



# Breeding Services Guide



# Begin your breeding journey with Towcester Equine Vets

## Trust in Towcester

Towcester Equine Vets is a British Equine Veterinary Association (BEVA) approved centre for Artificial Insemination (AI).

We are an established breeding centre with many returning clients. Our breeding team provide a comprehensive service with dedicated equine vets and nursing staff who are here to support your journey throughout the season.



## Introducing our lead Reproductive Vet Gemma Kirk BVetMed MRCVS

Gemma graduated from the Royal Veterinary College in 2008 and has been involved in equine practice ever since. As a new graduate she worked for a branch of Minster Equine Clinic in Yorkshire. She then undertook an internship at Arundel Equine Hospital in West Sussex where she looked after inpatients, carried out anaesthesia and was involved in lameness investigations and diagnostic imaging. Upon completion of her internship, she stayed at Arundel initially as a hospital/lameness assistant and latterly as part of the ambulatory and stud team.

Gemma spent four years dividing her time between the Northern and Southern Hemisphere stud seasons as a resident vet at Vinery Stud, Australia. Vinery is a large Thoroughbred farm that is home to around 300 horses with 150-200 mares being bred each season and 150-200 foals arriving every year. Time spent here served as a valuable experience in all areas of equine reproduction and foal care, albeit rather busy at times!

Gemma has been with us at Towcester Equine Vets since March 2016 and is our lead breeding vet; however having been practising for the last seventeen years, she is also a very valuable asset in all areas of the practice.

## Reproductive services



### Screening for diseases

All stallions and naturally covered mares should be swabbed and blood sampled to ensure freedom from sexually transmitted diseases at the beginning of every breeding season. The swab is screened for contagious equine metritis (CEM) and the blood sample is screened for equine infectious anaemia (EIA) and equine viral arteritis (EVA).

Samples must be received by an approved laboratory within 48 hours of sampling so we try to avoid swabbing on Fridays. CEM culture takes 7-8 working days, although a PCR test is also available which can provide results in 48hrs.

### Facilities

All scanning and AI can be performed either at your yard address or in our dedicated fertility room which separates our brood mares and their foals from the rest of the busy clinic's activities. In here we have side by side mare and foal stocks for the examinations to be carried out, safely reducing stress to the mare and foal.

We have a dedicated stallion collection room, dummy mare, teaser box and an experienced team to handle your stallion. This allows us to collect semen to be processed for fresh and chilled AI purposes.

We have an onsite laboratory with microscopy and heated stage for semen analysis. Additional equipment includes a semen centrifuge, which can be used to improve the quality of the semen from sub-fertile stallions, as well as facilities for cytology and culture of endometrial swabs.

### Pre-breeding assessment

This involves a thorough examination of your mare to assess her suitability for breeding and to help identify any abnormalities which may reduce her ability to conceive.

This includes an assessment of her vulval conformation, examination of the vagina and cervix and a rectal ultrasound examination of the uterus and ovaries, and if indicated further tests such as endometrial swabs, lavages.



## Chilled and Frozen Artificial Insemination (AI)

Towcester Equine Vets is a RCVS accredited practice and a BEVA approved centre for the use of chilled and frozen AI. AI allows a larger choice of stallions from Europe and beyond, with an added benefit of reduction in the risk of injury to the mare, stallion and foals associated with natural covering. Successful AI relies on appropriately timing the insemination in the mares oestrus cycle. Conception rates can be optimised by regular, sequential ultrasound scans and the appropriate use of drugs to manipulate the mares cycle, control the time of ovulation.

Chilled semen is generally inseminated around 24 hours prior to ovulation, whereas frozen semen must be inseminated closer to, and usually post ovulation, due to the decreased lifespan of sperm that have undergone the freezing process.

Preparation for insemination with fresh, chilled and frozen semen can be done on the yard but insemination with frozen semen needs to be undertaken at the clinic, as this is where frozen semen is stored and due to the number and frequency of scans required. As visits and sedation are not included in the AI package it can work out financially more viable to have the mare on livery with us at the clinic, even if using chilled semen.

