



VET NOTES

DECEMBER 2009

Previous VET NOTES

- October 2009 - tying-up Syndrome
- September 2009 - Flexural deformities in the forelimbs of foals
- August 2009 - Equine Cushing's Disease
- July 2009 - Corneal ulcers
- June 2009 - Laparoscopic surgery: A new way to look at things
- May 2009 - Equine cardiology
- April 2009 - Single screw compression update
- March 2009 - Resistance to anti-parasitic drugs
- November 2008 - Periodontal Disease
- October 2008 - Interstitial pneumonia - a different kind of lung disease
- September 2008 - The yearling sales
- August 2008 - Eastern Equine Encephalitis—have you vaccinated
- July 2008 - Castration complications
- June 2008 - The use of acupuncture as a diagnostic aid in the equine lameness exam
- April 2008 - Current parasite control recommendations
- March 2008 - The use of Oxytocin in the post-partum mare
- January 2008 - Preparing

Selection of mares for embryo transfer

I should apologize to the Thoroughbred breeders at the beginning of this article. Unfortunately the chosen topic is a technique that is not permitted by the Jockey Club; meaning that any foals produced by embryo transfer are not allowed to be registered. However, all other breeds that I am aware of allow embryo transfer, and most registries even allow multiple foals per year. Participants in some disciplines may not even concern themselves about registering the foal, such as with cutting horses, jumpers, etc.

The commercial availability of embryo transfer has been around long enough that most of you reading this know the fundamentals. A brief summary is in order for those that don't. The embryo is conceived in the donor mare utilizing the same management techniques as with any breeding. The use of natural service or artificial insemination can be employed. Artificial insemination can be done with fresh semen, cooled shipped semen or frozen semen. The mare's cycle must be timed appropriately to enable fertilization and she may require uterine treatment to ensure that the sperm can reach the egg and that the embryo can develop to the point that it can be recovered from the mare.

Seven or eight days after the donor mare has ovulated, her uterus will be flushed to recover the embryo(s). That embryo may be transferred in to the uterus of a recipient mare immediately, or may be cooled and shipped to another location where it is transferred (if this can take place in less than 24 hours). If everything goes according to plan the recipient mare will now carry the donor mare's foal to term, deliver it and nurse it as if it were her own.

There are various reasons why you may choose to perform embryo transfer rather than the normal breeding/foaling process.

The performance mare. Fillies and mares that are in performance can donate embryos quite easily. Breeding and subsequent flushing is usually easily

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scheduled around training and showing schedules. These mares can then produce offspring, even several each year, and never stop their show career. Capitalizing on genetics. Mares with superior blood lines and/or performance records are able to produce multiple offspring each year rather than only a single foal.

Aged mares. Often owners either don't trust a mare to carry a pregnancy due to her age or they don't wish for her to deal with pregnancy due to her age.

Debilitated mares. These mares are often older mares, but not necessarily. They may have health issues for various reasons. Again the owner may not trust this mare's ability to carry her foal to term or may feel that it is a burden that is unfair to expect the mare to endure. Certainly mares that struggle with their own health for whatever reason won't usually be able to produce as healthy a foal as a healthy, young recipient mare

Mares with chronic lameness. As with aged or debilitated mares, the burden of becoming heavy in foal may be more than these mares can or should have to endure.

Chronic endometritis. Mares with difficult to treat uterine infections can often be frustrating to deal with. Repeated treatments and intense management may be necessary to get these mares in foal and unfortunately they will have a higher propensity to lose that pregnancy than the normal mare. Flushing the embryo from her uterus just after it reaches her uterus usually means less work and cost to prepare her uterus and more chance that the pregnancy will survive in a recipient mare's normal uterine environment.

Mares with history of early fetal loss. Many mares that experience early fetal loss do so due to chronic uterine infection or inadequate progesterone production. However, the reason is not identified in some of these mares and treatments are unsuccessful. Embryos flushed from these mares will often survive in recipient mares.

A mare that double or triple ovulates on a breeding cycle. Mares that do this have a good chance of producing more than one foal with this breeding and embryo transfer provides a chance to salvage both or all three pregnancies.

There are multiple reasons why breeders choose embryo transfer. Encouragingly the costs have gone down over the years as the success rates have gone up.

your mares for the breeding season

- January 2008 - Proximal hind limb suspensory desmitis: (PSD): Part II: Treatment
- December 2007 - Pleuropneumonia - when shipping fever turns into a nightmare
- November 2007 - Proximal hind limb suspensory desmitis (PSD): Part I: Diagnosis
- August 2007 - Intramuscular injections
- June 2007 - A hard pill to swallow
- April 2007 - The advantages of high fat/low carb diets
- March 2007 - Bandaging
- February 2007 - Single screw compression V. Screws and wire (Transphyscal bridging)

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