# **EQUINE ASSISTIVE TECHNIQUE'S CONCEPTION RATES**

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#### Introduction

- Live cover has been the process of how the equine population has reproduced for thousands of years.
- In recent years assistive reproductive techniques in equine have made many advances and is rapidly growing in the equine breeding industry.
- Breeders have learned that they can use assistive reproductive techniques rather than natural cover to increase the number of offspring produced by stallions or mares, preserve international bloodlines, avoid spreading infectious diseases, allow sub fertile subjects to produce offspring, or use stallions and mares as athletes and breeding animals at the same time (World Equine Veterinary Association, 2014).
- It is important to understand which technique, live cover or assistive reproductive techniques, has a higher conception rate.

#### Materials and Methods

- A prospective study will be performed.
- A total of 30 guarter horse mares will be obtained for this study.
- The techniques studied will be live cover, embryo transfer, and artificial insemination.
- Each technique will have 10 mares to study. Mares will have to meet specific requirements to participate which include breed, age, health status, breeding soundness exam, and body condition score.
- Only one stallion will be used to inseminated all mares.
- Equine chorionic gonadotropin (eCG) levels can be checked within 45 to 90 days; therefore, conception will be checked after 60 days to reach peak gestation.

#### **Anticipated Results and Discussion**

This study provides the best method for breeders to gain more information on which equine assistive reproductive technique will produce the most successful conception rate.

- The key to making this study as accurate as possible it to be able to control each aspect for the mares and stallion.
- By having specific age, health, and breed requirements this allowed the most equal opportunity for each technique that was tested.
- It is also important that the same stallion will be used to impregnate each mare to ensure that there is no complication with the sperm used.
- The expectations for live cover would be 50-60% per cycle (Veterinary Associates Equine, 2022).
- The expectations for embryo transfer would be 60%–70% recipient mares becoming pregnant after transfer of one embryo (Pinto, 2023).
- The expectations for artificial insemination when using fresh/shipped semen of excellent quality is 60-90% (Matamata Veterinary Services, 2022).
- This study can be used and continued further to gain more knowledge regarding the conception rates of equine assistive reproductive techniques. This study can be used with different ages of mares to help determine which assistive reproductive techniques is best for a mare's age as well. By increasing our knowledge on the assistive reproductive techniques, breeders can provide their mare's the best option for their reproductive journey.

#### Live Cover: Physically breeding between mare and stallion.



**Embryo Transfer:** Breeding a donor mare to a stallion and then transferring the resulting embryo into a recipient mare.



### **Artificial Insemination:** The placement of semen into the uterus of a



#### Conclusions

Overall, the anticipated results form the equine assistive reproductive techniques that the assistive techniques have a higher conception percentage compared to live cover. Assistive techniques are more carefully executed and prepared for compared to live cover.

#### Literature cited

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mare at the time of ovulation.