Chilled semen is ordered by us the day before we predict it will be required and usually sent by post, but we can arrange for same day collections and inseminations if indicated. The stallion stud will usually require you to fill in an order form and pay for your semen in advance of dispatch. Frozen semen is ordered in a similar fashion but needs to be transported in a dry shipper.

One of the advantages of frozen semen is that it can be ordered in advance and stored at the clinic negating issues with postage.

### AI Packages

We offer all-inclusive AI packages to help with costs and, so that you have an indication how much each breeding cycle will cost before the outset.

These packages include all routine drugs, all necessary ultrasound examinations and one post breeding flush with sterile saline if indicated. The package does not include reduction of twins, non-routine post breeding treatments, sedation, visits and livery.

Group and individual turnout, mare & foal stabling and a horse walker are available to meet your mare & foals requirements. We kindly request mares are fully vaccinated for influenza and tetanus, up to date with worming or have a faecal egg count less than 300 eggs per gram (EPG) and hind shoes are removed for group turn out.

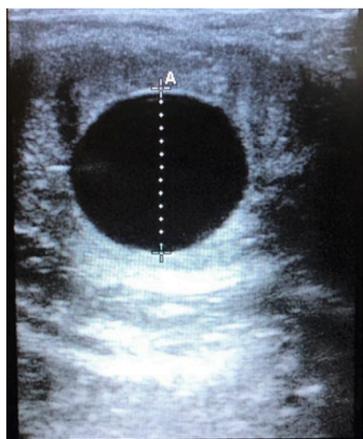
## Management of mares being covered naturally

Natural covering is a requirement when breeding Thoroughbred race horses but is also used for stallions not available for AI, or for difficult mares that fail to conceive with AI. Conception rates can be maximised if mares are monitored regularly with an approach not dissimilar to that used for chilled AI, the only difference being that the mare is walked in for natural cover rather than being inseminated by a vet/technician.

This more intensive management is recommended for problem mares and busy stallions to try and reduce the need for more than one covering.

## Pregnancy diagnosis

We advise that the first pregnancy scan takes place 14-16 days after ovulation. This enables identification of the pregnancy and allows us to detect the presence of twins, the quality of ovulation and status of the uterus. If a double ovulation has been seen following insemination we will plan to scan your mare twice, usually at 14 days AND 16 days following insemination to check for twins in case of asynchronous ovulation. An additional scan is done at 25-30 days post ovulation to ensure normal development of the foetus and to check for a heartbeat. Thoroughbred mares/difficult mares are often also scanned at 42 days. Difficult mares may also be monitored frequently during pregnancy to check on the progression. Blood tests can also be performed to assess and monitor the pregnancy if indicated.



Early pregnancy scan  
14-16 days



Heartbeat scan  
28-30 days

## Twin reduction

It is very rare for mares to be able to carry twins to term due to insufficient uterine surface for placental contact to support 2 foetuses to full term. This often leads to abortion around 9 months of gestation. If carried to term twins can cause foaling issues/dystocia or in the worst case can be fatal for the mare. Provided a twin pregnancy is detected in the appropriate window, one can be squeezed, leaving a single embryo to develop normally. For good success rates it is vitally important that this is done between 14 and 16 days after ovulation. Any earlier and they are too small or maybe missed, any later and the embryos will become implanted to the uterine lining and can't be moved away from each other, risking loss of both embryos if squeezed. Provided there are no issues with the uterus or embryos success with twin squeezing is very good.

## Foetal sexing

This is an optional scan advised to be undertaken between 55-60 days post ovulation. The sex of the foetus/foal can be assessed based on the position of the tail head and genital tubercle.

## Reduced fertility in the mare

Unexplained, persistent failure to conceive or maintain an early pregnancy can be investigated. In addition to ultrasound examinations, we can perform bacterial culture from uterine swabs or lavages and take biopsies of the lining of the uterus. The reproductive tract can also be visualised with one of our video endoscopes. Dormant infections (particularly streptococcal infectious) can also be activated with specific medicines which is useful to pick up subclinical infections.

