

# **A Guide to Artificial Insemination**

## **Why use Artificial Insemination?**

Artificial Insemination (AI) greatly increases your possible choice of stallion. You can choose a stallion from anywhere in the UK or abroad without having to travel your mare great distances. Many popular stallions are only available by AI, since this method decreases the risk to the stallion. AI has success rates comparable to natural service, and the detailed veterinary attention mares receive means those with fertility problems may be more likely to conceive. However frozen semen is not advisable for mares over the age of sixteen who have not bred a foal before.

## **Why use Tower Equine Fertility Services?**

Tower Equine is the breeding division of Gibson & Lee, Equine Veterinary Surgeons, developed by equine vet Roger Lee and run in association with Brackenspa Stud. We are a British Equine Veterinary Association approved centre for Artificial Insemination. Roger has many years experience in equine fertility working as a dedicated stud vet both in the UK and Australia.

Mares for AI will board at Brackenspa stud in a new, purpose-built mare block adjacent to the covered stocks and veterinary laboratory. Over thirty acres of grass turnout is available. In addition there is limited availability at a new unit at Tower Farm itself, for mares that need increased veterinary care.

We offer optional, fixed-price veterinary packages for both chilled and frozen semen. These help you to understand what your veterinary costs are likely to be. Not all mares will get in foal at the first attempt, and by having an 'in foal fee' we can further reduce the per cycle price. We are confident that our prices are significantly lower than those of our local competitors. Clients are however free to opt simply to pay for each veterinary procedure individually, and prices are available on request.

## **Choice of stallion**

Choose a stallion that will suit your mare and your purse. When using AI it is important to ensure that the stallion has a record of good fertility with chilled or frozen semen. If you are planning to use chilled semen, make sure the stallion will be available when you need him – some popular sires are busy competing as well as breeding. For frozen semen this is not an issue, but the stallion's fertility is even more important. Not all stallions produce semen that is viable after freezing and unfortunately there is still some poor quality semen being sold.

Discuss the terms of your contract with the stud. How many goes do you get for your stud fee? Usually for chilled semen you can order it as many times as you need it within one year, but studs vary. For frozen semen you often pay per dose of semen,

and you need to check if you will be charged for extra doses. If you have chosen a foreign stallion you need to ensure that the semen is collected at an EU approved semen collection centre, and that it will arrive with the correct EU certification.

### **Pre-breeding Check**

We would advise that all mares have a pre-breeding examination to evaluate their fertility. A combination of an external examination and an internal scan will identify any problems, and make sure the mare has the best chance possible of conceiving. This is also the ideal time to take a Strangles and/or EVA blood test and, if needed, a clitoral swab for contagious equine metritis (CEM). The swab takes seven days to culture and a clear result is necessary for mares who have been served naturally in the previous 2 years. The number of Strangles outbreaks in the UK has increased in recent years and the infection can be particularly devastating in foals and youngstock. A significant problem are 'Silent Carriers', apparently healthy mares who shed the Strangles bacteria. The Strangles blood test helps to identify any such mares and protect all the mares and foals at the AI centre. For this reason the pre-breeding check may be best done at your stables.

For more information on Strangles, please visit:  
[www.aht.org.uk/pdf/strangle\\_leaflet.pdf](http://www.aht.org.uk/pdf/strangle_leaflet.pdf).

### **Insemination Procedure**

The mare needs to come to us when she is just coming into season. If your mare shows in season at home this is easy to plan. If she does not show or you are not sure, we may need to scan her to tell what stage she is at in her cycle. Once at the stud the mare's ovaries will be scanned to determine the size of any follicles on them. Growth of the follicles will be monitored closely until one follicle reaches approximately 35 millimetres in diameter. At this stage the mare is given a drug that will help make that follicle ovulate at a predictable time – typically between 36 and 48 hours after the drug has been given. This allows chilled semen to be ordered for the day following the drug injection, and for frozen semen to be inseminated as close to the point of ovulation as possible.

After she has been inseminated with chilled or frozen semen the mare will be rescanned the following day, to check that she has ovulated as planned, and to treat any inflammation in the uterus following insemination. Most mares will receive at least one washout – that is a dose of antibiotic placed in the uterus to help prevent infection. Some mares are prone to fluid pooling in the uterus after insemination and they may require additional treatment.

### **Chilled Semen**

Semen is collected from the stallion, mixed with an extender and then placed in an insulated box containing icepacks in order to keep it cool during transport. Chilled

semen needs to go from the stallion to inside the mare within twenty-four hours. Any longer than this and its fertility will decline sharply. This means that semen is ordered the day before it is needed – ideally the mare is examined early in the morning, it is confirmed that she has a good size follicle, semen is ordered for next day delivery by overnight courier, and the mare is given the drug to help ensure ovulation at the optimum time.

The chief drawback to this method is that courier services will not do overnight deliveries at the weekend. In practice this means that semen may only be available from Tuesday to Friday. Mares' ovaries do not operate on a four day week and this can make timing ovulation so it does not fall at a weekend a challenge.

If the stallion is close by, it may be possible for the owner to drive and pick the semen up – with the advantage that semen can be inseminated on the same day as it is collected. Semen can be ordered from abroad – typically Germany, France or Holland – for next day delivery in the UK, but again, only on four days of the week.

### **Frozen Semen**

The advantage of frozen semen is that the semen is ordered in advance and stored in liquid nitrogen tanks at the AI centre, so it is available whenever required. However once unfrozen the semen does not maintain its fertility as well as fresh or chilled semen, so the mare must be inseminated very close to ovulation. This means more intensive veterinary input with at least twice daily ultrasound monitoring of the ovaries. We use a technique called deep intra-uterine insemination to deposit the semen as close to the tip of the uterine horn as possible, decreasing the distance the sperm have to swim.

### **Pregnancy Testing**

The first pregnancy scan is done on either the fifteenth or sixteenth day after insemination. The timing of this is extremely important because if your mare has twins, one has to be pinched out before seventeen days of age. A second scan is done between twenty-five and thirty days to check the pregnancy and identify a healthy heartbeat. A third scan at approximately forty days is advised.

Once she has been inseminated and 'checked off', your mare can either go home until the time for pregnancy scanning, or remain at the stud. However if she returns home you will have to pay for a visit and the cost of the pregnancy scan. We would advise that mares remain at stud at least for the first scan, because if they are not in foal a second insemination may be necessary very shortly after scanning.