

## **Artificial Insemination:**

By Cliff Kelsey, Starcastle Shire Horses

In 43 years of Shire breeding, we have not yet ventured into the realm of artificially inseminating (AI) our mares or collecting our stallion's semen for sale. I am not an expert on AI. However, I have spent a great deal of time investigating the potential of diving into AI, as a mare owner. I have learned a great deal that I am happy to share, to benefit those who may be commencing to evaluate AI as an option. All written in the context of "frozen semen":

1. **Educate Yourself:** Mare owners that are contemplating AI breeding for their mares should first educate themselves on the procedures, requirements, regulations and odds of success, before doing a thorough investigation of the total costs.

My investigations have indicated that the cost of AI per live foal can be more than the price to purchase a weaned foal, depending upon where the semen is coming from and how many inseminations are required to achieve pregnancy.

There are really no guarantees in horse breeding. In the worst case, you could spend a great deal on an AI and end up with no foal. Important high-cost decisions like the AI breeding of your mare(s), should only be made after you are able to make a well-informed and well-considered decision.

2. **Older Mares:** A highly respected equine reproduction Veterinarian told me that AI works best on mares 9 years old and younger. He revealed that if he were the mare owner, he would not waste his money on AI for mares aged 10 years or older. Other Veterinarians may have a more optimistic opinion.

3. **International Semen:** If you are contemplating the purchase of stallion semen that must cross international boarder, a Broker usually needs to be involved. The

Brokers fee must be included in your cost estimate.

It is highly recommended to check the importation requirements for semen coming from the country or origin. For certain countries the importation rules are very strict and often too onerous and stallion owners may not want to bother with additional requirements. The rules for importing stallion semen into Canada are extremely strict. The Canadian rules place additional restrictions and process burden on the stallion owner and his collection and shipping agents. Some overseas semen sellers simply do not supply Canadian customers. It is apparently much easier to get international semen into the USA. However Canadian mare owners cannot circumvent the Canadian requirements by having semen shipped into the USA and then shipped into Canada. From my investigation it seemed extremely difficult (if not impossible) to import stallion semen from Australia into Canada.

4. **Straws per Breeding Dose:** In North America most Vets consider a "Breeding Dose" to be 8 straws of semen, which are used for insemination of one mare on an individual ovulation. It is not uncommon for mares to be inseminated on 2 or 3 cycles before they get pregnant. So, in Canada it is prudent to acquire 24 straws per mare per season.

A complication arises when purchasing stallion semen from England or Europe,

where those Vets consider a breeding dose to be 6 straws. If you buy 3 breeding doses from Europe, you will most likely get 18 straws. If you import that quantity to the USA or Canada, your Vet may complain, and insist upon using 8 straws per breeding. So, in that case, you will have actually purchased only 2 breeding doses, with 2 straws left over. When purchasing from overseas, it is critical to understand exactly how many straws you will be getting for the purchase price, so you can make your decisions accordingly.

5. **Veterinary Involvement:** Unless you have semen storage facilities on your farm and ability to perform the AI yourself, there will be some rather high Vet bills to pay for each AI breeding. If your mare does not conceive on the first cycle you will have to pay for a 2<sup>nd</sup> or 3<sup>rd</sup> breeding. Hopefully your mare will conceive without needing more than 3 AI inseminations. It is prudent to ask your equine reproduction Vet. To give you an estimate if costs before you commit to purchasing any semen.

6. **Shipping Semen:** Shipping semen is very expensive. If you do not own a container for shipping frozen semen, you will need to pay for the rental on the container plus a deposit that is refundable upon return, So you must pay to ship the container in two directions.

Since the shipping costs are high, it is most cost effective to fill the container up with straws. Naturally that involves paying for more semen. My investigation revealed that about 180 straws will fit into a typical frozen semen container. That in North American terms is about 22 breeding doses. Depending on the actual conception rates,

my estimate is that may result in anywhere from 8 to 18 pregnancies. The cost efficiency of AI depends to a large degree on the conception percentage that your Vet achieves with your mares.

7. **Semen Sellers:** My experience is that semen owners, in some cases, can be difficult to deal with. Some seem to be “control freaks” that will only agree to send one 8-straw breeding dose to you at a time. Your mare may not conceive on the first AI breeding. Shipping costs are high. My suggestion is to avoid a semen seller that will not ship at least 3 breeding doses at the same time.

8. **Genetic Benefits of AI:** Breeders of this rare Shires breed must be very aware of the importance of genetic diversity in our breed. We all play a role in not permitting the gene pool to become too narrow and slipping into genetic vortex to extinction. Due to the low number of Shires and the great distances involved in North America, AI can be a valuable tool. AI can allow us to obtain semen from excellent stallions that are located on the other side of the continent or even in England or Europe.

9. **Quality Benefits of AI:** Perhaps the biggest benefit of AI is that knowledgeable diligent breeders on a quest to always improve their herd, can obtain semen from top quality stallions that may be located at great distances or even overseas. AI can be a valuable tool to help us to improve the overall quality of the Shire Breed.

10. **Due Diligence:** The best advice regarding AI is to educate yourself, and perform your due diligence first.