## Management of the in-foal mare

Once your mare is in foal it is vital that their health and welfare requirements are met as poor health and stress can have long term negative effects on the developing foetus, such as developmental bone conditions, insulin resistance, the foals brain and gut microbiome development. They should be fed appropriately but not over fed or encouraged to be obese. It is important that mares continue to be wormed, vaccinated and have regular farrier appointments.

A booster vaccination against Equine Influenza and tetanus around 6-8 weeks before the anticipated foaling date has been shown to increase the antibody to these diseases content, in the colostrum (first milk) that your mare produces. This colostrum is vital to your new born foal, given they are born with a naïve immune system - it provides them with the immunity that they require for the first 10 to 12 weeks of their lives before they develop a competent immune system. Equine Herpes vaccination is recommended in some mares at 5, 7 and 9 months of gestation to reduce the risk of abortion and abortion storms. This is of particular importance if mares are housed in large groups or are going to stud to foal. Your mare can also be vaccinated against Rotavirus. This is a life-threatening virus causing diarrhoea in foals so is recommended if the yard has previously had foals with Rotavirus infections. These are given at 8, 9 and 10 months of gestation. We are happy to give advice on all aspects of care for your pregnant mare and the foaling process.

## Post foaling checks

We recommend examining both the mare and foal within 12-24 hours after foaling to check for any problems or congenital abnormalities of the foal, but this can be done obviously sooner if any issues are encountered. The placenta (afterbirth) should be kept to allow us to check it and confirm that it has been expelled in one piece. This should have been passed within 3-4 hours after foaling: if it has not been passed within 6 hours please call us, then please call us as it can cause serious problems such as septic metritis and laminitis. It can be useful to test the first milk at the yard to check for quality with a colostrometer. We advise a blood sample is taken from the foal 12-18 hours after birth to check for passive transfer of antibodies from mare to foal. Failure of this passive transfer of immunity can be managed with a prompt transfusion of hyper immune plasma, correcting antibody levels and helping to prevent future, potentially fatal, infectious diseases such as umbilical, lung, gut or joint infections.



## Embryo Transfer (ET)

ET enables you to breed from actively competing mares without significant interruption to their schedule and removing the risk of foaling. Waiting for their retirement can result in a short-lived and potentially problematic breeding career. ET can also be useful in difficult breeding mares or those with uterine issues.

We work in conjunction with ET centres to inseminate mares and line them up for flushing for ET. We will inseminate your mare as standard with frozen, chilled or fresh semen. Around 8 days post ovulation the mare will travel to an ET centre for a flush.

If an embryo is harvested then it is assessed for viability and transferred into an appropriate recipient mare whose reproductive cycle has been managed to closely match the donor. The donor mare is then checked on her return home and the recipient mare is scanned for pregnancy at the ET centre or with us.

The recipient mare goes on to have the foal and the mare continues competing. This process can be repeated throughout the spring and summer to allow your mare to produce several foals in a year. Recipient mares can be provided by the owner of the donor mare or recipient mare services/ ET centres.

If you are interested in this service, then please do contact our team at the equine clinic, Gemma is very happy to discuss your options.



## Stallion Services

We offer a comprehensive semen collection service. Facilities include a dedicated stallion collection room, a dummy mare, teasing box and a team experienced in stallion handling.

Our on-site facilities allow us to analyse and process semen for immediate insemination or onward transit as chilled semen.

## Sub Fertility

We routinely perform semen extender testing at the beginning of each breeding season. In addition, semen is routinely refrigerated for 24-48 hours post collection to assess viability and is used as a reference if any issues over quality upon receipt of semen are encountered.

Some stallions semen cope with chilling/transportation differently. Same day semen collection and insemination may well be beneficial in some cases and we can facilitate this.

It is important to remember that, if you are planning to breed from your stallion you must have him swabbed and blood sampled for any sexually transmitted diseases at the beginning of the breeding season. These tests are required to be repeated post covering if the stallion is also covering mares naturally.





# Towcester

## EQUINE VETS



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