sudden and unexpected loss of their dam.

A less stressful form of complete separation involves removing one mare from the group at a time, leaving the foal with the other foals and their dams. Ultimately, all mares are removed, leaving the group of weaned foals in their own environment.

An *incomplete separation* has been used by several horse farms and was also the focus of foal behavioral research at Texas A&M University¹. This system separates the mare and foal with a common fence line. With the use of V-mesh or "bull wire," the mares and foals are able to see, hear and smell each other while in separate paddocks. However, these foals are not able to nurse and are subsequently separated completely after several days. Research indicated these foals experienced less stress during weaning when compared to abrupt separation. Researchers at Texas A&M University¹ refer to this method as gradual, not as incomplete separation.

Gradual separation of the mare and foal may be employed by horse operations as an alternative to complete and incomplete separation. Under this system the mare and foal are separated for a certain period of time each day. The length and number of separations are increased until finally the foal is never returned to the mare. A period of five to 10 days could be used to wean the foals. Although this method may be less stressful on the foal, it requires more time and labor to complete the weaning.

There are several factors to consider in choosing the best weaning system. These factors include the management level of the breeding farm, the condition and temperament of the mare and foal, available facilities, and the number of foals to be weaned during a given period. Advanced and informed planning is necessary to accomplish the desired outcome in each specific management situation.

If one weaning method could be shown to be favorable in terms of less stress and increased growth and productivity of foals, the producers would benefit by using this method. Reductions in productivity losses, which often occur during weaning, would result in larger, healthier foals. Previous research indicates that foals weaned by complete, abrupt

separation of mare and foal exhibit more behavioral problems associated with weaning stress than foals weaned by a more gradual separation. In the final analysis, no set method can be recommended for every farm and every situation.

One of the best ways of lessening the weaning stress is to maintain the foal in familiar surroundings. This can be accomplished by leaving the foal in the same area previously occupied and/or by weaning with other foals of like size and age. When other foals are not available, an older, non-lactating, well-dispositioned mare or gelding may be used for companionship. Some farms have successfully utilized goats for the same purpose. The foal appears to undergo far less stress when other elements of the environment are the same and/or when companionship is available, thereby limiting weight loss, decreasing disease incidence and making the transition to self-sufficiency less traumatic.

Regardless of the procedure, the foal's entire weaning area should be checked regularly for safety hazards on which a foal may injure itself. Under the stress of weaning, the foal may attempt to jump fences, squeeze through openings and fail to notice obstacles in its path. Provide adequate exercise to use the foal's built-up energy when weaning in a stall situation.

Mare Care During the Weaning Time

Weaning is not only stressful for the foal but is also a time for concern for the mare. The mare usually calms down more quickly than the foal, although the time required for her to resume normal behavior may vary from a few hours to a few days. If the mare still has significant milk production, the manager should remove all grain approximately five days prior to weaning. Additionally, the mare should have access to plenty of exercise.

The udder should be checked daily. If the udder becomes very tight, a small amount of milk may be milked out by hand. Repeated milking of the mare should be avoided as this will stimulate the production of milk, and the goal is for her to cease milk production. If the udder is still tight four days after weaning and the mare's temperature rises significantly, or other indications warrant it, the milk should be checked for the presence of mastitis (infection) and appropriate treatment performed by a veterinarian.

Summary

Successful weaning is both an art and a science. By following some of these simple rules, weaning can be pleasant and profitable. Remember, if the foal is healthy, eating well, has a companion and is placed in a safe facility, the chances of a successful weaning program are improved. Weaned foals should not be turned back to the mares. They may nurse again even when they have been separated for an extended period of time.

Visit the Agricultural Extension Service Web site
at <http://www.utextension.utk.edu/>

TNH-3004 2/03 E12-4415-00-019-03
The Agricultural Extension Service offers its programs to all eligible persons regardless of race, color, national origin, sex, age, disability, religion or veteran status and is an Equal Opportunity Employer.
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
The University of Tennessee Institute of Agriculture, U.S. Department of Agriculture,
and county governments cooperating in furtherance of Acts of May 8 and June 30, 1914.
Agricultural Extension Service Charles L. Norman, Dean