

Heavy Horse Reproduction: Friend or Foe?

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Introduction

The horse, and in particular the draft horse, has been in existence for thousands of years. Horsemen worldwide have been aspiring to breed the perfect animal for as long as draft horses have been around. Some have been more successful than others. Even the most astute horseman has faced trying times while chasing their dream. Their successes and more importantly their failures have not always been because of lack of courage, study or work.

The equine species itself has contributed to the inefficiency of the draft horse to reproduce. Both genders of the draft horse can be implicated for this reproductive disappointment. The fertility of draft stallions is less than desirable most times, while draft mares have a higher percentage of dystocias, retained fetal membranes and uterine fluid retention than their lighter breed counterparts. These issues along with their fallout, while not a complete list, are considered primary reasons why heavy horse reproduction has been less than friendly through the decades.

Draft Stallions

Fertility of draft stallions can be less than optimal. To begin with, the libido or sexual drive of mature breeding draft stallions is not always as high as seen in other breeds such as quarter horses, thoroughbreds, standardbreds and others. Teasing of the stallion in preparation for breeding can take considerable time and patience. By nature, some draft stallions tend to be more shy and less aggressive toward their female equals. In natural breeding settings, either pasture breeding or hand mating, the less aggressive stallion can be “turned off” or worse yet ruined by a vicious mare. In the era of artificial insemination, collecting draft stallions with an artificial vagina can also be devastating at worst and frustrating at best to a draft stallion with low libido.

A draft stallion with even a high libido can face other fertility problems. Draft stallions tend to have a lower total sperm cell count. Typically, a light breed stallion can have a sperm cell count per ejaculate ranging from eight to twenty billion or even greater. Draft stallions may only produce as high as ten billion sperm cells per ejaculate, while others can be as low as two billion sperm cells.

Regardless of the total number of sperm cells produced, motility of the sperm cells in each ejaculate must also be considered. Sperm cell motility in any stallion can routinely range from 40-90%, with draft stallions typically falling within the lower end of this range. With decreased motility, the total number progressively motile sperm cells decreases which in turn decreases overall stallion fertility. Sub fertility in draft stallions is more common than not. When coupled with draft mares with questionable fertility, successful pregnancy let alone production of a live foal will test the patience of any horseman.

Draft Mares

A second dimension in the potential frustration of raising draft horses is the female component. Conservatively speaking, reproductive efficiency of draft brood mares is fair to good at best. Reproductive problems with draft mares not routinely seen in light mares include, dystocias-both major and minor, retained fetal membranes and chronic endometritis.

Any dystocia, abnormal fetal presentation during birth, should always be considered a major corrective procedure. Why do draft mares tend to present with dystocias at foaling time? Foaling in any mare, regardless of breed, leaves very little room for an off course birth. If a dystocia does occur, the massive size of draft fetuses exponentially adds to the difficulty of correcting the mal-presentation. Rotating a foal, turning a head back into place, or pulling either one or both front legs into proper alignment can be nearly impossible in the limited space of the birth canal of draft mares. Correcting an even worse presentation of a breach birth is nearly impractical without surgical intervention.

Regardless of the outcome of a dystocia during birth, the long-term effects can be brutal to not only the reproductive capabilities of the mare, but more importantly, the lifespan of the mare. The fallout of a difficult birth can include retained fetal membranes, endotoxemia, ruptured uterine artery, or laminitis to name a few. Or worse yet, death due to any of the mentioned scenarios could occur.

While retained fetal membranes can occur following a dystocia, this incident regularly happens even following normal births in draft mares. The anatomical size and position of the uterus lead to more frequently retained fetal membranes. Most draft mares tend to have larger and broader uteri that can easily be suspended more cranially and therefore drop down further within the abdomen.

A lower suspended uterus allows fluid retention and pooling to easily occur. Fluid accumulation within the uterus is a contributing element of endometritis. Endometritis by definition is simply the inflammation of the endometrium; however, simple inflammation of the endometrium can prevent future pregnancies from occurring. Even if fertilization occurs, endometritis can impede further development of the embryo, and regardless of the cause, early embryonic death ultimately lowers the reproductive efficiency of draft mares.

Conclusion

Because the search for the flawless draft animal continues, heavy horse reproduction is alive and flourishing. Through the years, this exploration has seen prosperous times as well as frustrating inefficiency that has no gender bias. While draft stallions and mares have different fertility issues, each side of the fence falls short of their potential. Advancements have been made, yet much work remains. As history will teach those willing to learn, our experiences can show us how to improve, and only then will heavy horse reproduction become friendly.