

Optimizing Foal Care: Best Practices and Management Strategies

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ABSTRACT

Foal weaning methods include neonatal, two-month, and four-to-six-month. It also examines behavioural and physiological responses to progressive weaning. Health programs, creep feeding, weaning facilities, and handling skills should be considered in the weaning plan, according to the study. The conclusion emphasizes the need of weaning management for foal growth and stress reduction. The article discusses weaning methods and their effects on foal growth and offers tips for a stress-free weaning procedure.

Introduction:

Over the years, various weaning techniques have been used; the selection of system depends on the available resources, the knowledge, and the needs of farm management, as well as other factors including the quantity of foals getting weaned [1]. The mother and foal are abruptly and entirely separated by a sufficient distance to prevent them from being able to see or hear each other in the conventional total and abrupt weaning method. This study discussed a few of the more popular weaning schedules.

Neonatal weaning:

Some mare breeders wean young foals within a few days of birth; however, this is not something they do frequently. Neonatal weaning is justified in part by the fact that many mares are transported over considerable distances to reproductive farms, which could cause stress and harm to the foal during the journey. Trauma to the udder in the early postpartum period may need neonatal weaning if it results in a mare's aggressive resistance to nursing [2]. Neonatal weaning may also be necessary in cases of foal rejection by the mare, the most common behavioral issue reported in mothers; however, this issue mostly affects maiden (primiparous) mares. Early weaning of the newborn would also arise from the mare's death during or soon after giving birth. The health and nutrition of the foal need to be closely monitored in order for neonatal weaning to be successful [3]. It seems that weaning a foal in the initial days of life causes less stress than weaning it later on. It will take more time to train the foal to drink milk replacer from a bucket, though, as the mother is best suited to supply the foal's nutritional demands at this young age. The issue of whether the foal will learn to "be a horse" without the behavioral cues from its dam is another worry regarding the weaning of newborns. The impact of newborn weaning on growth rate has also drawn criticism.

Two-month weaning:

It has been proposed that the link between mare and her foal starts to deteriorate at the age of two or three months. It is necessary to evaluate the foal's rate of growth as well as wellness before using 2-month weaning [4]. Lower and slower-growing foals are typically left with their moms or given more time before weaning, although healthy and growing foals can be weaned at this point. Two-month weaning has advantages, according to mare owners. These include a longer mammary system lifespan (because of shorter breastfeeding intervals) and a lower chance of injury to a smaller foal during the weaning process. There are no controlled, empirical research to support these proclamations. When using a two-month weaning period, feeding foals a well-designed creep feed to meet their nutritional needs is essential to success [5]. Wall-mounted creep buckets are available for stalls, and creep feeders can be set up in a pasture or corral. Weaning age may have an impact on the development of dominance hierarchies in adult horses. As a result, experts and educators have expressed concerns over weaning infants as young as two months. According to studies, foals of dominant mares typically grow up to be dominant in their own herds [6]. As temperament and aggressiveness in horses can be taught behaviors and temperament appear to be the main factor determining dominance in an adult horse, owners of mares with unfavorable dispositions may want to consider early (2-month) weaning. For maximum transformation of the excellent disposition to the foal, owners of well-mannered mares might wish to keep the foal alongside its dam for as many days as feasible [6].

Four-to-six-month weaning:

The most common weaning technique utilized in horse enterprises today is comprehensive and quick weaning at four to six months of age. The majority of owners who use this technique think that keeping an offspring with its dam past this age strains the mare's energy reserves and may cause her body

condition to decline. This would be especially concerning for mares with poor physical condition [7]. Although the mare's milk still covers the foal's mineral needs during the third month of lactation, by the time the foal is four months old, it no longer provides all of the foal's energy needs. If four-to-six-month weaning is to be cast-off, different procedures such as (vaccination and castration) must be completed either well in development of weaning or at least one month beforehand [8]. Behavior score is an index that is determined by basal blood cortisol concentrations, blood hormone called as cortisol quantity after intravenous (IV) administration of ACTH, eating, sound, and movement activity and behavior patterns. The range of calculated behavior scores is one to 10, where higher scores indicate a better transition of the foal from its dam to being separated. Weaned-alone foals adjusted more easily to separation after weaning, as seen by the considerably greater behavior scores awarded to singly weaned foals compared to pair-weaned foals [9].

Gradual Weaning Techniques

The foal is traditionally weaned between the ages of two and eight months, during a period when there hasn't been any handling or human contact. The mare and foal are usually separated by enough space to avoid them from seeing or hearing one other, and it is frequently abrupt. Furthermore, the foal upon weaning is frequently brought to new places, castrated, dewormed, and given creep feeding for the first time. When weaning, weanlings raised with conventional methods are frequently also halter trained. Researchers have recently examined the physiological and behavioral reactions of foals weaned using progressive, partial separation methods [10].

Behavioral responses to gradual weaning.

