Mare Breeding General Information

PREPARING FOR THE BREEDING SEASON

Prior to the breeding season, it's important to ensure your mare is in the best possible physical and breeding condition to maximize health and fertility. Please make sure your mare is up to date on vaccines, deworming, dental and farrier care.

The following paperwork should be completed prior to the breeding season:

- Stallion Contract: Please ensure your stallion contract is in place and all fees are paid. Please forward a copy of your stallion contract to the clinic.
- Import Permit: If you are bringing semen in from the United States, an import permit must be acquired. This can take a couple weeks. Please contact our breeding manager to apply for your import permit well in advance of your anticipated breeding dates.
- Fen Vet Breeding Agreement: Prior to intaking mares for breeding, we require our agreement to be completed, signed and returned to us.

PRE-BREEDING ASSESSMENT

Once your mare is cycling, she should be booked in for a pre-breeding exam. It is ideal to do this when the mare is in heat. The mare will have an ultrasound examination of her reproductive tract. A uterine culture and cytology will be recommended in most mares that have previously been bred or had a foal to ensure a healthy uterine environment prior to breeding. In mares with a history of fertility or other reproductive issues, further diagnostics such as a uterine biopsy may be recommended.

UTERINE CULTURE AND CYTOLOGY

Cytology: This sample is collected using a specialized brush that picks up cells from the uterine lining. The cells are examined microscopically to assess their health, and look for signs of infection or inflammation. Uterine cytology samples are interpreted virtually by a board certified pathologist.

Culture and Sensitivity: This sample is collected by infusing a small amount of sterile fluid into the uterus and then recovering it and culturing it to detect the presence of infection causing bacteria. This can be done with the additional step of infusing a mucus-disrupting medication 24 hours prior to sample collection, which can increase detection of a biofilm if present. If a bacterial infection is detected, a sensitivity test is performed to determine which antibiotic(s) would be most appropriate for treatment. Fen Vet performs all of our uterine culture and sensitivity testing in house, which allows for expedited results.

Uterine culture and cytology results are interpreted together to assess the health of a mare's uterus.

BREEDING WITH FRESH SEMEN

When the stallion is available on site, he can be collected, the semen evaluated, and then the mare immediately inseminated with fresh semen. The average per cycle pregnancy rates reported in scientific literature with fresh semen are up to 60%.

BREEDING WITH FRESH-COOLED SEMEN

When the stallion is not collected on site where the mare is being bred, but is available for collections, fresh-cooled semen is commonly used. Semen is collected from the stallion when the mare is in heat, packaged, and shipped in a cooler (usually overnight) to the facility where the mare is being bred. Some variation exists in how well different stallion's semen stores cooled, but most stallions' semen stays viable for 24-48 hours using this method. The average per cycle pregnancy rates reported in scientific literature with fresh cooled semen are 45-55%

BREEDING WITH FROZEN SEMEN

Freezing semen in liquid nitrogen preserves it indefinitely. This allows for breeding to stallions that are located far away or are unavailable to be collected during the breeding season. Advantages of using frozen semen include access to stallions that are further away or unavailable to be collected, and the ability to store the semen on hand so it is readily available when the mare is ready.

Breeding with frozen semen causes a greater inflammatory reaction in the mare's uterus compared to fresh or fresh cooled semen. Because of this, many mares require post-breeding treatment with oxytocin or uterine lavages to help eliminate uterine inflammation. Mares with a history of uterine pathology or difficulty breeding may not be good candidates for frozen semen. The average per cycle pregnancy rates reported in scientific literature with frozen semen are around 30-45%.

AGE AND REPRODUCTIVE OUTCOMES

There is a negative correlation with age and pregnancy rates. There is typically a slow decline in per cycle pregnancy rates from 16 to 20 years old, and a more dramatic decline in fertility for mares >20 years old.

Older mares that have never had a foal before can face a unique problem with retaining fluid in their uterus post-breeding. This is due to their cervix not being stretched / trained to open from foaling. These mares may need more intensive post-breeding management such as additional lavages, cervical dilation, and medication to help with uterine contractions.

Pregnancy rates as recorded in: "Clinical Equine Reproduction Volume 1: Anatomy, Physiology, Pathology and Breeding Management" (2019). Author: Patrick M. McCue, DVM, PhD, DACT. Equine Reproduction Laboratory. Colorado State University.