The interactive reactions of foals weaned in a total of five weaning systems were displayed by McCall and his colleagues, along with the usage of these responses as markers of weaning stress. They employed twenty-one Equine mares who kept their foals by their sides and kept them in pastures. Before they were weaned, all foals received a month-long deworming and vaccination. Foals were allowed to be handled for fifteen minutes twice a week until they were two months old. Felines fed the creep-feed treatments received a crude protein content of 16% [11].

They came to the conclusion that varied weaning management strategies result in various behavioral reactions from foals. Complete seclusion without any sneak feed resulted in heightened manifestation of behavioral stress symptoms. When foals are administered creep feed prior to weaning, their activity level is reduced. In comparison to foals that are not fed creep feed, partially separated foals exhibit fewer vocalizations and activity levels. Creep-fed, partially separated foals did not behave any differently from control (unweaned) foals. The behavioral indicators of stress at weaning were reduced with the use of creep feed in conjunction with a partial, progressive separation from the dam [12].

Physiological responses to gradual weaning.

The brain releases ACTH in response to stresses, which triggers the adrenal glands to release cortisol. Cortisol excesses then impact other organs, which has further metabolic effects. As previously mentioned, there are two ways to gauge stress reactions: 1) Measurement of cortisol levels in the blood; 2) Assessment of adrenal gland sensitivity to ACTH injection after stressor exposure. The two methods have been used to measure the physiological impact of weaning. McCall and colleagues evaluated the adrenal reactions of foals to complete, sudden, or partial separation after weaning as part of their behavioral investigation. Stressed out during weaning, foals in whole separation protocols (with and without creep feed) showed considerably higher basal and post-ACTH cortisol responses as well as adrenal responses. On the other hand, neither the partially separated foals nor the control

(unweaned) foals displayed higher cortisol in response to weaning, regardless of whether they received creep feed [13].

Weaning Recommendations

It is impossible to provide a single weaning technique due to the numerous factors and particular circumstances found on farms and ranches. Nonetheless, there is compelling scientific data to bolster the theory that creep feeding in conjunction with slow and partial weaning methods results in the least amount of stress for the foal. With gentle weaning strategies, an owner may be able to generate a larger, healthier weanling because severe weaning stress is linked to stunted growth as well as increased damage and illness [14]. Success in weaning requires numerous factors, including as managing health and creep feeding, regardless of the method selected. Three time periods have been used to address weaning management: preweaning (from birth to the start of weaning), weaning (the actual two to three days split period), and post-weaning (the 1–2-week period after the mare and foal have completely separated). Early weaning. The following factors should be taken into account before weaning: adequate facilities, creep feeding programs, preventative healthcare, and handling techniques.

Health programs:

Before weaning, a solid health management strategy needs to be in place. For the first time, newborns should be dewormed at 8 weeks of age, and vaccinations should start at 3 months of age; check alongside your veterinarian for the most recent guidelines. Since the objective is to reduce stress for the foals that are being weaned, it is imperative that those processes be completed before the foals are weaned. Being stressed during the weaning process tests the immune system's competence, therefore preweaning vaccination and deworming programs give the foal's immune system an additional layer of disease resistance [15].

Creep feeding:

Research clearly shows that giving a foal creep feed might assist in with reducing stress levels. Nevertheless, giving creep feed to foals for their first time at weaning may result in overindulgence by ravenous foals, potentially disrupting their digestive systems. Ideally, before they are weaned, foals should be eating enough creep feed. The milk given by the mother no longer provides the foal with all of the energy it needs if it is weaned beyond four months of age. Therefore, creep feed lessens stress during weaning and offers nutritional assistance to maintain the fast growth rates seen at this age. The foal should be eating around one pound of creep feed/day for each month it is older than 19 months ahead of being weaned (thus, for a 4-month-old foal, that would be four pounds per day). Give your animal a clean, fresh, well-balanced 16–18% crude protein concentrate. You can find more specific advice for creep feeding in other sources [16].

Weaning facilities:

When it comes to weaning facilities, safety is paramount. Concerns include the availability of dangerous feeders, holes in fencing or stall walls, sharp objects, and slippery flooring in stalls or enclosures. Verify that there is nothing there that a foal could hurt itself on. Facilities should also be free of dust, clean, and shielded from harsh weather conditions [17].

Handling:

Working with foals and exposing them to human handling is a great decision as well. This task is made simpler by halter training foals when they still have a stable bond with their dam. It has been demonstrated that young horses pick up a maze faster than mature horses, and that as they become older, their trainability likewise declines. As a result, a lot of owners use imprinting techniques within their handling management regimen [17].

Conclusion:

For many people in the equine industry, selling and displaying the weanlings is their source of income. Avoiding unnecessary stress at weaning determines a large portion of the growth capability between weaning and one year of age, therefore proper handling of the phase of weaning is essential. However, the importance of nutrition and health management should not be understated. Weanlings and yearlings competing against peers at fall halter futurities may find themselves at a disadvantage because to the aftereffects of lost growth momentum. Weaning need not be an unduly traumatic experience for the foal if the mare owner or farm manager pays great attention to detail, follows prescribed methods, and prepares the mare well for the process. Then, weanlings can develop to their maximum potential for value, productivity, and growth.

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